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i-GREduc '24

SERDANG, SELANGOR
23 NOVEMBER 2024

PROCEEDINGS

FUTURE READY EDUCATION

INNOVATING FOR TOMORROW'S CHALLENGE

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INTERNATIONAL GRADUATE RESEARCH IN EDUCATION (i-GREduc) SEMINAR 2024

i-GREduc 2024

Future Ready Education: Innovating for Tomorrow's Challenge

23rd NOVEMBER 2024

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UNIVERSITI PUTRA MALAYSIA (UPM)

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UNIVERSITI PUTRA MALAYSIA (UPM)

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INTERNATIONAL GRADUATE RESEARCH IN EDUCATION (i-GREduc) SEMINAR 2024

PROCEEDINGS FOR FULL PAPERS

The Impact of Online Social Capital on Access to Higher Education amongst Urban and Rural Students

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Abstract

The relationship between online social capital and students' educational success has received considerable attention in the digital age. However, previous studies have neglected to explain the role of educational decision-making in the relationship between online social capital and access to higher education, as well as comparative studies of urban and rural groups. In this study, 356 first-year students from three universities in China were used as subjects, and the data were analyzed using multiple logistic regression and bootstrapping. The results show that educational decision-making mediates the relationship between online social capital and access to higher education and that online social capital significantly impacts urban students' access to higher education than rural students.

Keywords: Online Social Capital; Access to Higher Education; Educational Decision-making; Urban-rural Students.

1.0 Introduction

The urban-rural access to higher education divide is a significant issue of equality in China's higher education system (Lai et al, 2016). As the scope of higher education has grown, this gap has been highlighted as a disparity in access to outstanding higher education between urban and rural students, with urban students having far greater access to quality higher education than rural students (Sier, 2021). To improve educational equity, China has implemented a variety of measures, including increasing enrolment quotas for rural students and granting subsidies. Given the ease with which information and educational resources may be accessed in the Internet age, improving Internet connectivity in remote schools is another crucial undertaking. Internet access and use offer students the possibility of forming online social capital (OSO) (Spottswood & Wohn, 2020). Online social capital has become a critical factor in influencing students' education success (Salimi et al., 2022). However, due to regional constraints, there is a gap between different groups in terms of accumulating online social capital. This gap impacts their access to higher education.

It has been acknowledged that social capital plays a significant role in influencing educational decision-making (EDM) in the digital era and that EDM is crucial for gaining access to higher education (Edannur, 2018; Vietze et al., 2022). Nevertheless, little is known about the processes via which access to higher education and OSC are mediated in EDM. Understanding how OSC influences students' EDM can provide valuable insights into addressing the inequality of access to higher education. By examining the mediating role of EDM between OSC and access to higher education, this study aims to highlight how OSC influences students' educational trajectories.

2.0 Literature Review

EDM influences a student's access to higher education, particularly in the context of unequal resources and information. Suppose students lack adequate information and support during the decision-making process (Vietze et al., 2022). By the above findings, the hypothesis was formulated:

H1: EDM has a positive association with access to higher education.

The possession and utilization of OSC increases access to information and support for EDM, which in turn affects educational outcomes (Salimi et al., 2022). Under the above findings, the hypothesis was formulated:

H2: OSC has a positive association with EDM.

The importance of OSC is growing with the development of the Internet (Salimi et al., 2022). It increases access to higher education by fostering better EDM in addition to expanding access to educational resources and information. Following the above findings, the hypothesis was formulated:

H3: OSC has a positive association with access to higher education.

H4: EDM has a mediation effect on the relationship between OSC and access to higher education.

3.0 Methodology

This study uses quantitative methods to collect and analyze data to explore the relationship between variables. A purposive sampling method was used in this study to select colleges and universities representing different levels in the pyramid structure of higher education. Stratified sampling was then used to determine the sample size for each college based on the proportion of students in each school to the total number of students, and then first-year students were randomly selected based on the proportion of urban and rural students in each college to form the sample for this study.

Data were collected through the Chinese questionnaire website, Questionnaire Star, where counselors provided randomly selected students with a QR code or URL for the online questionnaire, and students scanned the QR code or logged on to the URL to fill out the questionnaire using their cell phones or computers.

The study used SPSS for data analysis. Descriptive statistics and correlation analysis were calculated using SPSS. Regression analysis was used to measure the relationship between the variables and bootstrapping was used to determine the mediating effect of educational decisions.

4.0 Results

4.1 Descriptive results

There were 25 items on educational decision making and the overall mean for this subscale was (M=4.978, SD=0.906). The scores of urban and rural students on this subscale were (M=5.062, SD=0.886) and (M=4.927, SD=0.916) respectively. OSC had 15 items and the overall mean for this scale was (M=2.824, SD=0.766). Urban and rural students scored (M=2.952, SD=0.783) and (M=2.746, SD=0.746) on this subscale, respectively.

Table 1. Descriptive statistics

		N	Mean	Std.Dev	Min	Max
EDM	total	357	4.978	0.906	1.33	7
	urban	134	5.062	0.886	2.42	7
	rural	223	4.927	0.916	1.33	7
OSC	total	357	2.824	0.766	1	5
	urban	134	2.952	0.783	1.07	5
	rural	233	2.746	0.746	1	5

4.2 Correlation analysis

The results of the bivariate Pearson test indicated that OSC was positively related to EDM ($r=0.299$, $p<0.001$), thus H2 was supported.

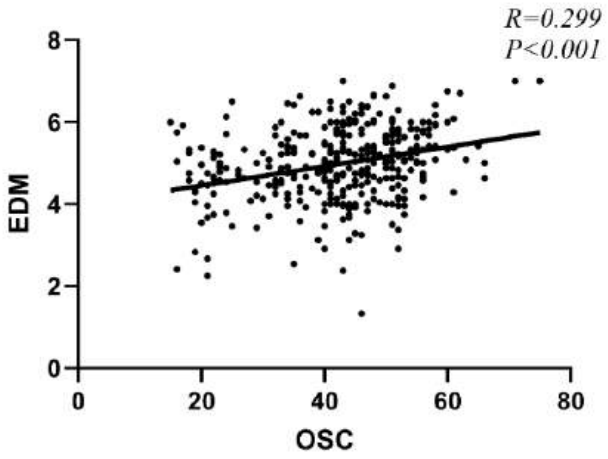

Figure 1. Correlation between OSC and EDM

4.2 Regression results

The significance test of the multiple logistic regression model was: χ^2= 184.503, p<0.001, which concludes that the model is statistically significant and the model is valid.

The results of the multiple logistic regression analysis are shown in Table 2. The effects of online social capital, EDM, gender, and household registration on access to GUU and DFCU are statistically significant through Wald's chi-square test. Rural students are negatively associated with access to GUU and DFCU. In contrast, EDM and OSC both have positive associations with access to GUU and DFCU, thus H1 and H3 were supported.

Table 2. Results of Multiple Logistic Regression Analysis

				Wald			95% CI	
		β	S.E	χ^2	p	Exp(β)	Lower	Upper
GUU	constant	0.427	0.677	0.397	0.528			
	EDM	0.814	0.194	17.655	0.000	2.257	1.544	3.300
	OSC	0.036	0.014	6.701	0.010	1.036	1.009	1.065
	Gender_male	1.106	0.311	12.642	0.000	2.022	1.643	5.560
	Ethnic_han	0.416	0.597	0.485	0.486	1.516	0.470	4.886
	HR_rural	-0.829	0.370	5.018	0.025	0.436	0.211	0.901
DFCU	constant	0.474	0.849	0.312	0.577			
	EDM	1.746	0.247	49.954	0.000	5.733	3.532	9.304
	OSC	0.070	0.017	17.718	0.000	1.073	1.038	1.109
	Gender_male	1.750	0.366	22.911	0.000	2.753	2.810	11.778
	Ethnic_han	0.746	0.785	0.904	0.342	2.109	0.453	9.818
	HR_rural	-2.338	0.405	33.272	0.000	0.097	0.044	0.214

Note: McFadden R^2 = 0.404
Cox & Snell R^2 = 0.456
Nagelkerke R^2 = 0.238

4.3 Mediation results

According to Table 3, OSC plays not only a direct role in access to higher education but also an indirect role in access to higher education through the mediation of EDM, thus H4 was supported. The direct and mediating effects account for 66.67% and 33.33% of the total effect, respectively.

Table 3. Results of direct and mediated effects

	Effect	Boot SE	Boot LLCI	Boot ULCI	Effect Ratio
Direct effect	0.243	0.049	0.145	0.340	66.03%
Indirect effect	0.125	0.025	0.079	0.177	33.97%

5.0 Discussion

This study aims to provide data on equity in access to higher education in China by examining the gap between urban and rural students in terms of OSC and the impact of this gap on urban and rural students' access to higher education, thereby providing research evidence for policymakers promoting educational equity. The study identifies the mechanisms by which OSC influences the educational trajectories of urban and rural students and emphasizes the mediating role of EDM between OSC and access to higher education.

6.0 Conclusion

The results of this study indicate that OSC directly affects students' access to higher education and also indirectly affects students' access to higher education by influencing EDM. These findings emphasize the value of OSC and EDM and provide valuable evidence for educational institutions to implement interventions to promote equity of access to higher education.

7.0 Limitations and Future Research Directions

First, data for both the OSC and EDM variables were collected through self-reports, which may lead to biased generalization methods. Second, the cross-sectional design limits the ability to draw causal relationships. Third, the sample from one province in mainland China may limit the generalizability of the findings. It is recommended that future studies consider nationwide sampling to improve the generalizability of findings.

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Empowering Students with Learning Disabilities: Mobile Applications as Innovative Learning Interventions

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Abstract

The integration of technology in education has introduced powerful new avenues for learning interventions, particularly for students with special needs, including those with learning disabilities (LD). This paper examines the urgent need for targeted interventions that support children with LD in achieving quality education, directly aligning with Sustainable Development Goal 4 (SDG 4) for inclusive and equitable education. Challenges faced by students with disabilities were intensified by the COVID-19 pandemic, underscoring the demand for innovative, adaptable educational approaches. Among these, mobile applications have shown significant promise, offering real-time, personalized learning environments that address individual student needs. This paper draws on evidence-based practices, emphasizing the importance of structured, theory-driven strategies and individualized support to help students with LD overcome diverse learning barriers. Through a comprehensive exploration of technology's role in education, the study highlights how tailored, tech-enhanced interventions can increase engagement, motivation, and inclusivity across varied learning contexts. Advocating for scalable, technology-integrated educational practices, this research aims to shape a more equitable educational landscape, empowering students with diverse learning needs to meet future challenges with confidence

Keywords: Mobile Application; Learning Difficulty, Learning Intervention.

1.0 Introduction

Implementing targeted intervention strategies for children with special needs specifically with learning disability (LD), is essential for achieving quality education and meeting Sustainable Development Goal 4 (SDG 4), which promotes inclusive and equitable education. According to the United Nations (2020), the COVID-19 pandemic created the largest disruption in education history. The pandemic posed significant challenges for governments globally, leading to the implementation of protocols like lockdowns and physical distancing which compelled educational institutions, including those in special education, to transition to virtual platforms. This shift underscored the vulnerabilities faced by students with disabilities, urging educators and policymakers to consider alternative approaches for delivering special education (Yakut, 2021).

Globally, there has been a marked shift towards inclusive education, driven by the ratification of the UN Convention on the Rights of Persons with Disabilities (UN-CRPD). This convention emphasizes the right to education for all individuals, advocating for inclusive practices that integrate students with special educational needs (SEN) into mainstream classrooms. Malaysia's education system has been working to improve accessibility and provide robust support for students with diverse learning needs. Nationwide, several Special Education Schools serve students with specific educational requirements, alongside the expanded Integration Special Education Programme (PPKI) in primary and secondary schools. The Ministry of Education Malaysia has also introduced an inclusive education program managed by the Special Education Division (BPK) (Ali & Mohamad Nasri, 2021). Students with mild specific learning disorders who are not formally categorized as having SEN are not eligible to enrol in these programs and therefore remain in mainstream classrooms. When identified as having learning difficulties, these students may be placed in remedial education classes, as specified by the Department of Special Education (2012). In mainstream settings, teachers are responsible for providing additional support to prevent these students from falling significantly behind their peers (Hasan & Ahmad, 2018).

Educational interventions have traditionally used structured strategies, such as repetitive practice and visual aids, to support diverse learning needs. While these conventional methods provide foundational

reinforcement, they may not fully address the specific challenges faced by students with learning disabilities. Recently, technology-based interventions, including mobile applications, have offered more adaptive, responsive approaches. These tools provide real-time feedback, personalized pathways, and multisensory engagement, making them valuable complements to traditional methods in creating accessible, individualized learning experiences.

Students with special needs include those with LD, neurodevelopmental conditions that significantly impair cognitive functions essential for foundational tasks such as reading, writing, and mathematics. Dyscalculia, a specific type of learning disability affecting mathematical abilities, disrupts number recognition, sequencing, and spatial reasoning, creating substantial obstacles to engaging with general curriculum content within traditional mathematics instruction (Chinn, 2021). The unique neurological processing difficulties associated with dyscalculia underscore the urgent need for specialized, adaptive interventions. Without targeted support, students with dyscalculia often struggle to access standard educational content effectively, as conventional approaches fail to accommodate the distinct cognitive barriers they experience. Butterworth (2019) highlights that mathematics educators must develop theory-driven, individualized interventions and assessments to meet the specific needs of each learner. Providing these tailored interventions is not merely beneficial but essential to fostering equitable educational opportunities for students with dyscalculia.

2.0 Learning Intervention for Children with Learning Disability

LD encompass a variety of challenges that affect a child's ability to process information, which can hinder their academic performance. Learning interventions have been developed to address these challenges, focusing on structured educational strategies, individualized support, and the incorporation of specific teaching methods.

Khan (2024) emphasizes the importance of integrating educational strategies with psychological interventions to effectively support children with learning disabilities. The study outlines evidence-based teaching practices, including structured and explicit instruction, individualized education plans (IEPs), and multimodal instruction. These strategies are designed to accommodate the diverse needs of learners with LD, promoting their academic performance and overall well-being. The findings suggest that a comprehensive approach that combines educational tactics with psychological support can significantly enhance the learning experiences of children with disabilities.

In a systematic review, Gunasegar et al. (2021) examined empirical evidence on educational interventions specifically for students with mathematics learning disabilities. The authors found that effective educational interventions positively impact students' mathematical skills, emphasizing the need for special education teachers to apply appropriate strategies tailored to individual learning needs. The review highlights the significance of structured interventions in improving educational outcomes for children with LD, advocating for the implementation of evidence-based practices in classroom settings.

3.0 The Role of Technology in Learning Interventions

The integration of technology in education has profoundly reshaped learning interventions, especially for students with diverse needs, by enhancing inclusivity, engagement, and learning outcomes. Behera (2023) found that technology-enhanced learning, via mobile devices, online platforms, and educational software, significantly boosts motivation and participation, particularly among students with learning disabilities, making educational environments more inclusive and dynamic.

In language education, Bahari (2024) demonstrated that innovative tools like chatbot-based support, adaptive algorithms, and VR not only improve language skills but also foster self-regulation, suggesting that embracing technology can elevate traditional teaching methods. This aligns with Major et al. (2021), who, through a meta-analysis in low- and middle-income countries, found that personalized learning through technology leads to learning gains when tailored to specific contexts, emphasizing the need for scalable, adaptable solutions. Xu (2023) further highlighted technology's role in promoting self-monitoring and focus among students, particularly benefiting those with learning disabilities by fostering accountability and engagement.

Collectively, these studies underscore the essential role of technology in transforming education, advocating it as a vital tool for motivation, personalization, and self-directed learning across diverse educational settings.

4.0 Mobile Application for Mathematical Learning Intervention

The integration of mobile apps in educational settings has gained significant attention, particularly in mathematics learning interventions. Mobile apps have become valuable tools in mathematics education, extending engagement beyond the classroom and supporting diverse learning needs. Poçan et al. (2022) demonstrated that such apps improve both performance and motivation by allowing flexible interaction with mathematical concepts, which enhances academic outcomes.

However, effectiveness varies by design and content. Outhwaite et al. (2023) found that while practice-focused math apps are common, many lack features for creativity and collaboration, suggesting the need for careful selection to meet educational goals. Alkhateeb (2019) highlighted the potential of gamified math apps, showing that game-based learning especially benefits students struggling with mathematics by making learning more interactive.

Interactive math apps also show promise for early learners. A trial by Outhwaite et al. (2019) found that children using these apps achieved greater gains in foundational math skills. Additionally, Yunianta et al. (2022) demonstrated that incorporating cultural elements into apps enhances comprehension and engagement, making learning more accessible.

Tailored apps also address specific learning needs. Mustafa (2022) found that apps designed for cognitive skill development effectively support problem-solving skills, while Herodotou et al. (2022) showed that drill-and-practice apps can aid young learners, though alignment with educational theory is necessary for full impact.

These studies highlight the potential of mobile applications to enhance mathematics education by boosting engagement, motivation, and performance. Given the variability in mobile app effectiveness, educators must thoughtfully select applications that best serve their students. As mobile learning evolves, incorporating culturally relevant and creative approaches will be crucial in addressing the diverse needs of mathematics learners.

5.0 Conclusion

In conclusion, targeted intervention strategies for children with LD are essential to achieving quality education and advancing Sustainable Development Goal 4 (SDG 4) for inclusive and equitable education. The COVID-19 pandemic has underscored the vulnerabilities faced by students with disabilities, emphasizing the need for innovative educational approaches. Technology, especially mobile applications, has emerged as a powerful tool in this effort, offering real-time, adaptive learning experiences that cater to each student’s pace and needs. These applications boost engagement, motivation, and inclusivity by incorporating interactive exercises, immediate feedback, and multisensory engagement, creating accessible learning environments that reach beyond the classroom.

Research highlights the importance of theory-driven, individualized interventions that address specific challenges, such as those faced by students with dyscalculia. Moving forward, educators and policymakers must implement evidence-based practices that leverage these technologies, enriching the learning experiences of students with disabilities and contributing to a more equitable educational landscape. An inclusive environment where all students can thrive is essential for building a future-ready education system that meets tomorrow's challenges.

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Exploring the Preparedness of Teachers in the Implementation of the Individual Education Program (IEP) at the School in the Hospital (SDH) Sultan Abdul Aziz Shah Hospital, Selangor

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Abstract

A study was conducted to explore teacher's preparedness in relation to the Individual Education Plan (IEP) process of understanding and practice in Schooling in Hospital (SDH). The Individual Education Plan (IEP) is a written document specifically designed for SDH students with disability. It is focuses on the seven main thrusts of the Ministry of Education of Malaysia (KPM), so that the existing educational gap can be bridged. The purpose of this study is to explore the extent to which School in Hospital (SDH) teachers are prepared, in terms of teacher attitudes and skills, to implement the IEP program in SDH. The research design is a qualitative approach using an interview protocol followed by focus groups, observation and documentary analysis of SDH teachers in selected SDH hospitals. The study examines how this IEP implementation constructs collaborative practice and professional involvement in IEP teaching. Data were analyzed thematically with the help of ATLAS.ti software from version 9 is formulated in the form of a diagram related to the implementation of the IEP in SDH. The findings of this study help to identify best practices in the design and implementation of IEP programs in SDH Malaysia. This research review may lead to more effective educational interventions for students in need in SDH.

Keywords: Individual Educational Program (IEP), Disability Students, Schooling in Hospital (SDH), Teacher's Preparedness.

1.0 Introduction

Malaysia Education System, guided by the National Education Philosophy, aims to nurture student's potential in a balanced and comprehensive way. It seeks to produce individuals who excel emotionally, physically, intellectually, and spiritually within society. This philosophy emphasizes that every child should have equal access to education and be given the opportunity to reach their full potential. To support this vision, the Schooling in Hospital (SDH) was established, ensuring that students continue their education even while receiving medical treatment in hospital. The teaching and learning and facilitation (PdPc) is carried out in a supportive environment, equipped with the necessary resources for students unable to attend to school. The education system in Malaysia is a continuous effort to develop the educational potential in a comprehensive and integrated manner to produce individuals who are complete in terms of emotional, physical, intellectual and spiritual aspects in a society based on the National Philosophy of Malaysia Education (NPME). In accordance with this concept, every child is given equal educational opportunities in a broad sense and able to achieve his or her potential according to Five System Aspiration for The Malaysian Education System (Malaysia Education Blueprint, 2013-2025). To realise this concept, the establishment of Schooling in Hospital (SDH) was introduced to ensure that student's education is not affected while they are being treated in the hospital. Lesson plans are conducted in a conducive environment with facilities suitable for students who are unable to attend regular daily school.

Children with special needs are those who require extraordinary educational interventions and treatments to unlock their full potential. One of the methods that can be used to achieve this is the Individual Educational Program (IEP). The IEP is a tailored course of learning designed for a child with special needs. It is deemed essential that the IEP be well-conceived and that it be followed if the autism-diagnosed child in the study is to have a real chance continue lesson in SDH.

In collaboration between the Ministry of Education (MOE) and the United Nations Children's Fund (UNICEF), the Malaysian government has developed an online Individualized Education Plan (IEP) system. This system, called e-RPI, is intended to improve the IEP document. Previously in use, these documents did

not allow for effective planning and implementation of the IEP. The e-RPI system functions via the internet and intends to include all stakeholders of special education in Malaysia so that they can all work toward the same goal and with the same document. However, despite the availability of an e-RPI user manual, many schools that serve students with special needs do not consistently choose to implement either the IEP or the e-RPI. The studies reviewed regarding the effectiveness of Individualized Education Program (IEP) implementation have reported various difficulties associated with its execution in schools. Several studies from the early 21st century highlighted these challenges. For example, a study conducted by the Swedish National Agency for Education in 2003 indicated that while IEP had become a widely accepted practice in schools, its implementation was not reaching a significant portion (25%) of students with learning disabilities (LD). Subsequent studies in both Sweden and Norway (Andreasson, Onsjo & Isaksson, 2013; Giota & Emanuelsson, 2011) confirmed this finding. Meanwhile, Krtizer's study (2011) in China similarly pointed to systemic problems that hampered IEP from working effectively. Many of these defensive studies hint at an overall need for a better way to comprehensively address special education needs. Because of these similar findings across several countries, IEP implementation warrants a deeper look in Malaysia.

According to Zainal Abidin (2010), it was found that the use of IEP by teachers for students with special needs makes the teaching and learning process more orderly, systematic and helps teachers to follow the development of students with special needs. IEP implementation helps teachers plan daily lessons in the classroom (Sahin, 2012). This is supported by Ismail (2008); Sahin, (2012) & Timothy & Agbenyega, (2018) that this program helps students with special needs to assist the Ministry of Education (MOE) to facilitate the registration of students with special needs to the Inclusive Education Program (Siti Nor Maisarah & Mohd Hanafi, 2016). Therefore, IEP implementation is an important part of learning and facilitation (PdPc) at SDH. This study was conducted to examine the effectiveness of IEP implementation and teacher challenges regarding the impact of IEP implementation in improving the achievement of SDH students who are unable to continue their studies in regular day schools. This study provides a comprehensive overview of the importance of implementing IEPs for SDH students who undergo treatment in hospital by achieving the 7 main thrusts of KPM, which is no dropout of students.

Furthermore, prior research indicates that educators are not well-versed in planning, managing, decision-making, and IEP implementation (Suhaimie, 2013). Teachers' ability to accomplish IEP goals will be hampered by the phenomena of inadequate knowledge and expertise in IEP implementation. Ismail & Majid (2020) state that teachers' comprehension of IEP implementation can assist them in recognizing the strengths and shortcomings of SEN students to enhance their performance. Each special education teacher has a variable level of knowledge and expertise; that is, some teachers believe they are highly skilled in teaching LD students, according to a study by Al-Shammari & Hornby (2020). Nonetheless, there are some educators who believe they lack the necessary skills to apply IEPs. Even though a lot of research has been done about difficulties in implementing IEP, most of these studies have been carried out in foreign countries. This demonstrates the necessity for studies on the difficulties in implementing IEPs in Malaysia, particularly about the proficiency of special education instructors. The purpose of the conceptual paper is to answer
The research questions as follows: (a) How does the quantity of time the teachers deploy for the preparation of paperwork associated with IEP in Schooling in Hospital (SDH)? (b) what is the compilation and implementation of IEP in SDH?

2.0 Theoretical overview and literature synthesis

Individualized Education Program (IEP) known as Individual Education Program is a written document that can describe the special programs and services required for students in the most appropriate learning environment (Avcioglu, 2015). According to Avcioglu (2015) and Baysen & Dakwo (2018), the IEP immediately starts offering treatment and other support services that are appropriate for the student's growth. This is supported by Rotter (2014) saying that IEP is one of the important components in providing special education services for students. Therefore, the effectiveness of the IEP Program can meet the core of education for special students. The IEP program also explains how students with special needs meet learning needs, how they communicate during learning and facilitation sessions and what teachers and supervisors do to help these children learn more effectively (Adibah 2014). IEP is also used as a modification of learning programs and services provided to students (Department of Special Education, 2005). IEP implementation guidelines can be found in the IEP Handbook of the Department of Special Education, Ministry of Education Malaysia (Zainal Abidin, 2010).

Recent years have seen a major increase in interest in the integration of IEP especially considering the changing educational landscape and the variety of learning demands. Results from numerous research that examine the creation, application, and results of IEPs are summarized in this review of the literature, with a focus on slow learners, preterm infants, people with intellectual disabilities, and those who struggle with health issue. Anggraeni (2022) addresses the need for specific educational programs that address kids with somewhat below-average intellectual capability in the context of slow learners. Based on Reddy's theory, the study presents an IEP framework that incorporates techniques like self-confidence building, individual attention, and motivation. This method emphasizes how crucial it is for parents and teachers to provide steady assistance to maximize learning results for slow learners. The focus on tailored attention is consistent with IEPs' overarching objectives, which are to address educational needs and promote academic achievement. Furthermore, in neonatal care facilities, it is crucial to provide educational programs for preterm infants.

Preparedness among instructors in individual educational programs is critical for effective teaching and learning, particularly in the context of medical emergencies and digital education. Sreeram et al. (2024) highlight that medical emergency readiness among rural healthcare providers is essential to mitigate high mortality and morbidity rates. Their scoping review reveals that educational interventions significantly enhance emergency readiness, although challenges persist in rural settings. This underscores the importance of tailored instructional programs that equip educators with the necessary skills and confidence to address specific emergency situations. Similarly, Hathaway et al. (2023) explore the transition to online teaching during the COVID-19 pandemic, emphasizing the preparedness of teachers for this shift. Their findings indicate that while teachers exhibited varying levels of readiness, there were notable themes around the need for professional development focused on digital competence. This aligns with the necessity for comprehensive training programs that address pedagogical, ethical, and technical dimensions of teaching in digital environments.

3.0 Implication

This study is important for all SDH teachers as it helps enhance the effectiveness of student learning. By conducting this research, teachers can explore diverse learning and facilitation methods (PdPc) within SDH. Additionally, the findings can provide equal opportunities for students with special needs who have the potential to excel academically. Research on SDH remains limited, underscoring the need for studies like this to highlight the importance of implementing IEPs across all SDH in Malaysia. This study offers valuable insights to encourage all SDH stakeholders to support the IEP program's success and develop students capable of continuing their education similarly to those in regular day schools. Moreover, this program contributes to teacher quality through continuous, in-depth training. Therefore, the active involvement of all SDH stakeholders can enhance social interactions among students and create a conducive (PdPc) environment.

4.0 Future Work

This research provides foundational insights, but future studies could expand on these findings by exploring additional variables influencing the effectiveness of IEP implementation. Specifically, longitudinal studies could investigate how continuous teacher training impacts student outcomes over time. Moreover, exploring parent and community involvement in IEPs may offer a more holistic understanding of the program's benefits. Further research might also consider the adaptability of IEP frameworks in various SDH settings to ensure that students with special needs receive the most effective, tailored support.

Future studies of IEP programs are important to ensure that education systems and support services meet the needs of hospitalized students. In addition, this study can involve research on the importance of education, health support, community support, and employment opportunities. Previous IEP studies focused more on student performance and school achievement. Therefore, the study of IEP needs to be expanded by doing research on post-secondary school students who have gone through the IEP Program in terms of their careers, good student practices and their lifestyles in the future.

5.0 Conclusion

Research on Individualized Education Programs (IEPs) highlights the essential role of tailored interventions for students with disabilities. Studies show that effective IEPs significantly enhance students' academic and social outcomes, particularly when educators have specialized training in diverse disabilities. However, pre-referral interventions and teacher training are often limited, affecting program efficacy. Teachers and school systems sometimes struggle with resources, reducing the impact of individualized instruction. Research also emphasizes the importance of early, accurate assessments and collaborative support from parents, educators, and specialists to maximize student success. This body of research underscores the need for well-trained special education teachers in inclusive environments.

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Preliminary Findings on the Importance of Flexibility in Shaping Digital Learning Agility among Teachers: A Mixed Methods Approach

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Abstract

Digitally agile teachers could adapt and respond fast to new experiences, experimenting with new behaviours and making rapid adjustments particularly in the use of technology for teaching and learning. This allows for effective learning to occur, even in the presence of unprecedented limits and challenges. Flexible teachers possess the ability to devise ways to accommodate their students' requirements in response to changes in the learning environment. This study explores the importance of flexibility in promoting the ability of teachers to learn and adapt to digital technologies, and its notable impact on teachers' perceived performance in digital learning and teaching. This study employed a mixed methods exploratory sequential approach, using semi-structured interviews with three in-service teachers and surveys with 30 teachers from primary and secondary schools in Selangor. The findings suggest that teachers who were flexible demonstrated the capacity to adapt and utilize different approaches, namely in efficiently integrating technology into the classroom. It indicates that flexible teachers are digitally agile, and flexibility also plays a crucial role in enhancing their teaching and learning performance with digital tools. This preliminary study highlighted the need of flexibility in developing teachers' capacity to increase their learning agility especially while using digital technologies.

Keywords: Flexibility, Teachers' Digital Learning Agility, Digital Classroom.

1.0 Introduction

Flexibility has been associated with resilience which empowers individuals to identify and adjust to a range of situational demands (Burke & SmAith, 2019; Derue et al., 2012; Guidi & Fava, 2022; Murphy, 2021). Flexibility among teachers is essential for adaptability in navigating unforeseen changes in today's ever-changing educational landscape. This flexibility enables teachers to adjust their teaching pedagogies and incorporate with digital technology effectively. Özen and Üçüncü (2022) emphasized that flexibility enables teachers to adapt with rapidly changes in technology platform, allowing them to stay updated with the latest tools and features available for online teaching. Therefore, this paper aimed to explore flexibility as kay factor in shaping digital learning agility among teachers and their performance in utilizing digital tools for teaching and learning.

Learning agility is an essential component of organizational leadership (Burke & Smith, 2019; Feng et al., 2020; Lee & Song, 2022; Lombardo & Eichinger, 2000; Mitchinson & Morris, 2014), but it has not been given much focus in educational contexts. In Malaysia, agility quality has been incorporating among leaders in business and higher education institutions and proven for optimal organizational performance (Josephine Ie Lyn Chan & Rajendran Muthuveloo, 2022; Kamis & Md Yusof, 2022). However, Abdallah (2023) study empower teachers as a classroom leader, emphasizing teachers can also benefit from developing agility. Derue et al. (2012) has provided a definition of learning agility that emphasizes the need of being flexible and quick. When discussing flexibility, they highlighted the ability to change perspective to understand the relationship between information and its application in a certain situation. In the realm of education, the promotion of teachers' learning agility is crucial in adapting to the evolving technological usage in teaching and learning (Susanto et al., 2024). In other words, with the exponential use of technologies, digitally agile teachers are needed. This study therefore employs a mixed method approach to explore teachers' flexibility and how this helps enhance their digital learning agility and adjust to dynamic circumstances.

2.0 Literature Review

Flexibility is indicative of superior cognitive abilities, namely the ability to mentally connect and transition between concepts effortlessly (Derue et al., 2012). Flexibility is essential for teachers to adapt quickly in today's fast-paced environment, enabling them to understand and incorporate new educational methods and technology for effective teaching. According to Derue et al. (2012), learning agility is described as the ability to learn quickly and adapt to new situations, with an emphasis on being flexible and efficient in cognitive and behavioural processes. Contrarily, (Burke & Smith, 2019) through Burke Learning Agility Inventory (BLAI) offered an alternative viewpoint on learning agility, delineating it based on behavioural elements and enumerating nine dimensions, which encompass flexibility, speed, experimentation, performance risk-taking, interpersonal risk-taking, collaboration, information gathering, feedback seeking, and reflection. Although they have different methods, flexibility remains an essential element of learning agility.

Learning agility is a crucial component of an individual to learn successfully in their experiences to perform well. It requires the ability to quickly comprehend a situation and effectively adjust and acquire knowledge in difference circumstances (Wang & Beier, 2012). Meanwhile, teachers also must be adaptable and swiftly adjust to various changes, including technological advancements, curriculum updates and new teaching methods (Wahjusaputri & Fadilah, 2022). The capacity to adapt and respond promptly to evolving circumstances is crucial for teachers to effectively engage with students and provide high-quality education (Fidan, 2022). In other words, teachers must be agile to navigate uncertainties, enabling them to maintain a high level of performance. Hence, teachers can profit from this study by receiving insights about how to develop their learning agility by practicing flexibility particularly in the context of using digital tools to adapt with ongoing technological advancement.

Proficiency in the use of digital technologies is crucial for educators. Flexibility in education is well-known, but the extent to which flexibility in education may support the development of digital agility especially among Malaysian teachers is not widely understood. The available studies do not adequately address the level of flexibility among Malaysian teachers in using digital tools. Nevertheless, several studies have scrutinized the importance of flexibility among educators in Malaysia. Flexibility among teachers in Malaysia is crucial for addressing challenges in online learning, such as the internet connection and digital devices usage (Krishnasamy, 2022) Similarly, online learning underscores the need for teachers to be flexible in adopting new instructional methods (Mat et al., 2022).

Undoubtedly, the significance of flexibility among teachers will increase. The extent to which flexibility influences the development of digital learning agility and how it affects the teachers' performance in using digital technologies in teaching and learning are not properly understood. Thus, to fill this knowledge gap, this preliminary research aims to answer the following questions: *How flexible teachers shape their digital learning agility?*

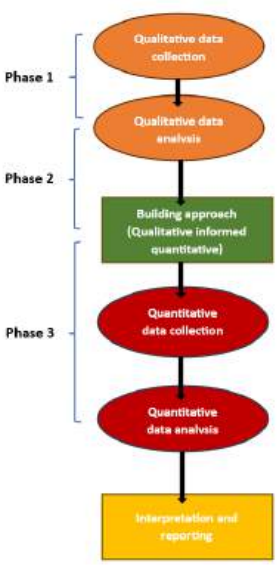
3.0 Methodology

The project primarily focuses on creating a framework for digital learning agility specifically for Malaysian teachers. To fulfil the objectives of the study, a more extensive dataset was collected. However, this research focuses on a specific aspect of the study, which is to investigate teachers' flexibility and improve their ability to use digital tools for online teaching and learning. Research was undertaken earlier, with a primary focus on the qualitative aspect (Rosli et al., 2023). Therefore, this study aimed to expand upon the existing research by employing mixed-methods findings to offer a more refined and comprehensive response to the research question.

This study employed exploratory sequential mixed-method design that converges qualitative and quantitative techniques to produce rich and quality research findings (Creswell & Clark, 2017). This approach is valuable in research settings when there is need to obtain a thorough understanding of a phenomenon by collecting abundant qualitative insights then statistically evaluating the effect of the treatments. Hence, this approach is best in exploring teachers' experiences with technologies in classroom, their attitudes towards being digitally agile teachers and how it affects their teaching performance. In this design, the integration of qualitative and quantitative employed the 'merging' technique to uncover new insights about the dimensions of digital learning agility. Building method were utilized to systematically

developed quantitative items using qualitative data, and then triangulated them to assess the consistency between the results of the two stages.

This study was conducted in three phases which are qualitative, integration, and quantitative phases. The mixed methods process of data collection and analyses shown in Figure 1.



Procedures	Products
Focus groups Malaysian national public-school teachers (n=3) • Atlas.ti coding and theme development • Developed phrase codes from coded text	Transcripts Key themes relevant to the teachers' experience in using digital tools and the importance of flexibility in shaping digital learning agility.
Developed survey items	Items for measuring flexibility among teachers
Survey of Malaysian public-school teachers (n=30)	Numerical survey item scores
• Preliminary analysis • Correlation analysis	Item correlations
• Explore extent to which qualitative findings were integrated • Evaluate congruence between qualitative and quantitative data	Culturally adapted instruments to measure teachers' flexibility in shaping digital learning agility

Figure 1. The exploratory sequential mixed method approach.

Phase 1: Qualitative Data Collection and Analysis

In the first stage, semi-structured interview was conducted. Due to a lack of study on the flexibility of teachers in developing their digital learning agility, the qualitative phase aimed to investigate the teachers' experiences in working with digital tools and their views on the importance of flexibility in developing their digitally agile qualities.

Three Malaysian public-school teachers aged 30 to 44 were selected using purposive sampling, with a minimum five years of involvement in online teaching. The results comprised annotations of the responses provided by the three teachers, designated as T1-T3. Data was collected using semi-structured interviews in order to gain a more comprehensive knowledge of the total experience, as opposed to relying solely on formal components (Moustakas, 1994). Due to the school closures over the end-of-term break, interviews were done via Google Meet. Participants submitted a statement written in simple English, filled out consent forms, and handed in audio recordings. The interviews had a duration of 80 minutes, and the audio recordings were transcribed and securely preserved.

The interview method encompassed the collection of demographic data, investigation of teachers' experiences with technology in the classroom, and assessment of their behaviour towards becoming technologically adept teachers. The transcribed data were organised using thematic analysis as coding frame which has been proposed by (Braun & Clarke, 2006). The process of data analysis entails identifying and categorising topics related to the attributes of adaptability that assist instructors in developing digital agility. The data obtained from the participants was categorised according to themes and subsequently analysed accordingly. Initially, the phrases and sentences from the data were identified and classified based on the meaning of the words and the structure of the sentences. Subsequently, the encoded information was merged and patterns were established.

Phase 2: Data Integration

In this study, a research strategy called exploratory sequential mixed method was employed. This study implemented a building technique to integrate data. Specifically, they used themes and statements from the qualitative phase to create new survey items and modify previous surveys from the Burke Learning Agility

Inventory (BLAI) (Burke & Smith, 2019). The latter task also entailed the revision of several survey items, and the incorporation of modified items was achieved using this method. By taking consideration into the familiarity of the target population with Likert scales and, 5-point Likert style rating scale with anchors (descriptors) were used for these items. Research indicates that utilizing a five-point scale is less ambiguous and leads to higher rates of response and higher quality responses (Buttle, 1996). Additionally, this scale provides a moderate level of granularity, allowing respondents to express their opinions within a limited range of options (Prasad et al., 2022; Solomon et al., 2019).

Phase 3: Quantitative Data Collection and Analysis

The pilot testing of recently created items that result the distribution of a survey that included demographic information, as well as the questions that were built using the building technique and adapted from BLAI. A 25-minute survey was done in person with a pilot sample of 30 teachers in Selangor, Malaysia. An accompanying cover letter from the researcher was provided with each set of questionnaires which included explanations of questionnaire's aim and the necessity for participants to fill it out and send the survey questionnaire back. Subsequently, data analysis included descriptive statistics, item mean scores, and item correlations. All statistical analyses were carried out in IBM SPSS 29.

Reporting Mixed Method Integration (Merging Approach)

Finally, the process of combining data (using a merging technique) was place at the reporting stage in order to present a unified view of both qualitative and quantitative data. The initial step of this method was associating qualitative themes with specific survey question categories, as a result of the deductive technique employed in analysing the focus group transcripts. The use of the inductive technique led to the identification of novel elements, which in turn facilitated the creation of new areas for a digital learning agility survey. Sample quotations were incorporated into the joint display under each relevant subject to generate unique adapted items that allow for teachers' flexibility. These quotes were accompanied by their corresponding items, demonstrating the integration of qualitative and quantitative phases. Following an initial quantitative analysis, the average scores of the items and the correlations between the items were included in the combined presentation to assess the similarity between the two phases. Figure 2 provided a description of the process of integrating and reporting mixed method data.

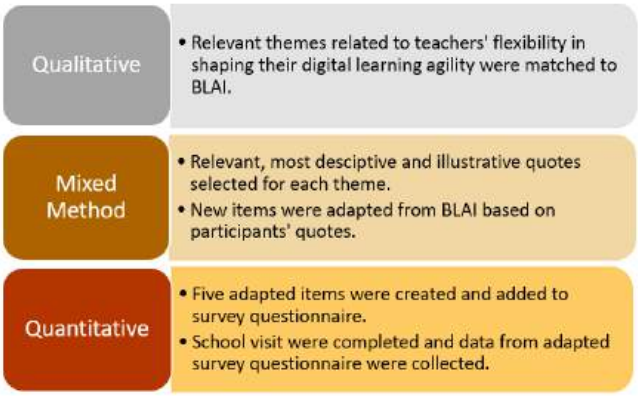


Figure 2. Mixed method data integration process.

Ethics

An ethics approval for use of human subjects was obtained from the Ethic Committee for Research Involving Human Subject UPM (JKEUPM-2023-416). While an approval to enter schools for data collection was obtained from Ministry of Education Malaysia and State Education Department.

4.0 Results

4.1 Demographic Background of Participants

Of the 30 national public-school teachers surveyed, 24 were female (80%) and 6 were male (20%). All participants had an average of 19 years of teaching experience and 9 years of experience utilizing digital technologies for teaching and learning. Approximately 67% of participants reported using digital tools in the classroom three times per week. These tools include mobile devices such as computers, laptops, and smartphones, as well as dynamic visualization applications like Microsoft Excel, Word, and Google Charts. About 57% of participants assessed their level of expertise regarding digital teaching and learning as fair to good, while 10% as outstanding. This indicates that over 50% of the instructors were thought to be adept in utilizing technology for teaching and learning.

4.2 Emerging Themes

Since the qualitative findings have been published previously (Rosli et al., 2023), this paper mainly focuses on the integration process results and summarization of qualitative findings. The qualitative findings revealed two main themes encapsulate the essence of digital learning agility and flexibility: (1) teachers adapting and thriving in digital classroom, and (2) teachers' adaptability to online teaching. These themes were further explored, and five underlying sub-themes were identified, which were used to develop the survey items. They were students' engagement, professional growth, and instructional effectiveness and teachers as learners, and supportive network contribution.

4.3 Mixed Method Results

The joint display showing the original descriptors of flexibility in shaping learning from BLAI, qualitative themes, participants' phrase codes, corresponding adapted survey items, item mean scores, and item correlation coefficient are presented in Table 1. The matching of qualitative themes produced five survey items for determining teachers' flexibility in shaping digital learning agility. The original descriptors of BLAI were adapted by integrating learning agility to digital technology usage among teachers to meet the objective of this study.

4.4 Quantitative Results

Mean scores on 5-point Likert scale items ranged from 3.67 to 4.17 (where 1= Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly disagree). The mean scores on the new survey items and the proportion of participants agreeing with the modified BLAI survey items demonstrate the alignment between the themes derived from the qualitative data and the subsequent quantitative data. The percentage of individuals who agreed with the items was significantly high, ranging from 63.3% to 90%. Regarding internal consistency for exploratory study, all item-total correlations were more than 0.2, indicating good internal consistency (Cristobal et al., 2007). In this study, items-total correlations were statistically significant, where the Pearson's correlation coefficient values ranged between 0.486 to 0.815.

5.0 Discussion

One of hindrances to conducting systematic studies is the lack of relevant and appropriate measurement tool. This preliminary study adds to accumulated knowledge about digital learning agility and create an effective and efficient items for measuring the teachers' flexibility in shaping their digital learning agility. The purpose of this study was to acquire a thorough knowledge of how flexible teachers might become more technologically agile in teaching practices. In using exploratory sequential mixed method design (Creswell & Clark, 2017), this study explores teachers' experience in teaching and learning and consider contextual factors of shaping their learning agility which is flexibility. By considering flexibility through teachers' experience among Malaysian teachers, this study allows for the development of adapted digital learning agility tools.

The qualitative process yielded five underlying sub-themes reflecting types of experience prevalent teachers being flexible. Firstly, it is evident that flexibility is crucial in shaping teachers' digital learning

agility as it expands their knowledge in digital literacy skills by adapting to unexpected changes in teaching. In other words, flexibility supports professional growth. These findings are supported by Mikhelkevich & Kravtsov (2021) as adaptability and openness to new experiences enable professionals to enhance their skills not only within their primary field but also in related areas, fostering a well-rounded professional profile. Furthermore, research indicates that flexible teachers are capable of increasing students' engagement by considering different options. To teach effectively, teachers must provide their students with what they need. Flexibility in decision-making is associated with the capacity to generate multiple options, which can lead to improved performance outcomes (Rovelli et al., 2024).

The role of flexibility in shaping teachers' digital learning agility is prominent as it allows teachers to switch digital tools in the classrooms. To identify the most effective tools for teaching, teachers must actively embrace and modify new information, ultimately making informed choices on the utilization of digital technologies. Similarly, learning flexibility in firms allows for the proactive adoption and adaptation of new knowledge, leading to best outcomes (Gligah et al., 2021), which supported the finding. Besides, flexible teachers are capable to navigate various perspectives in using digital tools in teaching and learning, promoting more diverse way of thinking. This finding is supported by Dennis et al. (2023) where flexibility is associated with the acknowledgment of different perspectives and views, promoting a more inclusive and adaptable approach to problem-solving and decision-making.

The development of items from the qualitative findings has shown a significant result to acknowledge flexibility in shaping teachers' digital learning. In this study, item mean scores and total correlations were measured for validity and reliability of the adapted BLAI items. Most items averagely score between 3.67 and 4.10, indicating the Malaysian public-school teachers in general found the items were relevant to their experience in being flexible while using digital technology in teaching and learning. These findings show that the participants were recognizing the importance of being flexible in shaping their digital learning agility. According to Yunos et al. (2019), flexibility is crucial for teachers to cater the diverse need in evolving nature of education field and the constant changes. Also, Rodin et al. (2022) highlighted on the importance of teachers being able to adapt to new teaching methods and tools to ensure continuous learning for students during pandemic. Thus, it is evident that teachers in Malaysia are expected to be flexible especially in using digital technology to meet demands of a dynamic educational system.

6.0 Conclusion

Ultimately, this preliminary study has contributed to the body of research about the impact of flexibility on digital learning agility among teachers. The exploratory sequential mixed method design used in this study, which employed semi-structured interview and survey with the public-school teachers in Malaysia, has been detailed in the methodology. The methodological approach of adding quantitative process to qualitative ones allowed a broad view of the teachers' actual experience in using digital technology, thus contributing to the validity and applicability of the items.

The ever-changing landscape of education in Malaysia particularly in the digital realm, has become a wake-up call for teachers to acquire necessitated changes in teaching method. Therefore, the finding of this preliminary study offers a scale for extensive investigation that could provide best practices for professional development and growth among teachers especially in using digital technology. Prior to this study, it is evident that flexibility is significant in shaping teachers' adaptability while teaching online. This study reflects themes solely by our participants; it does not generalize to teachers in different school landscapes. Thus, future study may consider integrating suitable items and adding relevant subscale.

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Table 1. Joint display of Burke Learning Agility Inventory (BLAI) and Adapted BLAI items.

Burke Learning Agility Inventory (BLAI) Original Descriptors	**Sub-themes from Qualitative Findings**	**Participants' Phrase Code**	**Corresponding Adapted Survey Items**	**Item Mean Score (SD) (Percent of agreement with item) (*n*=30)**	**Item Pearson Correlation Coefficient**
Proposes innovative solutions	Professional growth	*"…we can adapt to the situation slowly, but we can adapt. Like myself, so, like we start from zero but everything we learned by ourselves (and) we managed to overcome the situation …"* [T2] *"At that time, most people were more familiar with Google Meet because this feature was very new to Telegram. But after I got the hang of it, it was easier for me."* [T3]	F1: I accept new ideas involving classroom digital teaching and learning.	**4.17 (0.59) (90% agree)**	**0.681**
Considers options before acting	Student engagement	*"While doing the Google Meet, after the session I use Quizziz and usually I'll ask them to give answers in the chat box and I used an app on the internet called The Wheel of Fortune. I used the wheel of fortune and made a lucky draw. And I used the medium at the time, Telegram; I used Telegram using video chat, so I used both Telegram and Wheel of Fortune… maybe like doing some quiz and then the chat box so they get excited."* [T2] *"When a name was selected, the students got excited. … They'd spread the news, telling their friends that I do lucky draws in my class."* [T3]	F2: I consider many different options before deciding anything regarding classroom digital teaching and learning.	**4.00 (0.45) (90% agree)**	**0.486**
Switches among different tasks/jobs	Teachers as learners	*"…I have to think how to incorporate digital and hardcopy resources… I prepared my materials online, but I upload them in the group or Google Classroom … I borrowed my husband's tablet so that I can use two screens at once to show solutions in doing Math questions … I attend Google Training, webinars, watching videos, that were sent by PPD officers and school."* [T1] *"I have to think something creative to attract the children and focus. …I did Google Meet first time …I was panicking because it was like trial-and-error session. The, I managed. Actually, I was learning at that time."* [T2] *"…I was looking for a way to get this student to come to my class."* [T3]	F3: I am able to switch to using digital technology in the classroom when it is needed.	**3.80 (0.71) (76.7% agree)**	**0.689**
Finds common themes	Instructional effectiveness	*"…try a few apps that is east to be integrated during lessons. So, in the end, I used WhatsApp and then in order to check the answers as well I use another app …so that it's easier to link the checked worksheet or the products that the kids did to Google Classroom."* [T1] *"…the preparation was paperless and actually faster."* [T3]	F4: I am able to identify the most effective digital platforms for classroom teaching and learning.	**3.70 (0.70) (70.0% agree)**	**0.684**
Articulates competing ideas/perspectives	Supportive network contribution	*"Sometimes my friends will give me ideas like why don't we use this even they said we can play Kahoot games and everything's right so I learned from friends."* [T2] *"Like Excel, there are some teachers who I can talk about the internet, the materials they found. When the team is driven, we feel excited, when the team is one-man show, that's when things become difficult."* [T3] *"…it's quite helpful because sometimes we don't really have the time to do everything something you don't have time to even think for that thing so that's when collaborating actually helps."* [T2]	F5: I am able to express my ideas clearly in using digital technology in classroom teaching and learning with others.	**3.67 (0.76) (63.3% agree)**	**0.815**

** Significant at 0.05 level (2-tailed).

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Bridging Education and Industry: Adapting Secondary Technical and Vocational Education (TVE) with Regional Economic Development

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Abstract

Educational funding is a critical factor influencing student outcomes. Secondary Technical and Vocational Education (TVE) is an important part of the Technical and Vocational Education (TVE) system, which directly serves local financial construction. This study aims to analyze the adaptability of regional economic construction and secondary technical and vocational education (TVE) development in Wuxi City, Jiangsu Province, China. The study utilized data from schools, companies, and government websites in Wuxi City and open-ended interviews with students, teachers, and workers from local enterprises. Participants were asked questions about the development of technical and vocational schools, the selection of the study program, and the recruitment of job seekers. The findings indicated that while secondary technical and vocational education (TVE) is not currently aligned with local and regional economic development in Wuxi City, there is significant potential for improvement. This misalignment is influenced by the social environment, the government, and the factors of secondary technical and vocational schools. However, optimizing professional programs and developing harmoniously with regional economies is a promising measure. On the other hand, strengthening the teaching staff's construction may be essential. Furthermore, it may provide more to promote the new development of secondary technical and vocational education in Wuxi City. Realizing the depth of high school cooperation, increasing investment in education, and improving the education award system and any others are under consideration.

Keywords: Economic Development, Secondary Technical and Vocational Education.

1.0 Introduction

Technical and Vocational Education (TVE) is an important means to accelerate industrialization and modernization in China. During the current critical period of economic transformation, the development of TVE plays a vital part in advancing China's economy. TVE is related to the regional economy, and at the same time, the development of the regional economy requires the positive force of TVE. To adapt to the new characteristics of the basic dimension of the Chinese context and the development in the current stage, TVE must offer high-quality services for regional economies and provide a reliable layout for local industries and economic growth rates.

Secondary Technical and Vocational Education (TVE) is an important part of the TVE system, directly serving the local and regional economies. In the subject of education, secondary TVE is most closely linked to the regional economy; therefore, the study of the adaptability between secondary vocational education and the regional economy is very important and realistic.

China built the world's largest TVE system during "the 13th Five-Year Plan" (2016-2020). With "the 14th Five-Year Plan" (2021-2025), technical and vocational education must deepen the reform, promote industry-education integration and school-enterprise cooperation, and train more high-caliber craftsmen in the new stage of development. With the rapid development of China's economy, balancing growth between regional economies and secondary vocational education is equally important.

The research is centered on strategic decisions regarding the regional economy and secondary TVE in Wuxi City, Jiangsu Province, China. This article presents an on-the-spot investigation of Wuxi's technical and vocational colleges, combining domestic-related documents and local conditions. The study aims to explore the reforms of secondary TVE in Wuxi that align with regional economic development. The author also hopes that this study will contribute to advancing secondary TVE in other areas of China.

2.0 Relationship Between Technical and Vocational Education (TVE) and the Economy

Research on the relationship between education and the economy has been presented from various perspectives, from Plato to economic masters such as William Petty, Adam Smith, Marx, and Marshall. All of them proposed the economic theory that education can promote a country's economic growth. In *Das Kapital* (Marx, 1867), Marx regarded the labor force as the carrier of the economy and asserted that the acquisition of specialized labor must rely on education and training. Technical and Vocational Education (TVE) serves as a means to transform simple labor into specialized labor. It provides the initial theoretical basis for studying the relationship between TVE and economic development.

Leonardo Conti reveals the close relations between TVE and GDP in TVE and Economic Development. Represented by Paul Romer and Robert Lucas (Romer & Lucas, 1990), the new economic growth theory reveals that knowledge is the endogenous variable that plays a decisive role in regional economic growth. Furthermore, knowledge accumulation depends on stakeholders' investments in economic research and development, education, and investment. As mentioned before, the research on TVE and regional economic development outside China has become increasingly in-depth with the development of time. However, the studies on secondary TVE and the regional economy tend to be somewhat biased, relatively one-sided, and lacking comprehensiveness.

A total of 3,407 documents on "Technical and Vocational Education and regional economy" were collected in the existing China National Knowledge Infrastructure (CNKI) database, 86 were found in the doctoral thesis database, and 304 master's theses were collected. These data show that research on the development of TVE and the regional economy in China has already achieved a certain degree of success.

In China, discussions on the relationship between education and the economy began as early as the 1930s. Educators such as Tao Xingzhi and Yang Xianjiang started exploring this relationship. However, remarkable results were not achieved due to the impact of successive wars. Qian Minhui specifically studied the issues between TVE and socioeconomic development. The author studied the development of TVE within the entire society, economy, and culture (Minhui, 1999). This work marked that the research on TVE and social and economic development has reached a new period in China.

In 2002, Yuan Jilin took charge of a key subject of the National Educational Science "Tenth Five-Year Plan" that focused on empirical research regarding higher TVE and regional economic development in the central region. This topic studied the relationship between higher TVE and regional economic development in central China (Jilin, 2002). It aimed to identify educational methods that maximize regional economic development and provide suggestions for the local government.

Li Yuhua (2010) first provided a comprehensive overview of the unbalanced regional development of higher TVE in China; second, it analyzed the difficulties faced by higher TVE in underdeveloped areas and offered ideas and suggestions for addressing the existing problems.

A brief analysis of the relationship between TVE and regional economic development is presented. Second, the research identifies the existing problems. Countermeasures and suggestions for promoting the coordinated development of TVE and the economy are presented (Hong, 2008; Shengbin, 2005; Yao, 2000; Hongfeng, 2011).

3.0 Research on Secondary Technical and Vocational Education (TVE) and Regional Economic Development

In recent years, research on secondary Technical and Vocational Education (TVE) and regional economic development in China has continued to increase, and the research results have been positively affirmed. Research on secondary vocational education serving local and regional development has produced a relatively consistent view.

The role of secondary TVE in the regional economy focuses on the benefits of secondary TVE to local economic development and puts forward suggestions for upward development (Changhui et al., 2008;

Yiming, 2003). Secondary TVE has been reformed to adapt to regional economic development. Such papers emphasize the existing incompatibility between secondary TVE and regional economic development and propose suggestions and countermeasures to align with economic development (Qiumei, 2010; Yi, 2004).

Focusing on secondary TVE or regional economics separately, Mu Wenjun and Liu Xiaoping (2002) emphasized that the current situation of secondary TVE and regional development were only parts of it. Li Huiyan (2007) mainly focused on the government's investment in funding the development of secondary TVE. An empirical study on secondary TVE and regional economic development focus on the relationship between the two and the influencing factors (Hong & Huiyuan, 2009; Guoguang, 2011; Ping, 2005). Requirements of regional economic development for secondary TVE (Wang, 2004) are also being studied.

4.0 Methodology

The quantitative research was based on secondary data, where information was obtained from various government agencies, including the China Statistical Yearbook, Wuxi Education Bureau, Wuxi Bureau of Statistics, and the Wuxi Statistical Yearbook. The study collected data about the GDP of Three Major Industries in Wuxi, GDP and per Capita GDP in Wuxi, Employment Status in Wuxi, the Number of Secondary Vocational Schools in Wuxi, Secondary Technical and Vocational Schools Enrollment in Wuxi, The Number of Secondary Vocational Schools in Wuxi, The Ratio of Students in Secondary Vocational Schools and Total Population in Wuxi, the Graduating Number of Secondary Vocational Schools in Wuxi, Secondary Vocational Schools' Full-Time Teachers in Wuxi. The collected data were analyzed using IBM SPSS Statistics software.

The qualitative research employed interview questions as the research instrument to assist in explaining and interpreting the relationship between vocational education and the regional economy in Wuxi City. It adopted open-ended questions to collect qualitative data. To achieve the objectives of the study, open-ended questions were formulated and distributed, as shown in Table 1 below.

Table 1. Open-Ended Interview Questions

Item	Questions
Interview outline for relevant persons in charge of Wuxi secondary vocational schools	
1	Please briefly introduce the development status and scale of your school in recent years.
2	What are the majors offered by your school? What are the key majors? What is the basis for setting up majors?
3	What are the locations and industries of your school's interns? What is the internship rate for students in related majors?
4	Could you please tell me about the government's funding status of your school in recent years?
5	What difficulties is your school currently encountering and what kind of help do you hope to receive?
Interview outline for secondary vocational students in Wuxi	
6	How do you view secondary vocational education? Any ideas?
7	Why did you choose the school and major you are currently studying at?
8	Can your current school provide enough theory and practice for your major?
9	Will you engage in related majors after graduation?
10	What are your expectations for secondary vocational studies?
Interview outline for employers in Wuxi City	
11	Does your organization cooperate with Wuxi secondary vocational schools? Which ones are they?
12	When recruiting, do you pay attention to the academic qualifications of job applicants?
13	What is the number and proportion of secondary vocational students your organization has recruited in recent years?
14	Does your organization have any strict requirements for enrolling secondary vocational students? For example, professional qualification certificate, etc.?
15	What suggestions do you have for the development of secondary vocational schools?

5.0 Findings and Discussion

Correlation coefficient between students in secondary Technical and Vocational schools in Wuxi is presented in Table 2.

Table 2. Correlation Coefficient between Students in Secondary Technical and Vocational Schools in Wuxi

		Students	GDP
Students	Pearson Correlation	1	-.901*
	Sig. (2-tailed)		.037
	N	5	5
GDP	Pearson Correlation	-.091*	1
	Sig. (2-tailed)	.037	
	N	5	5

* Correlation is significant at the 0.05 level (2-tailed).

Correlation coefficient between students in secondary technical and vocational school and per capita GDP in Wuxi is shown in Table 3.

Table 3. Correlation Coefficient between Students in Secondary Technical and Vocational Schools and Per Capita GDP in Wuxi

		Students	Per Capita GDP
Students	Pearson Correlation	1	-.966**
	Sig. (2-tailed)		.008
	N	5	5
Per Capita GDP	Pearson Correlation	-.966**	1
	Sig. (2-tailed)	.008	
	N	5	5

**. Correlation is significant at the .01 level (2-tailed).

From SPSS analysis and comparison, the significance level is p = 0.037 and 0.008, respectively, and both p was less than 0.05 (P <0.05), indicating a significant correlation between secondary Technical and Vocational Education (TVE) and economic development in Wuxi City. It can be seen that the significance level is r = -0.901 and -0.966, respectively, which indicates that there was a negative correlation between secondary Technical and Vocational Education (TVE) and economic development in Wuxi City. That is to say, the development of secondary Technical and Vocational Education (TVE) does not adapt to economic development.

Based on the above research, the development of secondary TVE in Wuxi is incompatible with economic development. Because it is not only related to the social environment but also to the policy orientation of the local government and also to the secondary technical and vocational school itself. The reasons were reflected in traditional social concepts, blind pursuit of higher academic qualifications, imperfect policies, insufficient investment in education funds, unclear educational objectives of secondary technical and vocational schools, and mismatch between the professional settings of secondary technical and vocational schools and local industries.

The development of secondary TVE and the regional economy in Wuxi are significant concerns. The study proposed some suggestions and measures to alleviate the stress. In terms of enterprises and institutions, we should abandon the concept of "high education, light secondary vocational education" and implement in-depth school-enterprise cooperation.

From the government's perspective, we should change concepts and promote secondary TVE, broaden channels, increase funding, and improve the secondary TVE scholarship system. With respect to secondary TVE, we should optimize the professional setting and coordinate development with the regional economy, strengthen the construction of teaching staff, reform the teaching model, and improve the quality assurance system of secondary TVE.

6.0 Conclusion and Implication

Secondary Technical and Vocational Education (TVE) serves the regional economy, and its development has an obvious relationship with economic and social development. Economic progress and adapting to the development of the regional economy have always been the keys to secondary Technical and Vocational Education (TVE).

This study is based on the current situation of secondary TVE and socio-economic development in Wuxi City, Jiangsu Province, China, and conducts research and analyzes data. This paper starts with an analysis of the development scale, the industrial structure, and the technical structure of the economy in Wuxi City, as well as the adaptability of Wuxi's secondary TVE. Through investigation and research, the development of these three aspects is unsuitable for developing secondary TVE. In view of the problems existing in Wuxi's secondary TVE and economic development, the author puts forward relevant suggestions and countermeasures to enhance the adaptability of secondary TVE and economic development in Wuxi and, ultimately, the harmonious development of both.

This article's innovation is that it analyzes the adaptability and incompatibility of Wuxi's secondary vocational education and the regional economy in many aspects and proposes relevant suggestions and countermeasures to solve the problem.

Due to the limitations of my research level and time, this is only a preliminary study on the adaptability of secondary TVE and the regional economy in Wuxi City. The theoretical expression and practical demonstration are not sufficient. Significant differences exist, and there is a lack of objective argument for selecting Wuxi City. The countermeasures and suggestions for improving Wuxi's secondary TVE to adapt to regional economic development are not specific enough. The above issues need to be studied in depth and call for further improvement and analysis.

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Exploring Competencies Indicator for Succession Planning for Research-Based Energy Company in Selangor

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Abstract

This paper explores the concept of leadership competency within research-based energy companies in Selangor. The sustainability of these companies depends on the organisational leadership landscape and workforce retention. Leaders with incompetent criteria will impose adverse impacts on the effectiveness of succession planning. Addressing the right competencies will able to retain quality leaders and attract new talent. This study uses the Transformational Leadership Theory and Competency-based model to determine the suitable leadership styles, align with management goals and support career development. A qualitative approach is employed to investigate and explore indicators of future leaders, as well as to identify potential leaders through purposive sampling technique. This serves as a foundation for developing succession planning leadership competency indicators for energy-based companies. It will support the creation of competency-based succession planning models for both present and future needs, as well as provide a criterion for assessing leaders within energy-based research companies.

Keywords: Leadership competency: Indicators: Research-based energy: Succession planning

1.0 Introduction

The importance of succession planning is no longer limited to corporations and conglomerates; it now includes research-based centers (McCauley & Palus, 2021) in their efforts to identify future leaders. The ultimate goal of succession planning is to have well-prepared individuals ready to step into critical positions at pivotal decision-making moments. A well-organized organization can avoid unnecessary costs associated with power transitions. Without proper planning, an organization may fail to address key competencies and risk losing valuable talent resources.

Rothwell (2005; 2010; 2015) highlighted the importance of succession planning by emphasizing the process, critical positions, stability of top management, and the effectiveness of a clear succession pathway. Succession planning has become a strategic imperative for organizations aiming for long-term sustainability, particularly in research-based energy companies facing rapid technological advancements, evolving regulatory landscapes, and a continuous need for innovation. Al-Daihani et al. (2019) also underscored the importance of succession planning in the energy sector, especially in light of senior management retirements and the lack of focus on talent retention and development.

For companies in the energy sector, identifying and nurturing the next generation of leaders is essential for maintaining operational continuity, fostering innovation, and ensuring a competitive advantage in a highly specialized field. A robust succession planning framework supports leadership continuity and talent retention (Ogola et al., 2017). This framework typically includes three core components: identification of future talent, targeted development and mentoring, and retention strategies tailored to the unique organizational culture (Parfitt, 2022). In sectors like oil and gas, a systematic approach is crucial, involving detailed analysis of workforce demographics, competency mapping, and structured training roadmaps (Al-Daihani et al., 2019).

The research-based energy industry is no exception. Companies in this sector rely on highly skilled professionals at both leadership and technical levels to navigate the complexities of energy production, research, and technological development. Given the need for seamless knowledge and leadership transfer, effective succession planning is critical to managing the risks associated with leadership turnover and organizational growth. Furthermore, the future energy leader must possess a multifaceted skill set to address the challenges of energy affordability, security, and climate neutrality, especially as the workforce ages and

retirements increase (Mahapatra, 2022). To address these concerns, this study explores the conceptual of leadership competencies in effective succession planning within a research-based energy company. Specifically, the research focuses on identifying the competencies required for leadership roles, including functional and technical expertise, and on benchmark these criteria against industry best practices to develop a comprehensive succession planning model."

2.0 Leadership Competencies in the Energy Sector

Leadership competencies in the energy sector are critical for navigating the complexities of a rapidly evolving industry. Effective leaders must exhibit visionary and adaptive skills to inspire innovation and manage growth, particularly in high-growth environments like clean energy (Joel & Oguanobi, 2024). Developing a competency model tailored to the specific needs of research-based energy companies will serve as the foundation for succession planning efforts, enabling the organisation to identify and develop future leaders with the necessary skills, knowledge, and attributes to succeed in leadership and technical roles, by placing the critical competencies required for employees in leadership and technical roles within a research-based energy company. Competencies in this context include general leadership skills such as strategic thinking, decision-making, and team management, as well as specialised technical skills unique to the energy sector. Furthermore, a competency-based approach is essential for bridging leadership gaps in technical fields such as oil and gas, ensuring emerging leaders have the necessary soft skills and management techniques (Howes & Taylor, 2021). This study explores the balance between leadership and technical competencies, recognising that future leaders in this industry must possess a combination of both to be effective.

3.0 Effective Succession Planning the Energy Sector

Effective succession planning in the energy sector involves identifying high-potential successors to be in top management, aligning with organisational strategies, and implementing comprehensive training to ensure leadership continuity and mitigate workforce challenges (AlDaihani et al., 2019). The best practices model of a research-based energy consists of talent identification, initiatives programs and reward recognition (McCauley & Palus, 2021). The strength of the succession planning is depend on identifying and nurturing emerging leaders, aligning their skills with organisational needs, and integrating experienced hires into the team (Howes & Taylor, 2021).

Creating a comprehensive competency model incorporating leadership and technical competencies will guide the succession planning process for the organisation, ensuring that potential leaders are developed in their ability to manage and lead teams and their technical understanding of the energy industry. The model will provide a framework for assessing current employees, identifying high-potential individuals, and creating targeted development plans to prepare them for future leadership roles.

4.0 Transformational Leadership Theory and Competency-Based Leadership Model

The concept of leadership competency is not new and is defined as a combination of knowledge, skills, and abilities required for a leadership position (Hollenbeck et al., 2006). Rothwell (2010) emphasizes the importance of leadership style, commitment, and leaders' responsibility within the organizational structure. Leadership models and frameworks from previous studies demonstrate various leadership styles, competencies, guidelines for talent development, and future strategic directions (Yammarino et al., 2020). Leadership styles and approaches vary across institutions; however, many organizations face similar challenges, such as filling critical positions due to retirements or high turnover (Rothwell, 2015). Addressing these challenges is essential to identify and analyze critical roles, ensuring organizational viability, financial stability, and competitive strength.

Consequently, a competency model can help leaders align their actions with organizational goals. Additionally, Dragoni et al. (2011) developed a competency-based leadership model relevant to specific contexts, tasks, and organizational objectives. A combination of competency-based leadership and transformational leadership models can provide a solid foundation for developing a competency model tailored to research-based energy companies. Eng et al. (2022) suggest that transformational leaders enhance innovation by promoting ambidextrous balancing exploration and resource exploitation. Therefore, this

model can help identify essential competencies such as visionary thinking, team inspiration and motivation, adaptability, and innovation, all of which are crucial for leaders in the research and energy sectors.

5.0 Methodology

A qualitative research approach will be employed to achieve these objectives, explicitly utilising semi-structured interviews (Lim, 2024). This methodology is well-suited for exploring the competencies required for succession planning within a research-based energy company. Semistructured interviews are a robust qualitative research method that facilitates an in-depth exploration of participants' insights and experiences. This approach allows researchers to adapt questions based on the flow of conversation, enabling deeper investigation into emerging topics (Kraus et al., 2022). The study aim to conduct semi structured interview with 10 participants which are representatives from the top management, middle management and lower management, as well as cross the departments. Purposive sampling technique is suitable due to focus on selected employee in an organisation.

A qualitative research approach will be employed to achieve these objectives, specifically utilizing semi-structured interviews (Lim, 2024). This methodology is well-suited for exploring the competencies required for succession planning within a research-based energy company. Semi-structured interviews are a robust qualitative research method that facilitates an in-depth exploration of participants' insights, perceptions, and experiences. This approach provides flexibility, allowing researchers to adapt questions based on the flow of conversation, which enables a deeper investigation into emerging topics and nuances that may not be initially anticipated (Kraus et al., 2022).

The study aims to conduct semi-structured interviews with 10 participants, selected from various levels within the organization, including representatives from top, middle, and lower management, as well as across different departments. This multi-level approach ensures a comprehensive understanding of the organization's leadership and talent development dynamics. A purposive sampling technique is appropriate for this study, as it focuses on selecting employees with specific expertise and knowledge relevant to succession planning and leadership development. By targeting individuals in key positions, the study can gather valuable insights into the competencies required for effective leadership transition and talent retention within the organization.

Furthermore, the semi-structured interview format allows for the exploration of both structured questions and spontaneous follow-up questions, ensuring that the complexity of succession planning in the research-based energy sector is thoroughly examined. This flexibility also allows the research to capture diverse perspectives on leadership competencies, including those that might not be explicitly covered by predefined questions, thus providing a more holistic view of the organization's needs and challenges in succession planning.

6.0 Findings

The main purpose of this study is to provide a holistic view of the leadership competency indicators required for the management team as part of leadership and talent development. Additionally, the perspectives of current leaders will be invaluable in identifying the skills and attributes most critical for future leaders, as well as understanding the challenges and opportunities associated with succession planning in a research-based energy company. Combining Transformational Leadership Theory and the Competency Model is believed to provide a robust framework for this study. Transformational Leadership Theory offers insights into the inherent qualities necessary for effective leadership, while the Competency Model provides a practical approach to defining and assessing specific competencies. Together, these frameworks offer a comprehensive understanding of the competencies required for successful succession planning, tailored to the unique context of a research-based energy company.

7.0 Conclusions

This study explores the key competencies necessary for effective succession planning within a research-based energy company in Selangor. The research aims to provide a practical framework for identifying and developing future leaders by creating a competency model that integrates leadership, functional, and

technical skills. Succession planning is essential for ensuring organisational continuity, minimising disruptions, and fostering innovation, especially in a rapidly evolving industry like energy. Through the semi-structured interviews with management-level employees, this research will contribute to developing best practices for succession planning in the energy sector, ultimately supporting the long-term success of research-based energy companies.

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Motivation and Family Support as Mediating Variables between Emotional Intelligence and Achievement in Learning Moral Beliefs: Partial Least Square Structural Equation Model Mediation Approach

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Abstract

The subject of Aqidah Morals is the main subject and is very crucial in forming a generation with morals and plays an important role in character formation. Measuring understanding of moral beliefs can be measured from grades or learning outcomes in these subjects. The purpose of this research is to determine the effect of emotional intelligence on learning outcomes in the subject of morals with motivation and family support as mediating variables. This research uses a cross-sectional approach involving independent variables, intervening and mediating variables, and dependent variables. The dependent variable in this research is the result of learning moral beliefs. Intervening or mediation variables are family support and motivation. Emotional intelligence in this research acts as an independent variable. The number of samples in this study was 177 respondents. Each latent variable is composed of several question indicators which are measured using a scale of 1 to 4. The result of descriptive statistical analysis use to explain family support, emotional intelligence, motivation and Aqidah Moral score. The average of family support is 3.24. On the emotional intelligence variable, the average score was 3.29. Student motivation has an overall average of 3.29. The students' moral values have an average of 87.03. The results of the analysis using the Partial Least Square Structural Equation Model (PLSSEM) method concluded that only the Motivation variable acts as a mediating variable or causes an indirect relationship between the relationship between emotional intelligence and learning outcomes because the resulting significance value is 0.003. The family support variable does not act as a mediating variable or does not cause an indirect relationship between the relationship between emotional intelligence and learning outcomes based on the resulting significance value of 0.49, where this value is greater than 0.05.

Keywords: Emotional Intelligence, Motivation, Family Support, PLS-SEM.

1.0 introduction

The rapid development of information technology such as artificial intelligence technology can impact children's character both positively and negatively (Sunandari et al., 2023). This condition encourages children to strengthen their character to stem the impact of this technology. Strengthening character can be done by providing subjects such as Aqidah Akhlak. The Aqidah Akhlak subject is the main subject and is very crucial in forming a generation with morals and plays an important role in forming the character of students. (Parhani & Nabila, 2021). Moral belief education plays a role in forming a positive outlook on life in children, building harmonious relationships with other people, and cultivating noble attitudes such as patience, tolerance and compassion (Yuniarweti, 2023).

Measuring understanding of moral beliefs can be measured from grades or learning outcomes in these subjects. Learning outcomes can be influenced by several factors such as environment, learning resources, culture and other factors (Yandi et al., 2023). Intelligence Emotional intelligence is also a factor that can influence learning outcomes (Murtafiah et al., 2022) (Arafa et al., 2022). Emotional intelligence is also a variable that can indirectly influence a child's character (Rijal et al., 2023). Emotional intelligence has a very important role in achieving success in school, where emotional intelligence includes different abilities and influences academic intelligence. Emotional intelligence refers to the ability to recognize, understand, overcome and express emotions appropriately (Arafa et al., 2022).

Apart from the variables mentioned previously, motivation can also influence learning outcomes (Alfiando & Hakim, 2021). Student learning motivation can be considered the main determining factor in

the success of achieving good learning achievement. Previous studies show that learning motivation has a positive impact on student academic achievement. Research conducted by Kapitan et al., (2021)found that there was a positive influence between learning motivation and student academic achievement. Hypothesis testing in this research produced a significant value indicating that learning motivation positively influences student achievement. Another factor that can affect to student achievement is family support.

Family support has a crucial role in guiding and accompanying children in everyday life. Success at school is not only the result of the efforts of teachers and students, but is also influenced by the role of parents. The social environment that most influences children's learning activities is parents. Thus, parents play a big role in a child's success at school, especially in terms of learning. Marbun (2022) proves that family support is also a variable that can influence student learning outcomes. Agus Kriswanto's research explains that parental support is necessary so that children can excel. Parents have a big role in improving children's learning achievements. Collaboration between parents and the school can improve children's learning achievements at school (Napitupulu et al., 2024).

Based on the description above, this research aims to determine whether there is an influence of emotional intelligence on learning outcomes in the subject of morals with motivation and family support as mediating variables. The research was conducted at one of the Tsanawiyah Madrasahs in Nganjuk Regency. The statistical analysis used is the Mediation Partial Least Square Structural Equation Model. The consideration for using this analytical method is because in this research there are variables which are latent variables, namely emotional intelligence, family support, and measurable variables and measurable varible namely learning outcomes, so there are two variables with different types of dataThe use of the PLS-SEM method in data analysis in the research field was carried out by Fernanda et al. (2022) which researched the acceptance of JIBAS technology and analyzed using the method PLSSEM. Hidayah & Fernanda (2021) also used the PLS SEM analysis method to analyze the level of student acceptance of online learning using Google Classroom.

2.0 Methodology

This research uses a cross-sectional approach involving independent variables, intervening and mediating variables, and dependent variables. The dependent variable in this research is the result of learning moral beliefs. Intervening or media variables are family support and motivation. Emotional intelligence in this research acts as an independent variable.

The sampling technique in this research uses the Simple Random Sampling method. The number of samples in the study was calculated using the following formula from Slovin.$n = \frac{N}{1+Ne^2}$

$$n = \frac{318}{1 + 318\ (0{,}05)^2}$$

$$n = 177$$

The sample in this study amounted to 177 students. The variables in this research consist of 3 latent variables or constructs. Each latent variable is composed of several question indicators which are measured using a scale of 1 to 4. Score 1 indicates that the respondent does not agree, Score 2: disagrees, Score 3: agrees, and Score 4 states that students in this study agree with the questions asked. The family support variable is composed of 8 indicator questions, the motivation variable is composed of 11 questions, and Emotional Intelligence is composed of 9 questions. The indicators that make up each latent variable are presented in the following table.

Table 1. Question indicators for each latent variable

Motivation	I am enthusiastic about studying the subject of moral beliefs so that I can get good grades. I remain confident and always try even though my moral values are less than optimal. I am not embarrassed to ask questions when I don't understand when learning moral beliefs I paid serious attention when the teacher explained the subject matter of moral beliefs I am very enthusiastic about learning to achieve good achievements I was very motivated by the moral aqidah teacher to become a successful person. I am very confident after getting support from my parents, teachers and friends. I really like the learning process using interesting learning media. I am very happy to participate in the teaching and learning process in class with pleasant learning conditions I prefer studying in a quiet atmosphere rather than a crowded one. I like learning moral beliefs in a clean place.
Family Support	My parents asked about my learning progress at school My parents gave me good attention whenever I needed help My parents provided a special place for me to study. My parents gave me the things I needed to study My parents advised me to study hard to get good grades. My parents provide for a data/WiFi package so that I can learn from various sources. My parents gave me gifts to make me more enthusiastic about studying. My parents often praise me when I get good grades.
Emotional Intelligence	I know that feelings of anxiety arise due to not studying during tests I enjoy doing the assignments given by the teacher when my mood is calm I reread the lessons given by the teacher when I feel alone. I will calm my mind when I am nervous about taking a test. I don't like procrastinating on assignments given by the teacher. I don't give up quickly when I have difficulties. I will listen to my friends' opinions during discussions. I will help friends who have difficulty understanding learning. I dare to ask the teacher if there is any lesson material that I don't understand. I will discuss with friends when the assignment given by the teacher is too difficult to do alone.

The hypothesis in this research that we want to prove consists of two hypotheses.

1. The motivation variable acts as a mediating variable (causing an indirect relationship) between the relationship between emotional intelligence and learning outcomes.
2. The family support variable acts as a mediating variable (causing an indirect relationship) between the relationship between emotional intelligence and learning outcomes

3.0 Findings and Discussion

Descriptive statistical analysis of student assessments on the questions of family support, emotional intelligence, motivation is presented in table 2. On the family support variable, the average family support is 3.24. On the emotional intelligence variable, the average score was 3.29. Student motivation has an overall average of 3.29. The students' moral values have an average of 87.03.

Table 2. Descriptive statistic

Variable	Question Indicator	Average	Total Average
Family Support	DK1	3.38	3.24
	DK2	3.31	
	DK3	3.24	
	DK4	3.24	
	DK5	3.27	
	DK6	3.18	
	DK7	3.17	
	DK8	3.16	
Emotional Intelligence	KE1	3.08	3.29
	KE2	3.10	
	KE3	3.24	
	KE4	3.50	
	KE5	3.46	
	KE6	3.37	
	KE7	3.35	
	KE8	3.32	
	KE9	3.24	
Motivation	M1	3.19	3.32
	M10	3.38	
	M11	3.45	
	M2	3.42	
	M3	3.31	
	M4	3.34	
	M5	3.29	
	M6	3.22	
	M7	3.18	
	M8	3.30	
	M9	3.46	
Achievement		87.03	

The conceptual framework for the relationship between variables when analyzed using the Mediation Partial Least Square Structural Equation Model method is presented in Figure 1. In this figure, the indicators that make up each latent variable and the relationship between the latent variables are explained.

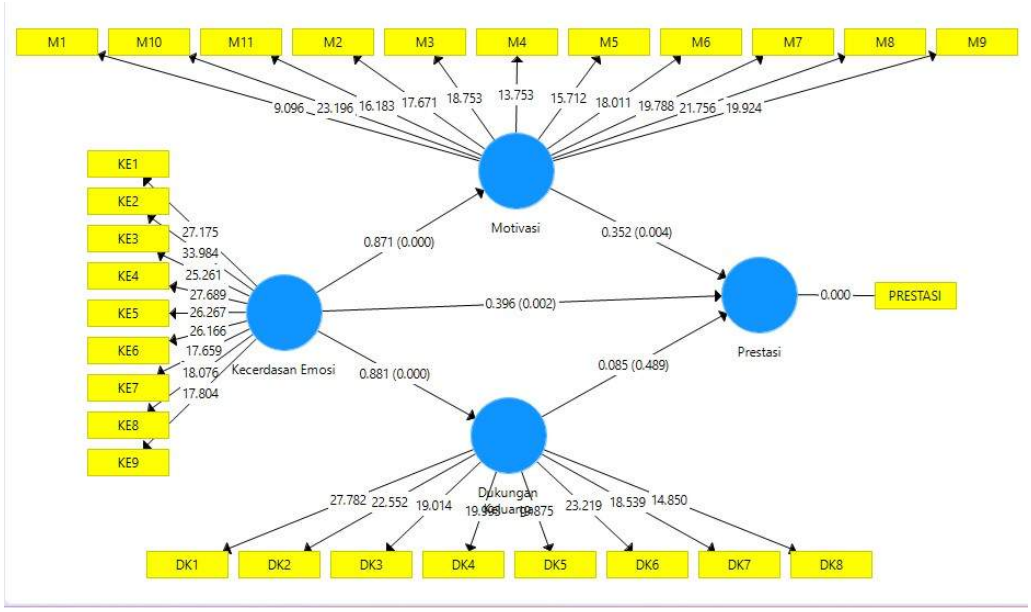

Figure 1. Research structural model framework

The latent variable in this research is composed of several indicators. The constituent indicators must meet the validity test. The validity test in the PLS-SEM method uses the outer loading value. The outer loading value of each question indicator is compared with the reference value. The indicator is declared valid if it has a value above 0.708.

Table 3. Outer loading

Variable Latent	Indikator Pertanyaan	Outer Loading
Family Support	DK1	0.81
	DK2	0.78
	DK3	0.77
	DK4	0.72
	DK5	0.72
	DK6	0.76
	DK7	0.72
	DK8	0.68
Emotional Intelligence	KE1	0.84
	KE2	0.84
	KE3	0.81
	KE4	0.86
	KE5	0.82
	KE6	0.80
	KE7	0.71
	KE8	0.73
	KE9	0.74
Motivation	M1	0.52
	M10	0.75
	M11	0.68
	M2	0.76
	M3	0.72
	M4	0.68
	M5	0.71
	M6	0.72
	M7	0.76
	M8	0.77
	M9	0.75

Based on the results of the outer loading values in table 3, it is known that there are two question indicators that have a value below 0.708, namely the 8th question indicator on family support. In the motivation variable, there are two questions, namely question 1 and question 4, whose outer loading value is below 0.708. These three indicators can be considered for review if they are to be used in further research.

Table 4. composite reliability

Variable	Composite Reliability
Family Support	0.910
Emotional Intelligence	0.940
Motivation	0.919

Composite reliability is used to measure reliability (internal consistency) in an instrument. An instrument is declared reliable if its composite reliability value is above 0.7. The composite reliability value is presented in table 4. In this table, it can be seen that the instrument for measuring family support, emotional intelligence and motivation is reliable because it has a value above 0.7.

Table 5. Outer loading

Indirect relationship	Coefficient	T Statistics	P Values
Emotional Intelligence -> Emotional Intelligence -> Achievement _	0.075	0.691	0.490
Emotional Intelligence -> Motivation -> Achievement _	0.307	2.935	0.003

Table 4 explains the results of hypothesis testing in research using PLS-SEM Mediation. Conclusions are based on the p_value obtained. The p value for the family support variable mediating the relationship between emotional intelligence and achievement is 0.49. This value is greater than 0.05, so the conclusion obtained is that the family support variable does not act as a mediating variable between emotional intelligence and achievement. The p value of the motivation variable is 0.003. This value provides a basis for decision making that the motivation variable acts as a mediating variable between the relationship between emotional intelligence and achievement or the motivation variable causes an indirect influence between emotional intelligence and achievement.

Table 6. R-squared Model

Variable	R Square Adjusted
Achievement_	0.63

The goodness of the structural model in this research can be seen from the resulting adjusted R-square value. The adjusted r square value in this study is 0.63, which means that the structural model in Figure 1 is able to explain 63% of the total diversity of existing data. The results of this research prove that the motivation variable acts as a mediating variable which causes an indirect relationship between emotional intelligence and learning outcomes in line with the research conducted Ghabiyaah (2021). His research concluded that learning motivation has a significant influence in mediating the influence of growth mindset and parenting style on academic grit. This is in line with the behaviorist theory put forward by Gagne and Berliner which states that learning is a change in behavior that occurs as a result of the interaction between stimulus and response. In this theory, the main focus lies on input in the form of stimulus and output in the form of response. Stimulus here refers to student learning motivation, while response refers to student learning outcomes. There is a close relationship between learning and motivation, where motivation can improve the quality of learning outcomes. When students are motivated, the learning process will be more effective. Learning motivation functions as a driving force that moves a person to achieve learning goals. The purpose of this learning is student learning outcomes. Students who have hopes and ambitions for the future are more likely to be involved in the learning process in order to achieve achievements in class, for example becoming class champions. Thus, they will study harder to get better grades than their friends. In other words, high motivation is very important to achieve optimal learning outcomes (Indriati et al., 2024).

4.0 Conclusions and Recommendations

The conclusions of this research are as follows,

1. The motivation variable acts as a mediating variable or causes an indirect relationship between the relationship between emotional intelligence and learning outcomes because the resulting significance value is 0.003.
2. The family support variable does not act as a mediating variable or does not cause an indirect relationship between the relationship between emotional intelligence and learning outcomes based on the resulting significance value of 0.49, where this value is greater than 0.05.

Suggestions that can be given based on this research are: Research needs to be developed to include other variables such as socio-economic variables. School environment, or other variables and Increase the number of samples in the research so that they are representative.

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Uncovering the Challenges of Indonesian EFL Lecturers in Implementing the Higher Education Curriculum

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Abstract

This study aims to uncover difficulties that English as a Foreign Language (EFL) lecturers face in implementing the Higher Education Curriculum (HEC) in undergraduate English major programs in Indonesia. This qualitative case study involved 20 participants from 18 higher education institutions in Indonesia selected using a purposive sampling technique. The data were collected through online semi-structured interviews and analysed using thematic analysis. The study reveals four themes as the challenges faced by the EFL lecturers in implementing the HEC: lecturers' limited understanding of the HEC, a greater workload, insufficient facilities, and students' low motivation and different levels of competencies. The study provides deeper insights into lecturers' experience while implementing the curriculum in their classroom practices.

Keywords: Challenges, EFL lecturer, Higher Education Curriculum (HEC), Implementation.

1.0 Introduction

Curriculum change is a common phenomenon in Indonesia, as it is in many other countries globally. Each country has different reasons for curriculum change. For example, in Indonesia, the government introduced a new curriculum called the Higher Education Curriculum (HEC) to equip graduates with competencies and skills of the 21st century and for global demands. Each higher education institution in Indonesia designs the HEC based on the National Higher Education Standards (NHES), which consist of education, research, and community services standards. Furthermore, the HEC is also designed based on the Indonesian Qualification Framework (IQF), comprising nine levels of qualification. Indonesian graduates are expected to have competencies and qualifications aligned with the levels of the IQF. For example, Indonesian graduates are expected to have three layers of work competencies: operators (levels 1 to 3), technicians or analysts (levels 4 to 6), and experts (levels 7 to 9). In educational pathways, levels 1 to 2 correspond to graduates from junior and senior high school, levels 3 to 5 pertain to diploma graduates (diploma 1, 2, and 3), and levels 6 to 9 are designated for graduates from higher education (Ministry of Education and Culture, 2013).

The HEC emphasises the achievement of learning outcomes and a student-centred instructional methodology. The construction of learning outcomes in conjunction with the IQF consists of four elements: morals and ethics, professional competencies, knowledge comprehension, and authority and responsibility. Moral and ethical principles relate to the behaviours and attitudes that characterise Indonesian identity. These attitudes and beliefs are internalised throughout the schooling process. Work competencies encompass an individual's ability to utilise appropriate methods and strategies effectively, deliver exceptional results, and comprehend the relevant circumstances and standards associated with their work process. Knowledge understanding denotes an individual's comprehensive mastery of a specific topic and ability to demonstrate their expertise in that domain. Authority and responsibility signify the established range of duties and the essential minimum level of authority of an individual (Ministry of Education and Culture, 2020).

The HEC is a top-down policy proposed by the Indonesian government and the HEC implementation is mandatory for universities in the Indonesian education system. Although the HEC has been implemented for more than a decade, the implementation of the HEC still leaves numerous problems for lecturers, including insufficient information on how to implement the HEC in the classrooms (Naibaho & Silalahi, 2022) and inadequate support regarding facilities, resources, and curriculum guidelines (Solikhah & Budiharso, 2019). In addition, unsuccessful implementation of the curriculum may occur because curriculum change frequently disregards the actual classroom practices, the obstacles that teachers or lecturers encounter during the curriculum implementation, and the alignment between the intended and enacted curricula.

The findings from previous studies revealed numerous challenges encountered by teachers or lecturers in curriculum implementation. In the global context, Zhao et al. (2019) found two types of challenges in curriculum implementation in China, namely individual challenges (e.g., teachers' beliefs) and contextual challenges (e.g., challenges from school culture). Similarly, Wang and Cheng (2009) who conducted a survey study with 248 EFL lecturers in China also revealed two main challenges in the EFL curriculum implementation: internal factors, such as teachers' knowledge of curriculum and external challenges, including school resources support. Both studies show that teachers as the implementers of the curriculum and institutions where the curriculum is implemented become the main challenges in curriculum implementation. Another study was conducted by Shah in 2015. He found that a new curriculum implemented in colleges in Pakistan was not only influenced by teachers and institutions but also by learners and contextual factors, such as cultural values and government policy. In the Indonesian context, several researchers revealed numerous factors influencing the implementation of the curriculum. For example, Naibaho and Silalahi (2022) examined the implementation of the curriculum in a private university in Jakarta and found that the main challenge of curriculum implementation came from lecturers. Neliwati et al. (2019) revealed the fact that lack of coordination among university stakeholders, lack of facilities and understanding of the curriculum are the main challenges faced by lecturers in implementing the curriculum in their classrooms.

The findings from the previous studies provide important information that teachers' beliefs, attitudes, and understanding of the curriculum are essential factors in curriculum implementation. In addition, providing facilities and resources improves the effectiveness of curriculum implementation. Identifying more challenges faced by lecturers is essential for giving directions on curriculum change and implementation. However, studies exploring lecturers' challenges during curriculum implementation are still limited. This study is important since it explores this phenomenon regarding the implementation of English curricula in Indonesian higher education institutions from the perspectives of EFL lecturers. Lecturers play a key role in delivering the curriculum in their classroom practices and transferring it to their students. They are considered important factors in the success or failure of the change because their knowledge, understanding, beliefs, perceptions, and thoughts influence how they implement the curriculum effectively in their classroom (Li, 1998; Park & Sung, 2013; Taole, 2015). Furthermore, through exploring their experience in implementing the curriculum, this study offers valuable insights to the curriculum planners and policymakers on what challenges the lecturers face during the implementation so that they can offer support for better curriculum implementation. Thus, this study explores the challenges EFL lecturers face in implementing the HEC in undergraduate English major programs in Indonesia.

2.0 Methodology

This study employs a qualitative interview method to provide a deep and in-depth insight into an individual's experiences, thoughts, and perceptions (Kvale, 1996). Qualitative interviews are ideal for studying how EFL lecturers perceive and experience during curriculum implementation. The participants were selected using a purposive sampling technique. This technique is used to capture and describe consistent themes and acquire information-rich data from diverse participants (Patton, 2002). I contacted 30 potential participants, and 20 agreed to participate in the interview, among 20 participants, nine male and eleven female lecturers. Participant Information Form (PIF) and Consent Form were sent to them before conducting semi-structured interviews online via Zoom. The interview protocol was used to elicit challenges that lecturers faced during the HEC implementation. Each interview took approximately 40 to 45 minutes. The interviews were recorded and transcribed verbatim. Pseudonyms and identification codes were used for the recorded interview files and the transcripts to be easily identified before analysis and to protect the participants' confidentiality. The data were analysed using thematic analyses by following six phases (Braun & Clarke, 2006; 2022). First, familiarising myself with the data. Second, doing coding. Third, generating candidate themes. Fourth, developing and reviewing themes. Fifth, refining, defining, and naming themes. Six, producing the report.

3.0 Findings and Discussions

This study reveals four themes as the challenges faced by EFL lecturers in implementing the HEC in undergraduate English major programs in Indonesia. The four themes are elaborated in the following paragraphs.

3.1 Lecturers' limited understanding of the HEC hinders effective implementation of the HEC

Lecturers were the primary implementers of the HEC in the classroom, which was essential for curriculum enactment. The effective implementation of the curriculum was significantly influenced by their motivation to comprehend the HEC, whereas the successful implementation of the curriculum was impeded by their lack of motivation to comprehend the HEC. Several participants of this study mentioned that their limited understanding of the HEC hindered the enactment of the HEC in their classrooms. For example, Meidi and Fandi conveyed that "not every lecturer has a good understanding of the HEC" and "many lecturers do not really understand KKNI in detail". In addition, Nila added that lecturers still have limited understanding and diverse conceptions of the HEC although the HEC has been implemented for years. She stated, "In my department, there are around 15 or 16 lecturers, and I'm sure that not all of us have the same understanding about the HEC". Furthermore, Putri who was one of the policymakers in her department mentioned that "I didn't know much about the HEC, even though I was part of the department…the information about the HEC is not that massive in my university". The data show that lecturers' limited understating of the HEC influences their curriculum implementation. Erihadiana (2019) and Neliwati et.al. (2019) stated that lecturers possessing insufficient curricular knowledge and inadequate understanding have challenges in formulating lesson plans and executing the curriculum within their classes. However, lecturers with a comprehensive understanding of the HEC have confidence and positive attitudes toward curriculum enactment in their classrooms (Nevenglosky et al., 2018; Tichnor-Wagner et al., 2018).

3.2 The HEC imposes a greater workload on lecturers

Some participants of this study mentioned that the HEC provides a greater workload for them, particularly in preparing curriculum documents. For example, Meidi said, "The idea to me is good, but then the administrative work, I think, is still too much". In a similar vein, Suherman reported that he did not encounter any issues with the curriculum's implementation; however, he perceived his workload as burdensome prior to its enactment in his classroom. He said, "The implementation is not really hard if we understand the main goal of the curriculum. But the problem is, there are a lot of administrative things that we have to deal with". The data show that the HEC forces lecturers to do a lot of preparation before enacting the curriculum in their classrooms.

3.3 Institutions provide insufficient facilities to support the HEC implementation

Another challenge faced by lecturers during the HEC implementation was that their institutions did not provide adequate facilities, such as a lack of language laboratories and teaching resources, and limited access to the Internet. As stated by Putri, "The internet provided by the university is very limited, not for the students, even for the teacher is also limited". Suherman added that lecturers need language laboratories to help them teach English and implement the HEC. He reported that "There are other external factors that can influence the implementation, such as the facilities, particularly in English language teaching, we need a laboratory". Due to inadequate facilities, lecturers had difficulty in implementing the HEC effectively in their classrooms. These findings align with prior research indicating that inadequate facilities, including a scarcity of classrooms and insufficient resources, impede the curriculum enactment in Indonesian higher education institutions (Rusdiana & Nasihudin, 2018; Sulistiyo et al., 2019).

3.4 Students have low motivation and come from different levels of competencies

The last challenges revealed from the interview data were that students' low motivation and their different levels of competencies hinder lecturers from implementing the HEC effectively. Students exhibiting low motivation and engagement in curriculum implementation sometimes demonstrate disinterest and minimal participation in classroom activities. Meidi and Mulyana mentioned that "they get used to being spoon-fed and listening to the lecturer lecturing" and "just come like an empty glass. So, they come to the class, they are waiting for the lecturers what will the lecturers give to them". Another difficulty faced by lecturers in implementing the HEC was students' different levels of competencies. As experienced by Ani, implementing the HEC with different levels of students' competencies was difficult. She stated, "The difficulty that I face most in class is the variation in the ability of students. There are students who are very smart, and there are students who are probably under average".

4.0 Conclusion

The study has shown that lecturers face four main challenges during the HEC implementation, namely lecturers' limited understanding of the HEC, a greater workload, insufficient facilities, and students' low motivation and different levels of competencies. The study shows that curriculum development is not just a matter of writing policy documents – but that extensive and ongoing work is needed to ensure that curriculum changes penetrate down into the classroom. I trust that this research will enable curriculum planners in Indonesia and other similar contexts, both currently and in the future, to enrich their understanding of curriculum implementation, particularly in higher education, from the perspectives of lecturers. In addition, this study provides valuable information to national and institutional policymakers to rethink curriculum planning and implementation and to make better and well-informed decisions in curriculum change policy in the future.

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Portrait of Attitudes and Behaviors of Environmental Literacy of Students: Reality and Recommendations

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Abstract

Finding out how knowledgeable students are about environmental issues, environmental care attitudes, and responsible behavior is the aim of this study. Students from one of the 64 junior high schools in the Nganjuk district make up the study's sample. Literature reviews and tests of students' environmental literacy are part of the data collection process for this project. The environmental literacy test questions utilized in this study were taken from the Middle School Environmental Literacy Survey (MSELS) standard assessment. Different average values were obtained when the average environmental literacy score was calculated using two environmental literacy indicators: 76.32% for environmental care attitudes (excellent category) and 23.68% for ecologically responsible conduct (poor category). The difference illustrates that there is a very significant difference between the attitude of caring and the environment and the behavior of responsibility towards the environment, which means that junior high school students in the Nganjuk area have a fairly good knowledge which implies that the attitude of caring for the environment has a good category but the real action of the attitude of caring has not been seen. Based on a literature review, it was found that there are three recommendations that can be made to improve attitudes and behaviors of responsibility towards the environment, namely innovation in the use of learning models, innovation in learning media, and innovation in school programs.

Keywords: Environmental Literacy, Students, MSELS, Environment.

1.0 Introduction

The world today is faced with a variety of increasingly complex and urgent environmental challenges. Climate change, pollution, land degradation, and biodiversity loss are some examples of global environmental problems that have a significant impact on human life and ecosystems (Nugroho, 2018). The Earth's survival is being threatened by the climate catastrophe, which is typified by increasing sea levels, harsh weather, and global temperatures. In addition, according to (OECD, 2012) other environmental issues like air and water pollution, land degradation, and biodiversity loss are all becoming more concerning in *Environmental Outlook to 2050*: *The Consequences of Inaction*. Environmental Outlook to 2050: The Consequences of Inaction Other environmental issues like biodiversity loss, land degradation, water pollution, and air pollution are also becoming more concerning. These problems not only impact the physical environment, but also trigger various social, economic, and political problems.

Each country and community faces specific environmental challenges. In Indonesia, for example, forest degradation, river and sea pollution, inadequate waste management, and uncontrolled urbanization are some examples of environmental problems that are often encountered. These problems are often interrelated and exacerbated by factors such as population growth, industrialization, and overconsumption. This condition not only threatens ecosystems and biodiversity, but also negatively impacts public health and the economy.

Environmental literacy is the key to creating a sustainable society whose ability to live in peace with nature and the ability to live in peace with nature and create a sustainable society depends on environmental literacy. To address increasingly complex environmental challenges, deep awareness and understanding of environmental issues are needed. Environmental literacy includes knowledge of ecological processes, how human activity affects the environment, how human activity affects the environment, and being able to take responsible actions to protect the environment that can be applied to address environmental problems (Hollweg et al., 2011).

Environmental education from an early age can instil the values of caring for the environment in the younger generation (Susanti, W. & Nupus, 2022). Environmental education has a very important role in

improving people's environmental literacy People can develop ecological knowledge, cognitive abilities, attitudes toward environmental care, and environmentally conscious conduct through environmental education (Hollweg et al., 2011). Environmental education programs can be undertaken at various levels, from early childhood education to higher education, as well as through informal activities such as trainings, workshops, and environmental campaigns.

Diverse environmental education programs have been implemented globally in an effort to develop citizens who have environmental literacy skills. In 1970, *The International Union for the Conservation of Nature and Natural* Resources officially coined the term "environmental education" in Nevada, USA. Then at the Tbilisi UNESCO Intergovernmental Conference (UNESCO, 1978) resulted in an agreement on a set of goals and objectives as well as guiding principles of environmental education (Susanti & Nupus, 2022). According to (Febriasari & Supriatna, 2017), students who have environmental literacy skills will show responsible behavior towards the environment. Through environmental education, it is hoped that it will form a generation of environmental literacy who can manage the environment wisely. Because solving environmental problems will only involve people who have awareness, literacy, and sensitivity to the environment (Köse et al., 2011).

Various studies that have been conducted by (Febriasari & Supriatna, 2017; Pujianti, 2019; Utami, 2019) show that low environmental literacy is the main obstacle in environmental conservation efforts. Studies have been carried out to evaluate the community's degree of environmental literacy, the variables influencing environmental literacy, and the efficacy of environmental education initiatives. The results of this study show that environmental literacy is still a challenge for many people, especially in developing countries. However, research also shows that with the right approach, environmental literacy can be significantly improved.

This study aims to determine the level of environmental literacy of students, especially those related to attitudes towards environmental concern and responsible behavior towards the environment, as well as suggestions for raising students' environmental literacy. It is hoped that this research can be considered in the development of the curriculum and government policies to improve students' environmental literacy skills.

2.0 Method

The research method used in this study is a descriptive method. This research was conducted in junior high schools in Nganjuk Region, East Java, Indonesia. The study's sample consists of 64 grade VII students, while the population consists of all junior high school students in the Nganjuk Area. In this study, there are four stages that are carried out. These stages include, problem identification, literature study, data collection, and report preparation. The first stage, namely problem identification, is carried out by digging up information related to environmental problems in the school environment and its relationship with the ongoing education system. The second stage is to collect literature sourced from books, journals, and the internet. This stage is carried out to complete the vocabulary of concepts and theories through the study of theories and find the right recommendations to improve environmental literacy. Then the third stage is data collection through the provision of a number of questions related to environmental literacy to research subjects. The final step is to write a report based on the research findings.

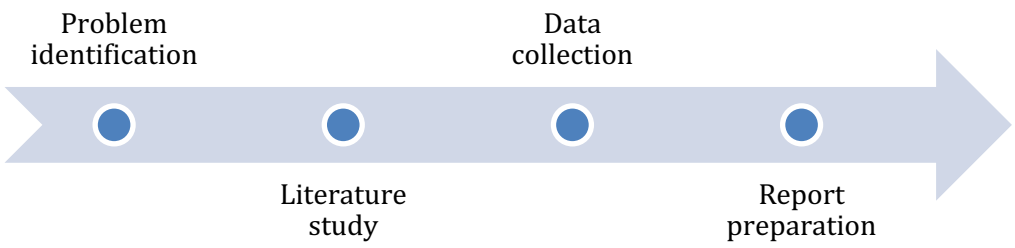

Figure 1. Research flow diagram

Environmental literacy test questions modified from the *Middle School Environmental Literacy Survey* (MSELS) standard assessment are used in this study to gather data on students' environmental literacy. As stated by (McBeth, W. & Volk, 2009), MSELS can be used as a benchmark for environmental literacy evaluations in a number of countries because it is considered effective in measuring environmental literacy of secondary school age children. This study's environmental literacy assessment consists of 2 components: consciousness of the environment and environmentally responsible behavior. For the other 2 indicators, namely environmental knowledge and environmental competence, tests will be carried out in the next research. The following will display the general environmental literacy indicators. Table 1.

Table 1. Environmental literacy test components tested

No	Indicators	Sub Indicators	Instrument Type	Number of Questions
1.	Environmentally conscious attitude	a. Interest in the environment b. Sensitivity or concern for the environment c. Intention to act in maintaining environmental sustainability	Questionnaire	9
2.	Responsible behavior towards the environment	Responsibility for environmental balance	Questionnaire	3
		Sum		12

For the environmental literacy category in this study, the Eco Schools Value category is used according to (Igbokwe, 2016). The following are the categories.

Table 2. Environmental Literacy Categories

Score	**Interpretation**
<50	Very Less
50-59	Less
60-69	Enough
70-79	Good
>80	Very good

(Source: (Igbokwe, 2015))

3.0 Results and Discussion

From the identified environmental literacy categories, it can be seen that environmental literacy skills of junior high school students in the Nganjuk Region, East Java, Indonesia is category of good. This is based on the percentage in each indicator dominated by the good category. Based on the findings of determining all student's average environmental literacy score, it shows that it is 79%, which is in the good category. (Igbokwe, 2015). The percentages of student success categories in junior high schools in the Nganjuk Region are as follows.

Table 3. Results of the Percentage of Environmental Literacy Achievement of Students in Junior High Schools in the Nganjuk Region

No	Category	Value range	Frequency	Percentage (%)
1	Less than once	<50	1	1,56
2	Less	50-59	1	1,56
3	Enough	60-69	8	12,5
4	Good	70-79	22	34,38
5	Very good	>80	32	50
Sum			64	100

Table 3 shows that the criteria for achieving environmental literacy of junior high school students in Nganjuk Region, East Java, Indonesia with a sample of 64 students, the highest percentage is 50%, which is in the very good category. The percentage with a good category has a value of 34.38%. The percentage of

categories is quite as much as 12.5%. As well as the percentage of the less and less once categories is 12.5% each. It is evident from the average environmental literacy score that junior high school pupils in the Nganjuk area have an average score of 79%, falling into the good category.

There are four indicators of environmental literacy that can be used to assess students proficiency, including environmental competence, environmental knowledge, environmental awareness and responsible behavior towards the environment. However, because this study was conducted in phases, the researcher only assessed students on two environmental literacy indicators: environmental awareness and environmentally responsible behavior. In the following study, cognitive skills will be assessed for the other two variables, specifically ecological knowledge. The mean environmental literacy score of Nganjuk junior high school students on each indicator is shown in the bar chart in Figure 2.

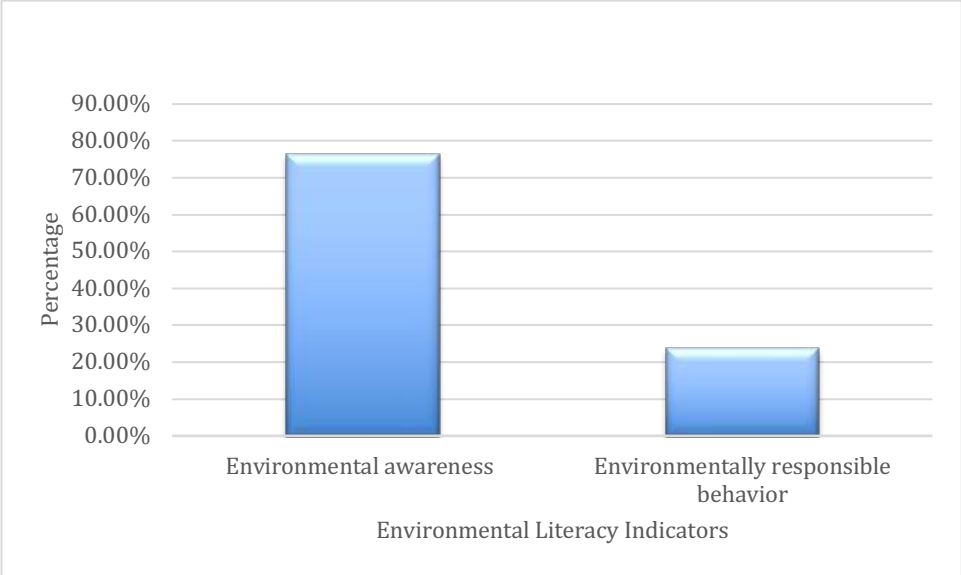

Figure 2. Comparison of average scores on each environmental literacy indicator

Figure 2 shows that the highest average score is found in the environmental awareness indicator which has an average score of 76.32% as expected. Meanwhile, the average indicator of environmentally responsible behavior has an average score of 23.68% with less criteria. The findings of the data analysis indicate that there is a disconnect between environmentally conscious conduct and environmental awareness, and that the average environmental literacy achievement of junior high school pupils in the Nganjuk Area does not fall into a very good category.

The findings of the data analysis indicate that junior high school pupils in the Nganjuk area do not reach the best levels of environmental literacy, which is consistent with a number of earlier research. A study conducted by (Santoso, 2017), for example, shows that the level of environmental literacy of students in Indonesia is still generally low. This is caused by a number of things, such as the absence of learning activities focused on practice, the lack of environmental support, and the lack of curriculum integration of environmental resources. (Ozsoy et al., 2012) stated that students' low literacy skills were not due to the lack of books about the environment but because there was no school environment that gave students the freedom to interact directly with the environment.

Furthermore, research (Khoirunnisa et al., 2023) highlights the importance of the role of teachers in improving students' environmental literacy. Teachers not only play the role of material presenters, but also as facilitators in developing critical thinking skills, problem-solving, and student cooperation related to environmental issues. Unfortunately, not all teachers have adequate competence in teaching environmental materials.

The Environment Education and Training Partnership (EETAP) affirms the idea of environmental literacy in (NAAEE, 2011) stating plainly that an environmentally literate individual knows what he will do for the environment and knows how to achieve it. According to (Miller, 2009) students' environmental literacy is also influenced by what they learn in school. The most special thing in the field of education is

learning, which is the process by which a person's environment is intentionally controlled to enable him or her to engage in certain actions under certain circumstances or produce certain responses.

Based on the findings of the study that show the low achievement of environmentally responsible behavior among junior high school students in the Nganjuk Area, it can be concluded that there is still a gap between the conceptual understanding of the environment and its application in daily actions. This condition is in line with several previous studies that indicate that although students have knowledge about environmental issues, it is not always directly proportional to sustainable behavior.

Based on the literature review conducted, it is known that to improve environmental literacy, cooperation from the academic community and the surrounding community is needed, as stated in research by (Fikriyah et al., 2020; Samidjo et al., 2023). The researcher recommends three innovations as follows:

1. Innovation in the Use of Learning Models

   The Learning Model is one of the ways teachers deliver material to students in order to arrive at the desired goal precisely. The learning model chosen by teachers has a great influence on improving students' environmental literacy as stated by (Ahmadi, 2022; M. Sari et al., 2020). Here are some Learning Models that have been proven effective and practical to improve environmental literacy.

   a. Project Based Learning Model

      Project-Based Learning provides an effective framework for developing environmental literacy in students by making students interact directly with the environment and produce a work that can solve environmental problems so that students will have the responsibility to maintain environmental balance, while environmental literacy provides interesting and relevant topics for student projects. This is in accordance with research conducted by (Adilah et al., 2024; Qhutra Nada Salym et al., 2022; Sirat et al., 2022) which stated that Project-Based Learning can significantly improve students' Environmental Literacy.

   b. Problem Based Learning Model

      Problem-based learning provides students with a forum to hone their sensitivity to the environment and find solutions to the problems they find so that students are indirectly accustomed to feeling responsible for the environmental problems around them. This statement is in line with research conducted by (Putri et al., 2024; Siddiq et al., 2020)which resulted in research with the conclusion that the problem-based learning model makes students have interest and sensitivity to problems that occur in the student's environment which has implications for improving students' environmental literacy skills, characterized by the ability of students to find solutions to problems in their environment.

   c. Science, Technology, Engineering, Mathematics (STEM) Learning Model

      STEM learning encourages students to use scientific methods in investigating environmental issues, from formulating hypotheses to collecting and analyzing data. Environment-focused STEM projects are usually relevant to the environmental issues that are happening around students, thus increasing their awareness of environmental issues. By being actively involved in the project, students feel they have a role in protecting the environment and are motivated to take action. This statement is reinforced by research conducted by (Anita et al., 2020; Kusnadi et al., 2023) where both agreed that Learning using the STEM model is very effective and efficient if used to improve students' environmental literacy.

   d. Ethnoscience Approach

      Ethnoscience is a learning approach that combines modern scientific knowledge with local or traditional knowledge of a society. Ethnoscience draws on local knowledge about the environment that has been developed by communities over the centuries. This knowledge is often very relevant to local environmental conditions and can be a strong starting point for learning. Connecting learning with local knowledge, students feel more engaged and connected to their surroundings. Research conducted by (Istikomayanti et al., 2023) states that learning with ethnoscience motivates students to act for environmental conservation because the ethnoscience approach provides students with the experience of studying the environment from past history to

the present.

2. Learning Media Innovation

The use of innovative learning media has proven to be very effective in increasing students' interest in learning, including in terms of environmental literacy. Abstract environmental concepts, such as the water cycle or climate change, can be more easily understood by students through the visualizations provided by the learning medium. (Anisa Noverita et al., 2023) developed comics based on local wisdom that has been proven to significantly increase environmental literacy. In addition, research conducted by developing animated videos also obtained results that stated that animated video learning media is very feasible and very effective for increasing environmental literacy (Kasmini, 2023). It is also supported by research conducted by (Vebrianto et al., 2023) by developing a Digital Scrapbook which also has very significant results to improve students' environmental literacy.

3. School Program Innovation

School programs have a very important role in improving students' environmental literacy. One of the school programs that can increase environmental literacy is the Adiwiyata School. Adiwiyata School is a program launched by the Ministry of Environment with the aim of realizing a school that cares and has an environmental culture. Research conducted by (Aprilianti, 2023) he Adiwiyata Program can positively impact pupils' acquisition of environmental literacy. Comparing the environmental literacy profiles of students attending Adiwiyata and non-Adiwiyata schools (E. Sari et al., 2023) found that students attending Adiwiyata schools had a greater level of environmental literacy.

In addition to the Adiwiyata School, the Waste Bank Program is also a program that can have a positive impact on students' environmental literacy. This program aims to reduce the amount of waste produced by schools, sort waste, and recycle waste that still has economic value. Based on research conducted by (Anggraeni & Irma Yanti, 2024), it is stated that the waste bank program in schools is effective in schools to train environmental literacy for the entire academic community in the school because the waste bank program in schools will make all elements of the school maintain waste so that it is no longer a pollution in the school environment, in addition to that it can also train students about the benefits of the waste they produce.

4.0 Conclusion

The environmental literacy of junior high school students in Nganjuk obtained different averages: 76.32% of them had an attitude of caring for the environment (good category) and 23.68% had environmentally responsible behavior (bad category). The researcher recommends 3 innovations to improve students' environmental literacy, namely innovation in the use of learning methods, learning media innovation, and School Program Innovation.

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Technical and Vocational Education and Training (TVET) Teachers Burnout: An Analysis

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Abstract

Job burnout has become a common phenomenon in modern society. Compared with other industries, job burnout is recorded higher in the education service industry. In many cases, teachers have the highest incidence of job burnout at school. Teacher burnout is still widespread in education services, including the Technical and Vocational Education and Training (TVET) field. Teacher burnout has become a pressing issue in the TVET sector, significantly impacting educators' mental health, job performance, and overall quality of life. This study aims to analyze the existing research materials and data on teacher burnout in the field of TVET in China. An analysis of the literature will summarize the characteristics of TVET teacher burnout in China and recommend corresponding solutions. The findings show that workload, job demands, and role ambiguity can significantly contribute to burnout. Physical and organizational environments may not directly influence burnout. Positive interaction and strong professional relationships can provide emotional support and reduce feelings of isolation—individual differences determining susceptibility to burnout.

Keywords: Social development, teacher burnout, motivation.

1.0 Introduction

The Chinese government has implemented a series of regulations and policies to promote the development of Technical and Vocational Education and Training (TVET) in response to the evolving economic landscape and the need for a skilled workforce. Since the establishment of the People's Republic of China in 1949, vocational education has been prioritized as a crucial component of the national education system, reflecting its significance in fostering practical skills and enhancing employability among graduates (Tian, 2022). The government recognizes that TVET is essential for achieving social equity, inclusion, and sustainable development, as it equips individuals with the necessary skills to meet labor market demands (Jiang et al., 2022).

In recent years, the Chinese government has introduced several strategic frameworks, such as the National Education Development Plan outlined in the 13th Five-Year Plan, which emphasizes the importance of vocational education in the context of a new technological revolution and global educational trends (Jiang et al., 2022). This plan includes initiatives to enhance the quality of vocational education by developing "double-qualified" teachers—those who possess both academic and practical expertise—thereby improving the overall educational experience for students (Zhu et al., 2022). Furthermore, the government has recognized the need for school-enterprise cooperation as a vital mechanism to bridge the gap between education and industry, ensuring that vocational training aligns with the actual needs of the labor market (Liu et al., 2022; Cheng & Zhou, 2022).

The expansion of higher vocational education has also been a focal point of government policy, with significant increases in enrollment rates and the establishment of new vocational institutions (Bingbing et al., 2023). This expansion is complemented by efforts to improve the quality of education, including implementing innovative teaching methods and curriculum reforms designed to enhance student engagement and employability (Qiu, 2023). However, challenges remain, such as regional disparities in educational quality and the need for a more robust financial investment system to support vocational education (Guo, 2022).

Technical and Vocational Education and Training (TVET) in China was introduced as early as the reform and opening stages. In recent years, with the transformation and upgrading of China's industries, the demand for technical talents has continued to rise, causing the government to introduce relevant policies

once again to promote the full development of TVET. Teacher burnout has gradually emerged in this field and attracted widespread attention today.

Teacher burnout is a widespread problem. Usually, teacher burnout will lead to a decline in teachers' teaching ability, negatively impacting students, schools, and teachers. In China, because TVET is often regarded as the "second choice" for students, TVET education is always placed below traditional education. Therefore, pressure from social recognition will directly affect TVET teachers. In addition, due to the influence of school systems, working environment, and teachers themselves, the problem of TVET teacher burnout has become increasingly severe. Many colleagues around me feel numb to their work to varying degrees, unable to gain a sense of accomplishment, feel inadequate under the existing management and promotion systems, and even want to change jobs' (Zheng Xiaoyan, 2022).

The issue of teacher burnout in the context of TVET in China is multifaceted and influenced by personal, environmental, and societal factors. Addressing these challenges requires a comprehensive approach that includes enhancing teacher self-efficacy, improving school environments, and changing societal perceptions of vocational education. By focusing on these areas, it may be possible to reduce burnout rates and improve the overall quality of education in TVET settings

2.0 Addressing Teacher Burnout for Retaining Skilled Educators

Addressing teacher burnout is critical for retaining skilled educators, particularly in the context of Technical and Vocational Education and Training (TVET) in China. Teacher burnout affects educators' well-being and has profound implications for student learning outcomes and the overall quality of education. Research indicates that burnout among teachers can lead to emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment, which collectively hinder their effectiveness in the classroom (Agyapong et al., 2022; King et al., 2023).

The word "burnout" usually refers to an individual's feeling of exhaustion due to frustration with something or a feeling of powerlessness in which an individual has consumed much energy due to something and is exhausted from coping. Burnout is also known as job burnout. Freudenberger, an American clinical psychologist who first proposed the concept of "occupational burnout," proposed that occupational burnout is intended to describe workers in the service industry who work long hours, work intensively, and serve many customers. It results in a state of energy exhaustion and physical and mental exhaustion. American psychologist Maslach proposed three dimensions of occupational burnout: emotional exhaustion, depersonalization, and low achievement. The emotional exhaustion dimension is the core part of occupational burnout. It is characterized by declining individual enthusiasm for work, weakened enthusiasm, emotional loss, and a pessimistic attitude toward work and life. Depersonalization is characterized by a mechanical and indifferent attitude toward work targets, resistance to contact with colleagues and leaders, and a lack of emotion at work. Doubts about self-worth, inferiority complex, and loss of work motivation manifest the dimension of a low sense of achievement.

This paper believes that teacher burnout refers to teachers' psychological overload reaction when facing work. It is characterized by low mood and negative work attitude, usually caused by work pressure. Teacher burnout is an abnormal psychological and physiological state that hurts teachers' lives and work.

Factors leading to teacher burnout mainly include individual characteristics and work characteristics. Individual characteristic factors are mainly derived from demographic variables and personality characteristics. Relevant demographic variables in existing studies include age, gender, marital status, education level, etc., but the results are inconsistent (Blix & Mitchell, 1994; Cordes & Dougherty, 1993). Research on personality and job burnout shows that personality traits such as stubbornness, low self-esteem, external locus of control, neuroticism, type A personality, etc., are related to job burnout (Mills & Huebner, 1998).

Compared with individual characteristic factors, job characteristics correlate more with job burnout. Work characteristic factors usually include workload, role conflict and ambiguity at work, social support and resources, information and sense of control, interpersonal emotional pressure, etc. (Brissie, 1998; Karasek

& Theorell, 1990; Leonard, 2000).

Related research on the concept of burnout. Liu Weiliang (1999) pointed out that many foreign researchers have different definitions of "teacher burnout" in the same direction. "Teacher burnout refers to a stress response in which teachers cannot cope with their work smoothly." Li Chaoping (2003) pointed out through relevant research that due to frequent interpersonal interactions, the psychological fatigue caused by the inability of relevant individuals to reasonably relieve work pressure or the inability to handle the difficulties encountered during work properly is called occupational burnout (Occupational burnout), which can also be called It is "job burnout," sometimes also called "occupational fatigue," "work exhaustion," "career exhaustion," etc. Wang Qiandi (2022) believes that teacher burnout is the negative emotions such as boredom and fatigue caused by teachers' long-term lack of teaching achievement. This kind of burnout is not only a negative emotion but has deteriorated into a pathological professional psychological state.

Research on professional burnout among teachers in vocational schools. Sun Jingxin et al. (2021) In order to understand the current situation of job burnout among young and middle-aged teachers in colleges and universities and explore the mediating mechanism of emotion and self-esteem on job burnout, they used the Positive and Negative Emotion Checklist, Self-Esteem Scale and Occupational Burnout Questionnaire to survey a certain student in Beijing. A survey was conducted among 175 young and middle-aged teachers in colleges and universities. The research results verified the bivariate model of positive and negative emotions. Compared with emotion, self-esteem has a more direct impact on occupational burnout, which provides a valuable reference for improving occupational burnout.

To effectively address teacher burnout, it is essential to implement targeted interventions that focus on both individual and systemic factors. For instance, enhancing teachers' self-efficacy has been shown to mitigate burnout symptoms, as educators with higher self-efficacy are better equipped to manage stress and maintain their motivation (Arvidsson et al., 2019; Qiang, 2022). Creating a supportive school environment that fosters collaboration and collegiality can significantly reduce feelings of isolation and burnout among teachers (Adeoye, 2023). Research suggests that administrative support and a positive school climate are crucial in alleviating burnout and promoting teacher retention (Tsang et al., 2022).

Addressing teacher burnout is vital for retaining skilled educators in the TVET sector. By enhancing self-efficacy, fostering supportive school environments, and implementing innovative interventions, educational institutions can create a more conducive atmosphere for teachers, ultimately benefiting both educators and students alike.

3.0 Methodology

This paper uses a literature research method to analyze recent years' burnout research on TVET teachers in China. By reviewing relevant data on teacher burnout in vocational schools, the literature reviewed in this article mainly deals with thesis research on TVET teacher burnout by Chinese scholars in recent years. The author searched relevant literature on Internet platforms such as CNKI and Google Scholar, covering job burnout's definition and connotation. Straight suggestions for improvement were conceived based on the summary and organization of these literature materials.

The researchers used Excel tables to extract data and record information, including the author, year of publication, research purpose, main findings, etc. They provided a structured template for extracting and recording information from various academic references. Below is an example of how you might structure your Excel table, along with a few sample references formatted according to the specified fields: author, year of publication, research purpose, and main findings.

The compiled literature data and the factors affecting teacher burnout in the target literature were summarized. To summarize the compiled literature data regarding teacher burnout and the factors affecting it, the researchers presented a structured overview based on the possible references we may have. This summary will include key themes and findings related to teacher burnout and the factors identified in the literature in China that contribute to this phenomenon.

The literature on teacher burnout reveals a complex interplay of individual, organizational, and

societal factors that contribute to this pervasive issue. Addressing these factors through targeted interventions and supportive practices is essential for retaining skilled educators and improving the overall quality of education. By fostering a positive school climate, enhancing self-efficacy, and implementing peer support systems, educational institutions can create a more sustainable environment for teachers, ultimately benefiting both educators and students.

4.0 Findings and Discussion

Table 1 shows the five studied documents, including the title, content overview, author, publication date, etc.

Table 1: Document Analysis on China TVET Teacher Burnout

No	Title	Summary	Authors	Publication Date
1.	A study on job burnout and its influencing factors among teachers in Qingsu Vocational Secondary School in Chengdu	Analyze the factors of teacher burnout from the social, school and personal levels and give suggestions	Yangyao	05/2023
2.	Research on the InvestigationAnalysis and Mitigation Measures of Teachers' Job Burnout in Rural Secondary Vocational Schools ——Taking Three Rural Secondary Vocational Schools in Shantou City as an Example	This study conducts a questionnaire survey on a total of 304 teachers in three rural secondary vocational schools in Shantou City to explore the correlation between the gender, age, marriage and childbearing status of teachers in rural secondary vocational schools and teachers' job burnout	Zheng Xiaoyan, Zheng Xiaoqin	06/2022
3.	Research on Job Burnout and Management Strategies of Teacher in Guangdong Technical Colleges	This paper takes teachers of technical colleges in Guangdong Province as the research object, and through empirical research, investigates the current situation of job burnout, explores the relationship between teachers' organizational support, work pressure and job burnout in technical colleges and establishes a model.	Wu Qinxuan, Zhang Xiangyang	05/2022
4.	Research on occupational burnout of physical education teachers in higher vocational colleges in Shandong Province	This research mainly to investigate the status of physical education teachers 'burnout in higher vocational colleges in Shandong Province, and analyzes and analyzes the factors affecting teachers' burnout	Jiang Guangtian, Li Simin	06/2020

5.	A study on the causes and Countermeasures of teachers' burnout in Secondary Vocational Schools	This paper is based on the theoretical basis of combing and studying the existing literature on teacher burnout at home and abroad, using a combination of questionnaire survey and interview survey, with 197 teachers from three secondary vocational schools in Shijiazhuang City, Hebei Province as the research subjects. Aiming to analyze and summarize the results of secondary vocational school teachers in the region. Current status and causes of job burnout	Yu Mengmeng, Xie Yongqi	06/2020

- **Social environment:** Refers to society's expectations and appreciation of teachers; whether work can be objectively and fairly evaluated; teachers' salaries and benefits, etc.
- **School level factors:** Refers to the rules and regulations and work requirements formulated by the school; teacher performance evaluation and professional title evaluation; opportunities for teachers to further their training; working environment and working conditions, etc.
- **Personal factors:** The teacher's physical and psychological factors, interpersonal relationships, family relationships, etc.

Table 2: Factors Affecting Teacher Burnout

Document	Social Environment	School Level Factors	Personal Factors
1	√	√	√
2	√	√	√
3	-	√	√
4	√	√	√
5	√	√	√

'√': Indicates that the factor was mentioned in the Article.
'-': Indicates that this factor was not mentioned in the Article.

No. 1 document. It is mentioned that the above three factors will affect teacher burnout. Social environment: The public's recognition of secondary vocational schools is low, and the social status of vocational and technical teachers is not high, leading to their burnout. School level: Due to heavy workloads, imperfect school management systems, teachers' rights and interests not being protected, schools lacking career planning for teachers, etc., teachers are prone to burnout. Personal factors: Teachers have too high expectations for themselves but cannot achieve them; teachers' professional abilities cannot be improved; poor interpersonal communication and other factors make burnout prone.

No. 2 document. The above three factors were mentioned as influencing teacher burnout. Social environment: Limited government investment leads to poor school infrastructure and teacher salaries and benefits; TVET teachers have a low social status and cannot be respected; the public's understanding of vocational and technical education is shallow. School factors: The work is complex, teachers have a heavy workload, and there are many non-teaching matters; the school management system is rigid, various departments cannot cooperate with teachers' work well, and the assessment system is not humane; the teacher promotion system is backward, making it difficult for teachers to be promoted. Personal factors: Individuals have no long-term career plans and no sense of direction in their work; it is difficult to balance work and family conflicts, and they lack family support; teachers' mental health is easily neglected.

No. 3 document. Two factors were mentioned. School factors: Teachers' work pressure is high, resulting in obvious manifestations of the 'depersonalization' dimension. At the same time, the school organization has

a weak sense of support for teachers, which also leads to deepening "depersonalization" and teacher burnout. Personal factors: The research results show that personal factors such as teachers' marital status and academic level also cause large differences in burnout among different teachers.

No. 4 document. Three factors were mentioned. Social environment: The high expectations of parents, society, and education departments for teachers make them feel helpless and lost, leading to teacher burnout; work cannot be objectively and fairly evaluated; wages and benefits are low. School factors: Unreasonable evaluation of teachers; few opportunities for teachers to participate in training and further education; poor working environment and high work intensity. Personal factors: poor handling of interpersonal relationships, poor adjustment to work status, and pressure from multiple role plays all lead to teacher burnout.

No. 5 document. Three factors were mentioned. Social environment: There is an imbalance between society's high expectations for teachers and the low social status of TVET teachers; their salaries are low. School factors: Students have poor learning ability, require teachers to invest more time and energy, and have much non-teaching work; the school system is rigid and does not pay attention to teachers' mental health. Personal factors: Teachers cannot balance family and work; students ignore learning, resulting in low teacher achievement.

Existing research shows that the causes of TVET teacher burnout in China manifest in three main aspects: social environment, school-level factors, and personal factors. Therefore, the problem of TVET teacher burnout should be solved from the above three aspects.

4.1 Social Environment Level

Improve the recognition of vocational and technical schools. Local governments and education departments have stepped up their efforts to promote and support vocational education. Vocational Education Promotion Law of the People's Republic of China (Adopted at the 19th Session of the Standing Committee of the Eighth National People's Congress on May 15, 1996 (Adopted at the 30th Session of the Standing Committee of the 13th National People's Congress on April 20, 2022) The relevant regulations (revised at the fourth meeting) clarify the status of vocational colleges, improve teaching management and services, enhance reputation, and treat them equally with non-vocational colleges (Yangyao, 2023).

Relevant government departments and schools will jointly guide the creation of a social atmosphere of respect for teachers and teaching and a good atmosphere in which society, schools, and students can respect TVET teachers.

Establish a reasonable salary system, improve the salary and benefits of TVET teachers, and form a reasonable labor income distribution system to ensure that teachers can get more for more work.

4.2 School Level

Reasonably arrange teachers' work and reduce teachers' non-teaching affairs so that teachers can reasonably arrange teaching and activities and balance work and life.

Schools should improve their management mechanisms to ensure that various administrative departments and front-line teachers can cooperate with each other, optimize the attendance system, and provide humane convenience to teachers. At the same time, they should correctly handle conflicts between students and teachers, administrative departments and teachers, and safeguard teachers' legitimate rights and interests.

Optimize the teacher evaluation system and improve teachers' promotion channels. Provide teachers with appropriate professional ability and physical and mental health training and pay attention to their physical and mental health.

4.3 Personal Level

Teachers should learn to handle interpersonal relationships well. In addition to communicating with students,

they should communicate more with colleagues, management department personnel, and their families. Good interpersonal relationships can greatly relieve teachers' stress and reduce burnout.

Take a reasonable view of the teaching profession. Plan your career path properly, balance school work and family life, and don't put too much pressure on yourself. At the same time, find a way to reduce work stress, such as listening to music and always paying attention to your mental health.

5.0 Conclusion and Implication

In recent years, few studies have been on teacher burnout in vocational and technical schools in China. This paper uses five documents as the subject to summarize and analyze the causes of TVET teacher burnout in existing studies in China. Through these studies, it can be found that teacher burnout exists to a greater or lesser extent, no matter what level, region, or size of TVET schools. At the same time, it can also be found that the reasons for teacher burnout usually come from society, schools, and teachers themselves. Social factors mainly focus on the lower social status of TVET teachers compared with other teachers, and the lower salaries of TVET teachers. These dissatisfaction factors may lead to burnout. School factors mainly focus on the overload of TVET teachers and unreasonable school systems. Overloaded work can lead to emotional exhaustion, and unreasonable school systems (e.g., promotion systems) can lead to a lower sense of accomplishment, which can lead to burnout. Personal factors are mainly manifested in TVET teachers' interpersonal problems and role conflicts. They often have problems managing relationships with colleagues and school administration. They find it difficult to transition between work and family life roles simultaneously, leading to burnout.

This article combines existing research results and puts forward corresponding methodological suggestions to solve the problem of TVET teacher burnout. However, since this paper only conducted a literature analysis on the burnout situation of TVET teachers in China and did not participate in the research, the suggestions may need improvement. However, through this analysis, we will understand the burnout situation of TVET teachers in China in advance and prepare for future practical research.

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An After-School Reading Intervention Project: A School Leadership Improvement Project

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Abstract

This study aimed to assess the reading proficiency of the After-School Reading Intervention Project in international schools in Selangor. The study was conducted on 20 respondents from an international school in Selangor, using a quantitative research technique. Data were obtained using a questionnaire and the analysis report of the pre-test and post-test in reading proficiency before and after implementing the After-School Reading Intervention Project. The results showed that the students found the improvement project extremely practical and helpful in improving reading skills and proficiency. The After-School Reading Intervention Project significantly improved students' reading skills, especially pronunciation, fluency, and expression. Students showed greater interest and confidence in reading post-intervention, aided by increased parental support and engaging materials. The reading workshops proved effective, and students and parents acknowledged the program's positive impact on literacy development. The implications for students and educational stakeholders, as well as future research suggestions, are highlighted.

Keywords: reading proficiency, after-school intervention, students, reading skills

1.0 Introduction

Reading is a vital ability that underpins a child's academic achievement. Its importance in education cannot be overstated; reading is essential to cognitive growth and a crucial learning component. Haliru et al. (2015) state that reading is vital in all educational environments. It entails actively creating meaning through the interaction of past knowledge, textual information, and the unique context of reading circumstances. Oladunjoye et al. (2016) emphasize the importance of reading in students' performance and academic achievements, arguing that students' capacity to study independently is critical to their success.

Furthermore, reading is an essential ability for personal growth and scholastic accomplishment. Therefore, everyone must nurture this habit to thrive in school and realize their obligations as active citizens in a democratic society. Reading is one of the most crucial skills for learning and career advancement. According to Yusuf (2014), reading improves children's language abilities since it helps them build a more extensive vocabulary, score better on grammar tests, and write better. Fundamental literacy—the capacity to read, write, and communicate in a specific language—is inextricably related to advanced literacy abilities (Arumobi & Ukwoma, 2016). A child's earliest learning consists of associating objects and concepts with language statements, emphasizing the importance of visual letter identification in reading.

Reading is important because it provides children with a wide range of knowledge and experiences. According to Aina et al. (2011), reading is a behavioral act that requires significant cognitive processes to decipher written symbols, making it an important component of interpreting printed texts. Reading should begin at a young age. Many children with learning disabilities struggle with reading and other language skills, but students cannot progress significantly in their academic endeavors without reading.

According to PISA (2018), 54% of Malaysian pupils obtained at least Level 2 reading competence, lower below the OECD average of 77%. These children can identify the major concepts in fairly lengthy texts, locate particular material, and, when encouraged, remark on the structure and purpose of texts. According to The Malaysian Reserve (2020), Dr. Zahrah has highlighted worries about Malaysians' reading habits, claiming that they read substantially less than their overseas counterparts. Malaysians spend barely three hours per week reading, compared to an average of 10 hours in other nations. Dr. Zahrah recommends reading in the morning for difficult academic topics, and afternoons and nights for leisure reading, particularly fiction. The report on Malaysia's performance in the PISA 2022 examination indicates various trends in mathematics, reading, and science:

a) Performance Trends (2012–2022)

Reading: The 10-year trend revealed a 7.1-point loss in reading scores, with a short-term reduction of 26.9 points from 2018 to 2022, demonstrating a consistent deterioration in reading proficiency.

b) Achievement gaps

Reading: There was evidence of a rising disparity over the past ten years, revealing significant differences in reading levels among Malaysian pupils.

Malaysia's PISA 2022 results show significant decreases across all three domains, with a rise in low-performing children and rising socioeconomic gaps in reading. Addressing these concerns may necessitate specific actions to assist disadvantaged children and the general student population to prevent additional decreases.

The fundamental purpose of this effort is to encourage and increase reading among kids after school, hence enhancing proficiency, abilities, and cognitive development. Students' reading abilities will develop, making them more perceptive in class and life, resulting in higher academic performance, cognitive maturity, and attention. Achieving a specific level of reading ability may help climb the PISA performance ladder as needed.

The Nilam Project is a comprehensive project launched by Malaysia's Ministry of Education to improve reading habits among pupils. Launched in 1999, this initiative combines multiple reading incentive tactics in government schools with continuous examinations to evaluate pupils' cumulative reading progress throughout their secondary education. The Ministry's Educational Technology Division oversees this effort, and its goal is to create a love of reading in pupils as early as their first year of elementary school.

Unlike government schools, foreign schools, such as P Foreign School A, are not compelled to implement this program. These institutions often require pupils to have excellent reading abilities when they enter. However, despite several attempts to promote reading, efforts to instill reading habits in pupils have proven ineffective. A lack of solid reading skills frequently impedes academic advancement at the elementary, middle, and high school levels and future chances. Early discovery of reading impairments is critical since neglecting to correct these gaps can lead to significant consequences later in life. According to Aramide (2015), students should read for academic and personal growth, as well as for leisure and enjoyment.

Reading is fundamental to the educational system, and teachers at international schools work hard to instill in children a genuine interest in this critical ability. Educators encourage extensive reading to improve comprehension, cultural awareness, and vocabulary. As student enrolment grows, there is a greater need for various educational stakeholders to work together to improve academic achievement. Parents play an important role as their children's primary instructors, instilling a passion for learning and encouraging independent study.

Ndileleni (2014) emphasizes that parents should not just consider reading as education but also encourage their children to read for pleasure, which is critical for establishing a strong reading culture. Unfortunately, many parents restrict their contributions to academic-related reading, reducing their potential influence on instilling a reading habit at home.

Personal conversations with instructors emphasize the obstacles that teachers confront while teaching reading. One English instructor cited issues with pupils mispronouncing words based on syllables, while an EAL teacher stated that children need more practice at home. The Head of the English Department voiced displeasure in student participation in reading competitions, indicating a preference for more enjoyable activities. Teachers agreed that while kids are competent speakers, they struggle with reading accuracy and pronunciation.

This research examines overseas pupils' ability to recognize syllable patterns and read successfully. Understanding these trends can help instructors select effective teaching techniques for improving reading abilities. The outcomes of this study are intended to inform effective reading programs and contribute to improving reading competency among foreign students in Selangor.

Recent PISA 2018 figures show that Malaysia's average reading scores are lower than the OECD average. Only a tiny fraction of pupils earns good reading scores, emphasizing the need of effective reading development programs.

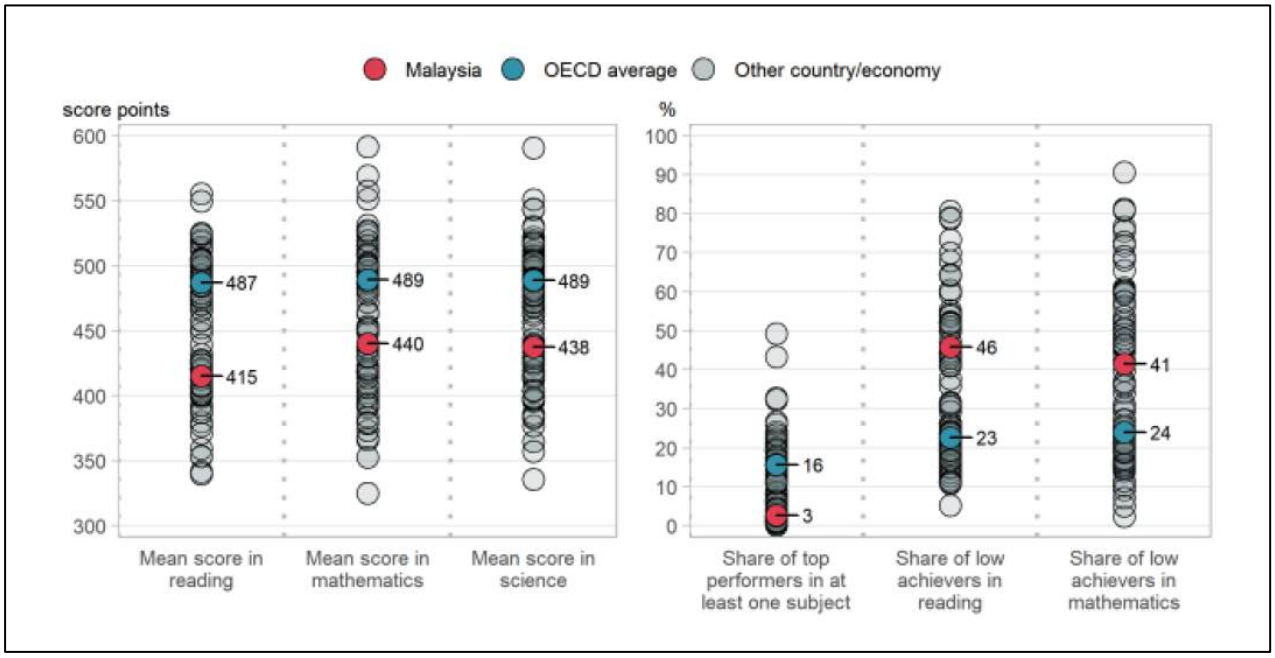

Figure 1: Snapshot of Performance in Reading, Mathematics, and Science (Sources: PISA 2018)

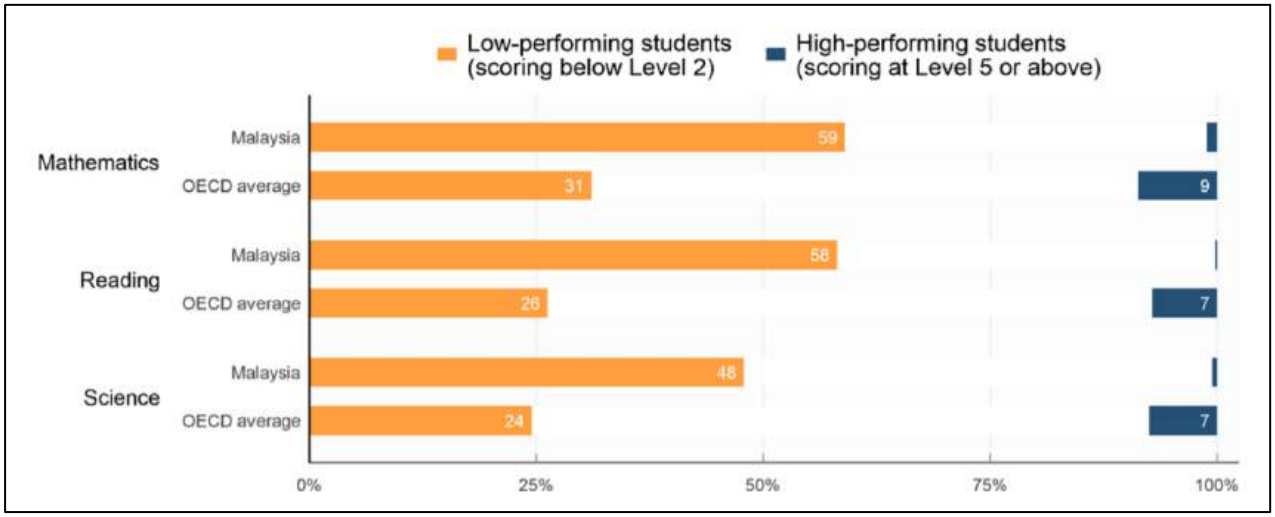

Figure 2: Snapshot of Performance in Reading, Mathematics, and Science (Sources: PISA 2022)

2.0 The Role of After-School Programs on Students Reading Abilities

After-School Programs (ASPs) play an important role in addressing kids' educational issues, notably in the area of reading ability. These programs offer organized environments outside of school hours, allowing kids to acquire skills essential to their academic success. Reading, according to Haliru et al. (2015), promotes cognitive processes that assist youngsters in constructing meaning through interactions between past knowledge and textual material. Yusuf (2014) said that excellent readers excel in vocabulary, grammar, and writing, emphasizing the need of developing good reading habits. According to Cross's argument, foreign school pupils in Malaysia frequently lack such habits, as evidenced by tests of poor reading competence.

After-school reading programs frequently use manualized curricula, such as Scholastic's READ 180, which combines digital media with classroom instruction. This systematic method offers consistency and demonstrable results (Arnold, 2019). Phonics education, comprehension tactics, and fluency training are all examples of tailored approaches that target individual student requirements. Cross's study reveals the effectiveness of personalized reading treatments, with pre-and post-test results demonstrating substantial increases in students' reading fluency, pronunciation, and comprehension. According to Ahmad (2020), parental involvement substantially impacts children's reading habits. After-school programs boost reading ability through a variety of methods:

a) Individualized instruction and targeted interventions.

When paired with one-on-one or small group support, targeted treatments in ASPs, including phonics, guided reading, and fluency practice, successfully assist children with reading issues in catching up with peers.

b) Increasing reading engagement and motivation.

Interactive activities in ASPs, such as storytelling and book clubs, provide a pleasant reading environment, increasing students' intrinsic motivation and long-term literacy performance (Graham & Hebert, 2017).

c) Parental and community involvement.

Parental participation and community support improve ASP efficacy by fostering cohesive and resource-rich learning environments through workshops, reading sessions, and collaboration.

d) Addressing socioeconomic disparities.

ASPs help overcome literacy gaps by giving impoverished students access to books, digital resources, and a supportive learning environment, which is critical for promoting academic equity (Graham & Hebert, 2017).

Research repeatedly shows that after-school activities improve reading ability. Graham and Hebert (2017) discovered that ASPs that included writing and reading tasks significantly improved students' comprehension skills. The study found that organized reading interventions combined with writing activities like summarizing texts and producing tales resulted in measurable increases in students' reading comprehension and fluency.

A longitudinal study of after-school literacy efforts discovered that adolescents who participated in these programs had more excellent reading proficiency scores than their non-participating classmates (Lauer et al., 2018). These findings highlight the necessity of offering consistent and enjoyable reading options outside of traditional school hours.

After-school activities improve children's reading skills, close literacy gaps, and cultivate a love of reading. These initiatives foster literacy development by offering personalized education, encouraging participation, and involving parents and communities. Despite obstacles, effective investments in resources, technology, and collaborations may significantly increase their influence. As research confirms the benefits of ASPs, their incorporation into educational frameworks becomes increasingly important for raising literate and empowered youth.

3.0 Methodology

The Ishikawa Diagram was employed to identify key issues contributing to poor reading habits, such as:

> Several problems impede the formation of kids' reading habits. These include low student motivation, inadequate family support, and instructor restrictions. Each group encounters unique challenges that contribute to the problem.

Students frequently lack desire to read after school because they are exhausted and have conflicting demands from their coursework. With little time for extra reading, kids may overlook this activity. Furthermore, the lack of parental support exacerbates the problem, making it more difficult for youngsters to develop a passion for reading.

Many parents encounter major hurdles restricting their ability to help their children develop reading habits. Demanding job schedules leave little time for meaningful interactions with their children. Additionally, parents whose native language is Japanese or Korean may have difficulty assisting their children with pronunciation. Effective at-home coaching is much more difficult for people with lesser educational levels.

Teachers are likewise limited in their abilities to urge children to read outside of class hours. Their responsibilities are frequently limited to school settings, and they cannot give coaching outside these hours. Furthermore, their ability to promote reading is hampered by their engagement in other school-related activities, leaving less time to focus on this issue.

The school's infrastructure and policies further compound these issues. The library lacks a diverse selection of books for students to borrow, which limits their exposure to varied reading materials. Additionally, no systems, such as a reward structure, are in place to motivate students or teachers to prioritize reading. Teachers often bring their materials as the library does not supply after-school reading resources, adding to their burden.

Students are constantly distracted at home and in their social situations, making it difficult for them to concentrate on reading. Environmental distractions like television noise can severely impair their focus, making continuous reading difficult. Furthermore, some kids attend online tuition sessions after school, reducing their reading time.

On the social front, kids are lured to screen-based activities in their spare time. Many people spend hours watching TV or YouTube, while others are active on social media platforms such as Instagram and Facebook. These activities occupy their free time and directly compete with reading as an amusement.

The availability and attraction of reading resources influence pupils' reading habits. In many situations, school libraries do not provide a comprehensive range of genres to meet the unique interests of their pupils. While many students like comic books, the library's restricted selection does not reflect their interests. This dearth of appealing information inhibits pupils from reading as a recreational pastime.

Addressing these environmental, social, and material issues may help educators and administrators develop a more favorable reading culture among children.

The objective of a study design is to develop a data-collecting strategy that enables the accurate assessment of causal relationships between independent and dependent variables. Research design refers to developing a framework or strategy for a research undertaking. Leavy (2017) defines research design as creating a structure, or blueprint, for one's research undertaking. This type of research relies on gathering and analyzing quantitative data and emphasizes objective phenomena that can be controlled.

As a result, this study relied on quantitative research, which emphasizes numerical data and precise reasoning from several viewpoints. This study utilized a questionnaire to obtain student feedback on the project before and after completion. Students are given a pre-test and a post-test before and after the assignment to measure their reading skills. Collect information using score frequency, percentages, and averages. The reading proficiency mastery data of students was analyzed using descriptive statistics. Furthermore, the researcher analyses various indicators to assess the overall impact of the plan's implementation.

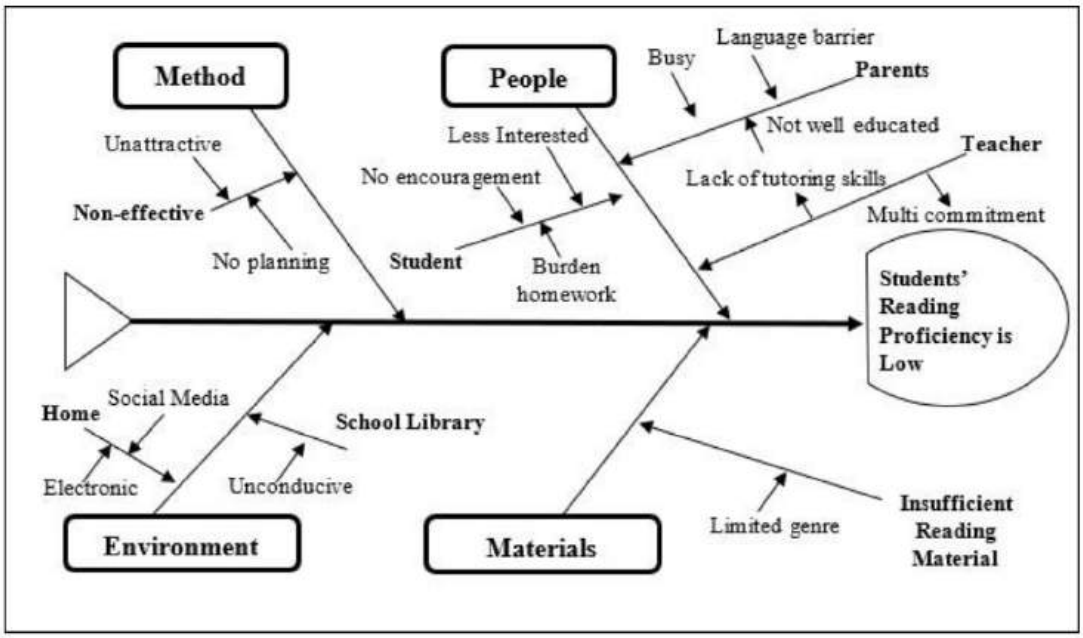

Figure 3: Ishikawa Diagram

An operational plan provides more details on the activities or work procedures the tactical strategy will carry out. It also outlines the work technique to be implemented with the process's lead teacher. Sharing these responsibilities will make program monitoring easier. The operational plan in Table 1 further defines the implementation of the upgrading project, which is an After-School Reading Intervention.

Table 1: Operational Plan

Name of the Project: An After-School Reading Intervention
Objective of the Project: Improve the reading proficiency among students
Target Group: 20 students
Duration: 20 minutes a day for 8 weeks (2 months)
Cost: RM300

Step	Work Process	Responsibility	Duration	Contingency Plan
1	Discussion with the Principal to decide the best to do for the project	Executor ofthe Project	One day	If the Principal is not around, the discussion is done with the Head of English Department.
2	Meeting with HODMeeting Agenda: Decide on theproject date Cost and availability of resource planning Proposal on how the project will be carried out	Executor of the project and HOD	One day	
3	Notification letter to thestudents and parents	Executor of the project	One week before the project	If the students and parents did not receive the letter, post the letteron Seesaw where it is accessible for parentsand students
4	Orientation for thestudents	Executor of the project	One day	
5	Creating questionnaires,questions, and interviewtools	Executor of the project	Two days	
6	Distribution of questionnaire to the students	Executor of the project	One day	
7	Preparation of Pre-TestPaper	Executor of the Project	Two days	
8	Undergoing Pre-Test	Executor of the Project		
9	Implementation of the Project 9.1 Reading after-school	Parents	Two months	If parents are unable to guide the students in reading, the students will set a 20-minute Google Meet or Zoom with the teacher.
10	Undergoing Post-Test	Executor of the Project	One day	
11	Examine the Post-Test and offer an analysis of the pre- and post-test results.	Executor of the Project	Four days	
12	Make a project assessment report after briefly discussing the research findings.	Executor of the Project	One day	

Gantt charts are commonly used to illustrate the time required to finish a project. They are crucial as a control for the implementation duration to ensure the project is finished within the given period. Table 2 shows the Gantt Chart for an After-School Reading Intervention.

Table 2: Gantt Chart

No	Task	Sept 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2022	Feb 2022	Mar 2022
1	Gather information on theschool's history and student and staff statistics.							
2	Determine existing issues							
3	Conduct a projectneeds analysis.							
4	Questionnaires and pre-rest are being conducted.							
5	Strategic Planning SWOTAnalysis TOWS Matrix RankingMetrics Strategic Plan							
6	Research design Tactical Plan Operation Plan							
7	Committee meetings for the project							
8	Notification ofevents to participating teachers and students							
9	Implementation of After-School Reading Intervention							
10	Evaluation of the project							
11	Report writing							

Sampling is an important task that must be accomplished before the collection of research data can begin. A 'sample' is a subset of a population that is chosen to reflect the total population (Acharya et al., 2013).

The population for this study consists of P International School A students. The goal of this study was to look at the efficacy of reading proficiency among students. As a result, the target audience consists of level five students. The study's two-month intervention period, which runs from 2021 to 2022, necessitates a sample of students enrolled in school during those two years. In this case, the researcher uses a purposive sampling strategy to concentrate on key features and complete the study emphasis. As a result, samples are only collected from Year 5 students.

Purposive sampling is the selection of a study sample based on criteria specified by the researcher. In this situation, the research participants were 20 Year 5 students who did not reflect the whole student population of the school. The study sample consists of 13 boys and 7 girls ages 10 to 11. As a result, because the sample does not represent the total student population at the school, the study's findings cannot be applied to the full student body. The study's results only address a subset of its respondents.

The questionnaire is organized into two pieces. Section A was intended to gather information about the respondents' backgrounds. Section B comprises 12 issues designed to elicit survey respondents' impressions before and throughout the project intervention. A five-point Likert scale was employed to assess respondents' perceptions of their reading abilities, with replications ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was created in English, but the researcher used Google Translate to get accurate and precise data from Japanese students.

The second tool employed in this study was the assessment of Pre-Test and Post-Test outcomes. The pupils were given a book to read, and the researcher evaluated their reading abilities using the criteria. The rubric is divided into five categories to assess students' reading abilities: word pronunciation, reading fluency, volume, expressiveness, and punctuation use.

The After-School Reading Intervention Project was carried out according to the operational plan. The project meeting with the head of the department occurred one day after the researcher had preliminary conversations with the principal. Before beginning the experiment, the researcher performed a pre-test to acquire data on reading abilities and competency. Meanwhile, the researcher sent questionnaires to students to gather feedback on reading.

The researcher next requested the Head of the English Department to supervise a reading session for

the 20 responses. The researcher selected to approach the HOD of the English Department since the intervention for this project coincides with the Covid-19 pandemic chronology. Professional speakers were unable to enter the school at that time.

Table 3: Workshop Schedule for After-School Reading Intervention Project

Lesson	Date/Time	Workshop Scopes
1	October 1, 2021 3.00 p.m. – 4.00 p.m.	Get to know the students. A whole class reading
2	October 8, 2021 3.00 p.m. – 4.00 p.m.	Introduction to pronunciation and phonics
3	October 15, 2021 3.00 p.m. – 4.00 p.m.	How to read fluently
4	October 22, 2021 3.00 p.m. – 4.00 p.m.	Usage of your voice to create a good volume and intonation while reading
5	October 29, 2021 3.00 p.m. – 4.00 p.m.	How to insert expressions while reading
6	November 5, 2021 3.00 p.m. – 4.00 p.m.	How to read according to punctuation

After the six workshops, 20 participants completed a questionnaire and a post-test, allowing the researcher to collect data after the study.

4.0 Findings and Discussion

In addition to the Ishikawa diagram analysis, 20 students were asked to complete a questionnaire on after-school reading intervention.

Table 4: Analysis of Students' View on After-School Reading Intervention

Items	Strongly Disagree 1	Disagree	Neutral	Agree	Strongly Agree 5
	Percentage (%)				
I am interested in after-school reading	25	15	40	15	5
I have basic reading skills/proficiency	10	30	30	15	15
I enjoy reading all genres of books	20	15	25	30	10
I spend at least 20 minutes reading every day after school	30	45	10	10	5
I can use pronouns in all the words from the book I pick	15	30	25	15	15
My parents are there to help me if I am unsure of pronouns a word	25	10	15	25	25
My home is the best place to do after-school reading	5	15	25	20	35
I prefer reading online materials for after-school reading intervention	30	20	20	20	10
After-school reading intervention will help me in my pronunciation/proficiency	0	20	35	20	25
I prefer to have reading intervention in school	20	20	25	10	25
I prefer reading with my friends in school	15	20	15	15	35
I prefer listening to audio stories for easier proficiency/ pronunciation	10	15	20	20	35

According to the findings, 40% of students reject after-school reading interventions. 40% of students were unsure, whereas 30% indicated high interest in the intervention. The majority of students are uninspired since 40% lack basic reading skills. Only 30% can read well. 40% of students enjoy reading a variety of genres, while 35% do not, probably owing to a lack of exposure to different book genres. 75% of students do not spend time reading after school.

This is a catastrophic condition, given that just 15% of students feel that reading for at least 20 minutes daily is essential. Reading proficiency with precise pronunciation is essential. Therefore, 30% of students thought they could say the words correctly, while 45% struggled to articulate them. The pupils' parents appear helpful since 50% help their children with after-school reading. 35% of them do not receive any guidance from their parents. Even though 30% of students were dissatisfied with their surroundings,

55% felt at ease reading at home. 50% of students prefer to read their textbooks online, while 30% prefer paper copies. 45% of students believed that after-school reading sessions would enhance their reading abilities.

Only 20% disagreed with this goal. 40% of students would rather read at home than engage in after-school reading interventions. 35% enjoy reading in school. 50% of students prefer to read with their classmates at school, whereas 35% prefer to read to themselves. Finally, 55% of students prefer audio storytelling, while 25% oppose the idea. Based on the above research, an after-school reading intervention is necessary to improve children's reading skills.

In addition, a pre-reading intervention was conducted in school to assess the student's reading skills. The total score for the pre-reading intervention is 20. The intervention is divided into six areas: word pronunciation, reading fluency, volume, expressiveness, and punctuation. The results of the pre-reading intervention are displayed in Table 5.

According to the study of pre-reading intervention in school, eight pupils earned between 15 and 20 marks in their reading, accounting for 40%. Another eight pupils earned between 10 and 14 points, accounting for 40%, while the others received scores ranging from 1 to 9. This delivers the data 20%. Overall, the findings suggest that 16 pupils have advanced or intermediate competency in readiness, while just four students are deficient.

Table 5: Analysis of Pre-Reading Intervention in School

	Pronunciation of words	**Fluency of reading**	**Volume**	**Expression**	**Use of punctuation**	**Total Marks**
Student 1	2	2	2	2	2	10
Student 2	2	2	3	1	1	9
Student 3	4	3	3	3	3	16
Student 4	2	2	2	2	2	10
Student 5	3	3	3	3	3	15
Student 6	4	4	4	3	4	19
Student 7	2	2	2	2	2	10
Student 8	3	3	3	2	2	13
Student 9	4	4	3	3	3	17
Student 10	2	2	2	2	2	10
Student 11	2	2	2	2	2	10
Student 12	1	2	2	1	1	7
Student 13	4	4	4	4	4	20
Student 14	4	4	4	4	4	20
Student 15	1	1	1	1	1	5
Student 16	4	4	4	4	4	20
Student 17	2	2	2	1	1	8
Student 18	3	3	3	3	3	15
Student 19	2	2	2	2	2	10
Student 20	2	2	2	2	2	10

4.1 Strategic Planning

4.1.1 SWOT Analysis

The analysis is provided in Table 6. The SWOT Analysis highlights strengths (qualified teachers) and threats (COVID-19 and technological distractions).

Table 6: SWOT Analysis

STRENGTHS (S)	**WEAKNESSES (W)**
S1: Teachers are equipped to aid pupils in increasing their reading skills S2: Teachers are devoted to improving the reading skills of their students S3: Some pupils are interested in after-school reading S4: The school administrators provide them with full support	W1: Students lack the drive to read W2: Only 40% of kids are proficient in reading W3: Teachers lack experience in performing reading assessments for kids W4: There is no suitable space for pupils to perform after-school reading
OPPORTUNITIES (O)	**THREATS (T)**
O1: Firm parental support to lead the students O2: Purchase books for the pupils depending on the genres that will be taken home	T1: Less support and encouragementfrom parents T2: Covid-19 T3: Lack of reading material T4: Too affected by electronics T5: Parents who cannot speak English

4.1.2 TOWS Matrix

The TOWS matrix generates and picks the best solution based on the SWOT analysis shown in Table 6 above. Based on the TOWS matrix shown in Table 7 below, several solutions are proposed.

Table 7: TOWS Matrix

Internal	**STRENGTHS (S)**	**WEAKNESSES (W)**
	S1: The teachers are qualified to guide the students in improving their reading proficiency S2: The teachers are committed to improving the reading proficiency of the students S3: There are students interested in after-school reading S4: The school administrators are giving their full support	W1: Students lack motivation to read W2: Only 40% of students have proficiency in reading W3: Teachers lack experience in conducting reading assessments with students W4: No conducive place for students to do after-school reading
External		
OPPORTUNITIES (O)	S-O Strategy	W-O Strategy
O1: Firm support from the parents to guide the students O2: Purchase books for the students based on the genres to be brought back home	S1+S2+S3+O1 Establish a reading club in school to engage the students in reading	W1+O1+O2 An after-school reading intervention at home
THREATS (T)	S-T Strategy	W-T Strategy
T1: Less support andencouragement from parents T2: Covid-19 pandemic T3: Lack of reading material T4: Too influenced by gadgets T5: Parents who are unable to speak in English	S4+T2+T3 Build a reading room withexcellent design for the students	W3+T1+T5 Workshop for parents on how to guide their kids inreading

Table 8 shows how a list of acknowledged strategies is generated based on the strategies supplied by the TOWS Matrix.

Table 8 List of Recognized Strategies

Type	Strategies
S-O S1+S2+S3+O1	S1 - Establish a reading club in school to engage the students inreading
W-O W1+O1+O2	S2 - An after-school reading intervention at home
S-T S4+T2+T3	S3 - Build a reading room with excellent design for the students
W-T W3+T1+T5	S4 - Workshop for parents on how to guide their kids in reading

4.1.3 Ranking Metrics

Following the TOWS matrix analysis, ranking metrics determine the most effective strategies for achieving the stated objectives. Table 9 shows the strategy determination scale, which is used to find the most effective way to improve pupils' reading competency.

During the strategy determination process, the degree to which the work process is challenging, the competence of the responsible teachers, financial considerations, infrastructure, facilities, and equipment, and assumptions about expected outcomes/impact on goal achievement were all taken into account. Table 10 displays the results of the investigation of the selected methodologies, as well as the criteria.

Table 9: Scores and Interpretation for Strategy Determination

Score	Interpretation	Score	Interpretation
1	Very difficult / Very inappropriate / Very inadequate	4	Easy / Suitable / Adequate
2	Difficult/inappropriate/inadequate	5	Very easy / Very suitable / Very adequate
3	Medium		

Table 10: Ranking Metrics

	Strategies			
Selection Criteria	**S1**	**S2**	**S3**	**S4**
The degree to which the work process is challenging	3	4	2	2
Competence of the responsible teachers.	3	5	3	4
There are financial to consider.	3	4	2	2
Infrastructure, facilities, and equipment	3	3	2	3
Assumptions about expected outcomes/impact on achieving goals	3	4	2	3
Total score	**15**	**20**	**11**	**16**

As seen by the total score above, **S2** is a priority for project execution since the entire score indicates a very high possibility of success.

4.1.4 Strategic Plan

A strategic plan was created based on the study field, issues, goals, objectives, key performance indicators, targets, and tactics. This international school's strategic challenge is its students' low reading competency. The school's strategic goals include improving students' reading competency by implementing an after-school reading intervention.

Table 11: Strategic Plan

Area: Reading
Strategic Issue: Low reading proficiency among students
Strategic Aims: To improve reading proficiency among students byimplementing an after-school reading intervention

		Target		
Objective	**KPI**	**Pre-intervention project**	**Post-intervention project**	**Strategy**
1. To increase the reading proficiency of students	Percentage of students' reading proficiency	40% of students have readingproficiency	70% of studentshave readingproficiency	S2: An after-school reading intervention at home

4.1.5 Tactical Plan

An after-school reading intervention effort, known as After-School Reading Intervention, lasted two months and aimed to improve children's reading skills by assigning reading to be completed after school. The intervention cost RM300 and was funded by the school. The costs associated with this implementation include acquiring multiple book genres and duplicating reading materials for students to take home.

The Key Performance Indicators (KPIs) will demonstrate some success in the percentage of kids who improved their reading skills at the end of the After-School Reading Intervention project. As a result, students may exhibit their reading proficiency during the project's post-test. A contingency plan must be implemented if the intended project fails to meet its objectives within the timeframe stated. Instead, parents will be trained to assist their children's reading as a substitute for autonomous after-school reading. Table 12 displays the tactical strategies that were created.

Table 12: Tactical Plan

Strategy: An after-school reading intervention at home
Objective: Increase the percentage of students in reading proficiency
Project: After-School Reading Intervention

Responsibility	**Action**	**Duration**	**Cost RM**	**Output**	**KPI**	**Contingency Plan**
SubjectTeacher	English Subject Teacher	2 months (November 2021 to January 2022)	300	Increasing the percentage of student in their reading proficiency	70% (20) students improve intheir reading	Workshop for parents on how to guide their kids in reading

4.2 Demography Information

The study will provide the demographic profile of the respondents, as well as the pre-test and post-test results of study respondents before and after project execution, based on data acquired from the questionnaire. Table 13 shows the demographics of the student respondents in this study.

Table 13: Demographic Features of Student Respondents (N=20)

Demography	**Frequency**	**Percentage (%)**
Gender		
Male	7	35
Female	13	65
Age		
10 years old	6	30
11 years old	14	70

4.3 Improvement in Reading Proficiency

Table 14: Test Result

Demographic	Pre-Test November 2021		Post-Test January 2022	
	Total Marks	Percentage (%)	Total Marks	Percentage (%)
Student 1	10	50	15	75
Student 2	9	45	12	60
Student 3	16	80	20	100
Student 4	10	50	13	65
Student 5	15	75	17	85
Student 6	19	95	20	100
Student 7	10	50	13	65
Student 8	13	65	18	90
Student 9	17	85	19	95
Student 10	10	50	15	75
Student 11	10	50	14	70
Student 12	7	35	13	65
Student 13	20	100	20	100
Student 14	20	100	20	100
Student 15	5	25	11	55
Student 16	20	100	20	100
Student 17	8	40	14	70
Student 18	15	75	20	100
Student 19	10	50	15	75
Student 20	10	50	15	75

Table 15: Paired Sample t-test Results

	t	df	p-value	Mean	Standard Deviation
Pre-test	7.58	19	0.05	12.84	4.78
Post-test				16.26	3.23

4.3.1 Reading proficiency levels before the intervention

The data analysis demonstrated that most students were interested in reading to increase their abilities and knowledge. However, the majority of children in the chess club lacked basic reading abilities, including pronunciation and reading fluency, loudness, emotion, and punctuation. An examination of the pre-test data supported these findings. Furthermore, students agreed that unpleasant reading materials had no influence on increasing their reading skills.

Due to a lack of parental reinforcement, students lacked confidence in their reading abilities. As a consequence, the researcher found that the students' reading competency before the intervention was inadequate. Therefore, alternative methods were necessary to ensure that the student's enthusiasm for reading was directly proportional to their core reading skills.

4.3.2 Reading proficiency changes after the intervention

According to the data, all twenty students (100%) maintained a great interest in reading. Following the project's completion, the majority of students left positive feedback on Items 1-9. Furthermore, all respondents stated that after-school reading helped them improve their reading competency abilities. They also agreed that reading at home is thrilling, which increased their enthusiasm in reading. Due to parental support, the number of pupils interested in reading after school has increased. As a result, the student's reading competency increased significantly after the intervention project (January 2022).

The intervention appears to have had a substantial influence on student attitudes towards reading. Prior to the intervention, only 5% of children indicated enthusiasm for after-school reading, showing that reading was not a popular or engaging activity for the majority. However, following the intervention, 100% of kids expressed interest for after-school reading, indicating a paradigm shift in their mentality. This

suggests that the intervention's tactics successfully made reading fun and engaging, most likely by creating a supportive, participatory, and gratifying learning environment.

Furthermore, kids' reading confidence increased significantly. Prior to the intervention, just 30% of students were confident in their fundamental reading skills, indicating a significant gap in self-assurance. This proportion increased to 70% after the intervention, demonstrating that the program enhanced students' self-efficacy and technical reading skills. This change implies that the intervention addressed underlying barriers to confidence, such as a lack of practice or poor self-perception, by facilitating effective and supported learning experiences.

On average, students' pronunciation scores increased by 0.8 points, indicating a tangible improvement in their ability to enunciate words correctly. During the session, there was likely a conscious emphasis on phonics, repetition, and maybe auditory modeling, contributing to this improvement. Improved pronunciation improves communication clarity and lays the groundwork for enhanced comprehension, as precise articulation is frequently associated with comprehending word structure and meaning.

The consistent improvement throughout the group demonstrates how focused activities, such as reading aloud, phonemic drills, and listening exercises, were helpful in treating individual pronunciation deficiencies. Such improvement might be especially important for younger students, as early mastery of pronunciation serves as the foundation for higher reading and speaking abilities.

Students showed a 1.2-point increase in punctuation and expressiveness. This component of reading is critical because it elevates basic reading into expressive, meaningful communication. The capacity to pause at commas, recognize full stops, and change the tone for question marks and exclamation points demonstrates a greater knowledge of text structure and emotional meaning.

This increase is likely due to activities that emphasize expressive reading, such as guided reading sessions, role-playing discussions, or listening to expressive storytelling. The intervention may have focused on teaching kids how punctuation signals can influence intonation, rhythm, and emotion, making reading a more dynamic and interesting exercise. The development in expression reflects technical progress and demonstrates that students are growing more confident in their ability to connect with and convey the content of the text.

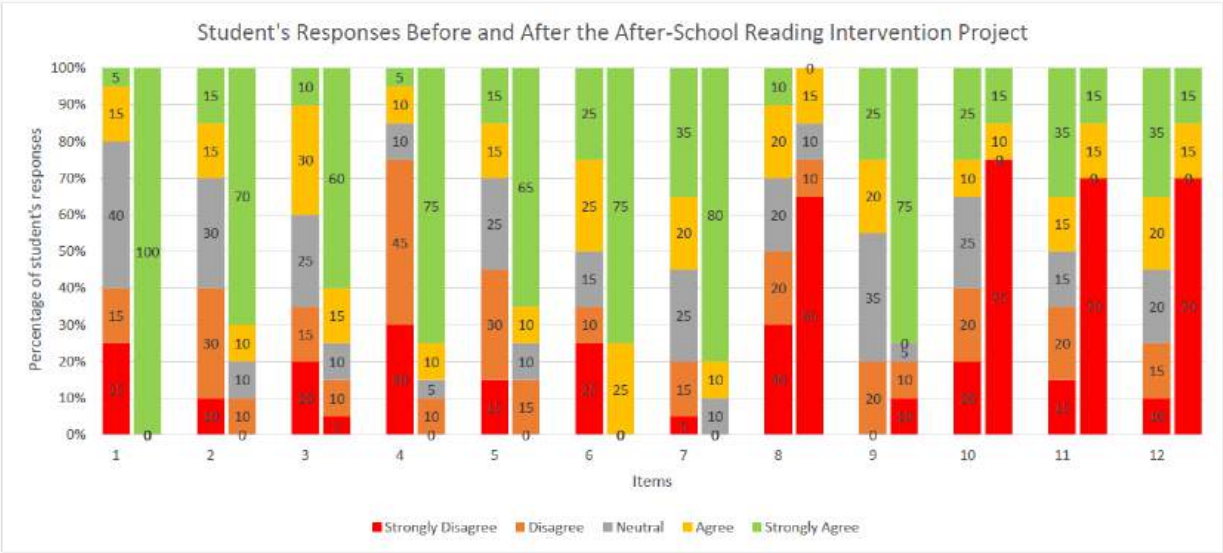

Figure 4: Students' Responses Before and After the After-School Reading Intervention Project

These shifts in passion, confidence, and technical capabilities demonstrate the intervention's complex effectiveness. The rise in involvement and confidence suggests that kids are becoming more proficient readers and beginning to see reading as a fun and rewarding activity. Meanwhile, measured increases in

pronunciation, punctuation, and expressiveness demonstrate the tactics' effectiveness, implying that the program provided both controlled skill development and motivating support.

In summary, the findings show that the intervention used a comprehensive approach, addressing both the technical and emotional components of reading. By creating a supportive environment and providing targeted exercises, the program has not only improved students' reading ability, but also enabled them to approach reading with joy and confidence. These modifications are expected to have a long-term influence on their academic performance and lifetime learning behaviors.

5.0 Conclusion and Implication

The study sought to increase reading performance at an international school in Selangor. Pre-intervention studies revealed that pupils lacked fundamental reading abilities, including pronunciation, fluency, and confidence, due to inadequate parental assistance. Post-intervention findings showed a considerable increase in reading competency, with 100% of kids expressing an interest in reading and reporting favorable outcomes. The after-school reading classes, supported by parents and teachers, significantly improved pupils' reading skills.

Teachers and parents play critical roles in effective after-school reading programs. A supportive reading environment at school and home increases children's confidence and interest. The intervention consisted of student-centered sessions that focused on basic reading skills. Positive changes were ascribed to collaborative efforts and supportive leadership, which validated previous research emphasizing family participation and tailored educational initiatives.

The intervention approach can help instructors build effective reading programs. Schools should provide a variety of reading resources and promote parental engagement. This technique promotes constant reading practice, academic improvement, and self-efficacy in pupils.

Leadership, especially the HOD's mentorship, was critical to the program's success. Effective leadership stimulates instructors and students while ensuring that projects run smoothly. Transformational and charismatic leadership styles were critical, especially amid obstacles such as the COVID-19 pandemic when distant learning adaptations facilitated development.

Future treatments should begin early in the school year, involve all interested pupils, and incorporate complete reading programs. To obtain more data, the study should be expanded to include interviews with instructors and parents from other schools. Long-term impact evaluations employing time-series analysis might help evaluate the intervention's efficacy.

The project's success was due to strong leadership, teacher engagement, and family support. Improving reading competence is critical to academic achievement, and joint efforts are required. Effective school leadership brings all stakeholders together to achieve common educational goals, promoting long-term progress.

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Cross-cultural Human Resource Management Strategies for Lenovo's Acquisition of IBM

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Abstract

Over time, the number of multinational corporations in China has steadily increased. Take, for instance, Lenovo's purchase of IBM, Volkswagen's takeover of Porsche and various other brands, Haier's takeover of Sanyo, among others. Concurrent with the growth of Chinese state-owned businesses, several issues have surfaced. It has become an inescapable truth that the business can address the intercultural disputes and guide every national division to wards achieving profitability. Lenovo's triumphant acquisition of IBM serves as a model to examine how cross-cultural human resource management skills influence corporate efficiency. Beginning with Hofstede's six cultural dimensions, this study delves into Lenovo's cross-cultural human resource management during its acquisition of IBM, thoroughly examining the state of foreign-funded businesses and the cultural clashes they face. Strategies will be suggested to harness the inherent capabilities of global corporations, merging the maximization of real economic gains with the execution of cross-cultural management. The document aims to serve as a guide for international human resource management of overseas-funded businesses in China.

Keywords: Lenovo's takeover of IBM, Intercultural disputes, Management of cross-cultural human resources.

1.0 Introducing of Lenovo

Lenovo, a Chinese firm specializing in personal technology products, boasts a revenue close to $30 billion and serves clients across over 160 nations globally. Lenovo has maintained its position as the top seller in China's local market since 1997, representing over 30% of the country's PC market. Lenovo, through its cutting-edge products, streamlined supply chain, and robust strategic implementation, is dedicated to developing top-tier PC and mobile Internet offerings for global users. This conglomerate, consisting of Lenovo and the erstwhile IBM Personal Computing Division, is engaged in the creation, production, and distribution of dependable, superior, secure, and user-friendly tech products, along with top-tier, professional services globally.

Globally, around 27,000 individuals are employed by Lenovo. Key operational hubs encompass Beijing, Paris, Raleigh, North Carolina, USA, and Singapore. Key centers for research and development are situated in Beijing, Shanghai, Shenzhen, China, and Raleigh, North Carolina, USA. Lenovo boasts around 3,200 representatives in sales and maintains a global network of channel partners. Worldwide call centers offer product assistance in over 25 languages globally, bolstering an international supply chain with upwards of 2,500 technical staff across 18 service centers and roughly 25,000 certified field technicians delivering millions of immediate services monthly.

Lenovo has risen to global prominence in technology, thanks to its robust local market base, worldwide strategic framework, and ongoing technological advancements.

1.1 Lenovo’s Acquisition of IBM

The Lenovo Group took over IBM's Personal Computer Division, the oldest in the industry, on December 8, 2004, for $1.25 billion, comprising $650 million in cash and $600 million in Lenovo shares, ranking it as the third-largest PC manufacturer globally with yearly revenues exceeding $10 billion. Lenovo and IBM find themselves in a mutually beneficial scenario, yet they face hurdles in terms of natural integration and cultural variances (Wu, 2005). Following Lenovo's acquisition of IBM's PC division, the cultural disparities between China and the United States became evident. Significant differences existed in their organizational ethos, approach to talent development, managerial met hods, and various other facets. Examples include disputes arising from diverse cultural heritages, the absence of a sense of identity and belonging among employees, and the challenges in establishing a cohesive human resource management system, among others. (Chen,

2011). Resolving this intercultural management dispute has emerged as crucial for the triumph or downfall of Lenovo's international mergers and acquisitions. Mr. Liu Chuanzhi, the Chairman of Lenovo Group's Board of Directors, stated, "Today's critical cultural integration matter is the feasibility of collaboration between Chinese and Western individuals."

1.2 Cross-cultural Conflict between Chinese and American Human Resource

Cross-border corporate mergers and acquisitions manifest as a stream of products, capital, technology, and other international exchanges, yet fundamentally, they represent a distinct culture characterized by conflict, trade, and integration. Global corporations aim to surpass national and cultural barriers in their management frameworks, roles, and staff policies, which are neither feasible nor preferable.Initially, Lenovo's takeover of IBM's personal computer sector was met with disapproval, as it was concluded that the company needed to embrace the impact of two distinct cultural variances created by an unseen power. Lenovo's major hurdle in opting for cross-border mergers and acquisitions was navigating the vast cultural variances, settling disputes, and keeping its corporate staff.

1.3 Analysis of Differences in Cultural Dimensions

The study delves into the cultural variances between China and the United States, utilizing Hofstede's cultural dimensions theory, a Dutch management expert. He characterized culture as the shared cognitive mechanisms that set apart one group from another within a specific setting (Hofstede, 2001). Hofstede identified six key elements (Figure1) that serve to differentiate the impact of national culture on the values and attitudes of employees, analyzed in the following manner:

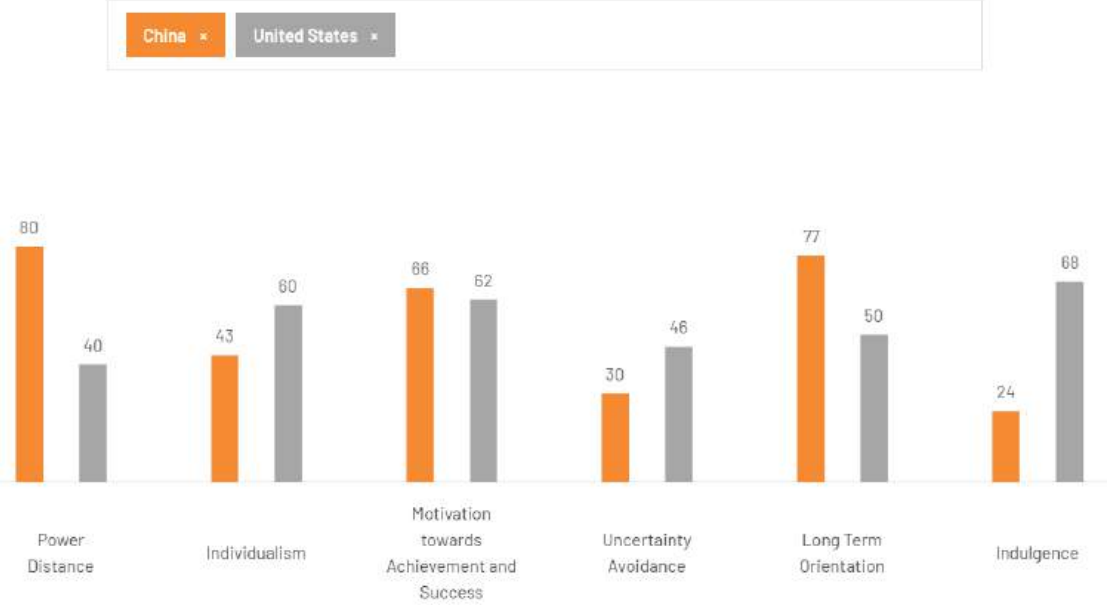

Figure 1: Hofstede's cultural dimensions between China and U.S.
Source: http://www.theculturefactor.com

2.0 Power Distance

This aspect addresses the reality of individual inequality in societies, reflecting the cultural perspective on these disparities among us. Power Distance refers to the degree to which members with lesser power in a nation's institutions and organizations anticipate and agree with the unequal distribution of power.
China ranks higher on the PDI scale, signifying a societal belief in the acceptability of human inequalities.The dynamics between subordinates and superiors are often divided, leaving no safeguards against misuse of power by higher-ups.People are shaped by official power and penalties, generally holding a positive view of their ability to lead and initiate.Individuals ought not to harbor ambitions that exceed their social standing.

The United States registers a low score in this aspect, highlighting the American belief in universal liberty and justice. The emphasis on equal rights across all facets of American society and governance further demonstrates this. In U.S. companies, a structured hierarchy is created for ease of access, higher-ups are readily available, and managers depend on specific staff and teams for their specialized knowledge. Managers and employees alike anticipate frequent consultations and the exchange of information. Concurrently, the mode of communication is casual, straightforward, and engaging.

3.0 **Individualism**

This aspect primarily focuses on the extent of mutual reliance that a society upholds among its members. This concerns the determination of individuals' self-perception as either "I" or "We". Within societies valuing individualism, individuals are expected to solely care for themselves and their immediate families. Within Collectivist communities, individuals are part of 'groups' that provide care in return for their allegiance.

Scoring 43 indicates that China upholds a collectivist ethos, prioritizing collect ive interests over individual ones. Factors within a group influence recruitment and career advancement, with more intimate group members (like family members) receiving special privileges.The dedication of employees towards the organization, though not exclusively towards its staff, is minimal. While in-group interactions with colleagues tend to be collaborative, they exhibit a lack of enthusiasm or even antagonism towards out-groups. Individual connections take precedence over duties and the organization.

Scoring 60 suggests a culture of individualism in the US. This concept is mirrored in the American ethos of "liberty and justice for all", demonstrated by a clear focus on equal rights across all facets of American society and governance. In U.S. companies, higher-ups are readily available, with managers depending on specific staff and teams for their specialized knowledge. Consultation is anticipated from both managers and employees, with information being exchanged often. Concurrently, the nature of communication is somewhat casual, straightforward, and engaging. In this loosely structured society, it's anticipated that individuals should solely focus on their own well-being and that of their close family members, rather than depending excessively on the authorities for assistance. Within the corporate realm, it's anticipated that employees will exhibit independence and proactiveness. Furthermore, in the realm of exchange-based employment, recruitment, advancement, and decision-making are grounded in the merit or proof of one's actions or capabilities.

4.0 **Uncertainty Avoidance**

The uncertainty of what lies ahead always carries with it a sense of anxiety, and various cultures have adapted to manage this anxiety uniquely. The degree to which cultural members are intimidated by unclear or unfamiliar circumstances, leading them to form beliefs and institutions aimed at evading them, is mirrored in the Uncertainty Avoidance score.

China's rating for evading uncertainty is notably poor. Truth might be subjective, yet within close-knit social groups, there's a strong emphasis on Truth with a capital 'T', accompanied by numerous rules (though not always laws). Nevertheless, compliance with laws and regulations can adapt to real-world scenarios, and pragmatism is an inherent aspect of life. Ambiguity is well-received by the Chinese, who find it challenging to grasp due to the language's inherently unclear meanings. The Chinese exhibit adaptability and entrepreneurial spirit.

In the United States, the performance is subpar, scoring only 46. This implies a considerable level of receptiveness towards novel concepts, groundbreaking products, and an eagerness to experiment with different approaches, be it in technology, business methods, or cuisine. It's common for Americans to exhibit greater acceptance of diverse thoughts and opinions, advocating for the liberty of speech. Thus, a significant amount of regulation isn't needed by Americans.

5.0 **Motivation towards Achievement and Success**

Achieving a high score (Decisive) in this area signifies a society propelled by rivalry, accomplishment, and triumph, where success hinges on the victor /top performer in the domain - a principle that originates in

educational settings and persists across the organization's lifespan. Scoring low in the Consensus-oriented dimension indicates that societal values primarily focus on nurturing others and enhancing life quality. In a society guided by consensus, the standard of living is indicative of success, and distinguishing oneself from others is not commendable. The core matter at hand is the driving force behind individuals' desire to excel (Decisive) or to enjoy their work (Consensus-oriented).

Scoring 66, China exemplifies a society deeply driven by the pursuit of success and achievement. The pursuit of success is illustrated by the tendency of numerous Chinese individuals to forgo family and leisure activities in favor of employment. The significance of leisure time diminishes. The United States boasts a high score of 62 in Motivation for Achievement and Success, evident in its standard behavioral patterns. The rationale behind this lies in its integration with Individualism. Put differently, Americans, in a manner of speaking, each exhibit their unique drive for success and accomplishment. The essence of this American blend is evident here: conduct in educational, professional, and recreational settings stems from a common belief that individuals ought to "strive for their utmost potential" and that "the victor claims everything". Consequently, Americans are inclined to openly discuss and exhibit their life "successes" and accomplishments. In American culture, success isn't primarily driven by perseverance, but by the ability to demonstrate one's achievements. A significant number of U.S. evaluation systems rely on exact goal-setting, enabling American workers to demonstrate their performance. The "can-do" mindset fosters societal dynamism, underpinned by the belief in the perpetual potential for improved methods.Generally, Americans choose to "live to work" with the aim of earning financial benefits, thereby elevating their status based on their potential. The prevailing belief is that a level of discord can unlock people's finest qualities, aiming to achieve the status of "the winner".

6.0 **Long-term Orientation**

This aspect illustrates the necessity for each society to preserve connections with its history while addressing current and future challenges, with societies placing varying importance on these dual existential objectives. Societies adhering to norms.those scoring poorly in this aspect, for instance, tend to uphold traditional customs and standards, yet regard societal shifts with skepticism. Conversely, individuals with a high-scoring culture adopt a more practical stance, advocating for frugality and diligence in contemporary education to gear up for what lies ahead.

With a score of 77 in this aspect, China demonstrates a highly pragmatic cultural approach. People in pragmatically oriented societies hold the view that the truth is heavily influenced by the circumstances, context, and timing. They demonstrate a knack for swiftly adjusting customs to evolving circumstances, a marked inclination towards saving and investing, frugality, and determination in attaining outcomes.
The United States registers a score of 50 in this aspect, indicating the absence of a predominant preference. Americans tend to scrutinize fresh information to verify its accuracy. It's important not to mix this up with the reality that Americans exhibit a pragmatic approach, evident in their "can-do" mindset. In the U.S., companies evaluate their performance over a brief period, issuing quarterly profit and loss reports, which motivates people to aim for rapid outcomes in their jobs.

Indulgence

This aspect refers to the degree to which individuals attempt to manage their urges and urges, influenced by their upbringing. "Indulgence" refers to comparatively mild control, while "Restraint" denotes more intense control. Consequently, cultures may be characterized as either indulgent or controlled.
The subdued nature of China's society is evident from its modest rating of 24 in this aspect. Communities scoring poorly in this aspect often exhibit a propensity towards skepticism and a pessimistic outlook. Furthermore, unlike societies that are indulgent, those that are restrained show little focus on leisure time and have less control over the fulfillment of their desires. Individuals of this mindset believe their behaviors are limited by societal standards and consider self-indulgence to be somewhat inappropriate.
On the sixth dimension, the United States is rated as a society that indulges. This is evident in these conflicting mindsets and actions: toil diligently and engage in leisurely activities.

Intercultural Human Resource Conflicts during Lenovo's Acquisition of IBM

Clash of Cultures

A majority of Lenovo's PC department staff hail from China, in contrast to IBM's PC department staff, who hail from over ten distinct nations. Persistent conflicts and misunderstandings among company employees arise due to divergent values, behaviors, and cultural misunderstandings. Furthermore, the existence of a corporate culture as a distinct subculture is confined to a particular social setting, invariably influenced by external elements like societal structures, national traditions, traditions, and geographical settings, leading to significant variations in the corporate culture. IBM's core values include individual respect, valuing the dignity and rights of every organization member, and thoroughly engaging the staff's motivation. Conversely, Lenovo fundamentally advocates for the incorporation of employees' individual interests into the organization's enduring growth. The first emphasizes individual worth and fosters individual creativity, while the second concentrates on how employees adhere to the distinct corporate culture. Post-merger and acquisition across borders, employees face cultural clashes stemming from divergent cultural ideas, leading to incompatible values, thought processes, and behavioral patterns, complicating the assimilation of the corporate culture.

Psychological Stress in Employees

Mergers and acquisitions across borders invariably lead to significant strategic and organizational shifts in businesses, frequently inducing anxiety, anxiety, and fear in employees, resulting in intense psychological stress, a phenomenon Hunsaker & Coobms (1988, 58) collectively termed as the "Merger Emotional Syndrome" (MES) (Figure 2).

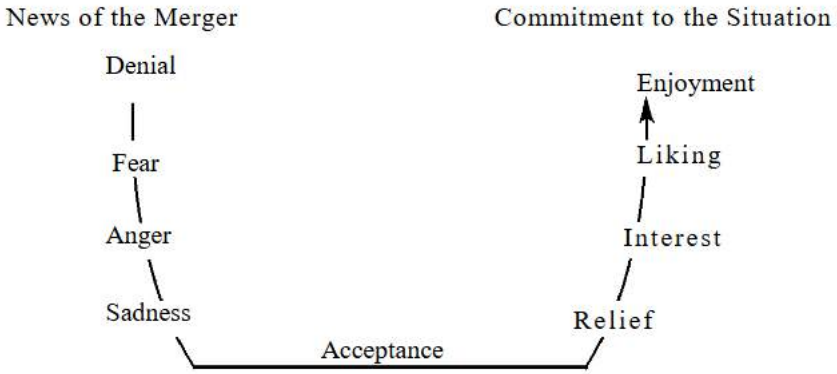

Figure 2: Stages in the Merger-Emotions Syndrome
Source: Hunsaker and Coombs(1988, 60)

Additionally, the way employees react to stress differs during various phases of a merger and acquisition. During the initial phase before mergers and acquisitions, an increasing number of rumors lead to heightened feelings of uncertainty and anxiety among employees, along with a heightened sense of self-defense; at the outset of mergers and acquisitions, employee anxiety peaks, and role uncertainty intensifies; conversely, at the merger's integration phase, team conflicts escalate, leading to a decline in trust levels, among other effects. Following Lenovo's declaration of acquiring IBM's PC division, the stark disparity in Lenovo's position and IBM's industry prowess made it unavoidable for ex-IBM PC workers to experience adverse feelings like anxiety, stress, loss, unclear roles, and uncertainty. The ex-employees of Lenovo, recently shaken by the 2004 major job cuts, were also unavoidably more concerned about the job cuts following the merger and acquisition. Consequently, post-merger announcement, there was a rise in reports of employees experiencing insomnia, headaches, alcoholism, and disputes both at work and home.

Challenges in Creating a Unified HRM System

Crafting an all-encompassing strategic blueprint is vital for the eventual triumph of an international merger and acquisition. The involvement of human re sources in the design phase, whether minimal or non-existent, makes it clear that guaranteeing the deal's successful finalization is challenging. Consequently, Lenovo's

decision to acquire IBM aimed at maintaining its initial workforce for contract signing and standard salary levels, among other strategies. However, the existing training in human resources management, compensation, incentives, coordination, and communication between Lenovo and IBM creates a significant gap between forming a cohesive merger and implementing a cross-cultural human resources management system. Regarding training, while tailored to various job requirements, IBM's training approaches and content, being more comprehensive and applicable, can enhance staff career planning effectively.
Employees at IBM relish the company's diverse human resources safeguards, and any efforts to halt or diminish these advantages could result in talent depletion. Consequently, Lenovo is limited to merging its dual corporate cultures, ensuring IBM employees' contentment with their training, career growth, remuneration, and peace of mind, while also considering the initial reaction and interests of Lenovo's internal team. The complexity of this task necessitates ongoing exploration into the cross-cultural HRM within M&A firms.

Lenovo's Way out of Intercultural HRM

1. The Merging of Dual Cultures

In Lenovo's business localization strategy, it's crucial to strike a balance between self-maintenance and adapting to others. In honoring IBM employees' American ethos, it's crucial to preserve the nation's superior culture through incorporation, balance the pros and cons, mutually enhance each other's capabilities, and attain mutual compatibility.

2. Establishment of Common Values

During Lenovo's merger and acquisition of IBM, as the acquiring entity, Lenovo's corporate ethos and values will dominate, posing a threat to IBM's corporate ethos and values. This conflict arises from the divergent thought processes and work practices of these two parties.
Consequently, the goal is to foster a shared ethos in the organization, to grasp and honor the cultural nuances of each party, to engage in balanced communication, to discover a blend of these two cultural aspects, enhance one another capabilities, and subsequently create a unified team to bolster the unity and collective strength of the personnel.

3. Distinct Oversight of Various Personnel Stages

Post Lenovo's takeover of IBM, there should be a phased adaptation of the workforce. This is to ensure the motherland's senior management, intermediate and junior management, along with staff localization. Senior executives are capable of bridging the gap between IBM's PC Division and the parent firm's strategic goals, ensuring uniformity and cultural cohesion, thereby enhancing collaboration between the parent company and its subsidiaries. Concurrently, this approach aids in enhancing the foreign management skills of these top executives and in developing the company's international management abilities.
Localizing managers and staff at intermediate and junior levels aligns with the host nation's strategies to safeguard local workforce and boost job prospects. Simultaneously, this approach enhances the host country's workforce's grasp of regional traditions, policies, and rules, aiding in stakeholder interactions with subsidiaries, cutting down on exorbitant expenses for international dispatch and cross-border activities, and promo ting cultural assimilation while diminishing the local populace's boycott of foreign investments.

4. Executing Training for Employees Across Cultures

Training across cultures serves as a potent method for averting and resolving cultural disputes, and a fundamental approach to address cultural variances and enhance the management of cross-cultural human resources. The training for senior managers abroad ought to be as outlined below.
Initially, the goal is to enable senior expatriate managers to grasp the host country's cultural essence and background; subsequently, to develop their analytical skills, both rational and emotional, regarding the host country's cultural attributes. Employees in the host country primarily receive training in these areas: firstly, to become proficient in the parent company's cutting-edge technology and managerial approach to enhance their business skills; secondly, to understand the strategic and corporate ethos of the parent company's main office, aligning them with the parent company's objectives and ambitions. Employees from both nations

receive language education, and a range of cross-cultural communication entities, both formal and informal, are set up to enhance their comprehension of the natural, social, political, economic, commercial, legal, and social norms of each country.

5. Implementing a Flexible System for Evaluating Performance

Lenovo, when assessing its domestic executives, should not only conduct routine evaluations but also concentrate on gauging their international work capabilities. The primary focus should be on evaluating the employee turnover rate in the host country, determining the market share of the company's offerings, assessing team leadership and collaborative skills, adapting to and applying the culture, evaluating communication capabilities, and gauging the satisfaction and sense of belonging among employees in the host country. Employees in the U.S. ought to undergo thorough assessments focusing on their individual performance, efficiency, and skills.

6. Update the Salary System

It's imperative that the remuneration framework aligns with the regional wage market, pertinent legal and regulatory frame works, labor union impacts, subsidiary economic outcomes, cultural inclinations, among other elements, while also harmonizing with the overarching business tactics of the parent firm. The remuneration for employees in the U.S. ought to be equitable and correlate directly with their personal performance, featuring fair salary disparities and substantial individualized benefits to guarantee their life quality. Besides setting up a remuneration scheme that aligns with the host nation's legal and regulatory frameworks and cultural heritage, the subsidiary companies are also obligated to maintain the remuneration of their senior executives abroad, consistent with that of other foreign subsidiaries.

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The 5P Funnel Framework: An Instructional Design for Enhancing Teachers' AI Competency

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Abstract

The strategic research of moral education plays an important role in the field of education. Exploring the effectiveness of moral education is a major topic for improving and promoting educational strategies. This study examines the effectiveness of moral education through focus groups. Through the results of this study, it is found that the strategy of enhancing life reality and experiential learning and using teachers as facilitators to conduct moral education is more effective, it is effective for students to participate in moral education in life while seeking strategic education courses. This study may provide a theoretical basis for this field and may help policy designers in curriculum design.

Keywords: Effectiveness, Teaching Strategies, Moral Education.

1.0 Introduction

As modern education pays more and more attention to teaching and strategy, moral education also begins to emphasize the importance of strategy application under the influence of other science education (Asif et al, 2020). In today's educational landscape, moral education is seen as a critical component of fostering not just academic success, but also the overall character development of students. This has led to the adoption of various teaching strategies that aim to engage students in ethical thinking and moral decision-making. Character education programs, which emphasize the teaching of core values like respect, responsibility, and fairness, have become widely implemented in schools (Biesta, 2021). These programs often involve purposeful instruction, as well as activities that encourage students to practice these values in real-life situations.

The effectiveness of these strategies varies depending on factors such as the educational environment, the commitment of educators, and the cultural context in which they are applied. As schools continue to face challenges such as bullying, social inequality (Tan, 2008), and the influence of digital media, the need for effective moral education strategies remains pressing. Educators are increasingly seeking to create programs that are not only effective in promoting ethical behavior but also adaptable to the diverse needs of students in a globalized world (Narayanti et al., 2024; Andreotti, 2011).

1.1 Problem Statement

Despite the widespread adoption of ethical education programs, there is still debate about the most effective strategies for teaching moral values. Empirical studies have had mixed results, with some methods being more successful in some Settings than others (Thambu et al., 2021; Zhang et al., 2022). This variability underscores the need for continued research into the effectiveness of different pedagogical strategies, especially as societies become more diverse and face new ethical challenges. For educators seeking to prepare students for the complexities of modern life (Lukovitskaya, 2020), understanding which approaches best promote ethical development is critical.

In addition, the teaching strategies of moral education have long been difficult to be tested effectively in the complex cultural context (Watson, 2022). It is mainly reflected in the application of teaching strategies in diverse cultures, which have different performances in different regions (Shang & Cai, 2021). Effective ethical strategies are difficult to define due to the interference of many different factors.

1.2 Research Questions

This study aims to answer the following research questions:
1. What are the most effective teaching strategies to promote students' moral development in different educational Settings?
2. How do cultural and social contexts influence the effectiveness of different ethical education strategies in cultivating ethical behavior and decision making?
3. What role do pedagogical approaches play in the successful implementation of moral education programs in schools?

2.0 Literature Review

2.1 Moral Education

The goal of moral education is to develop virtues of character. Moral character consists of three elements: moral knowledge, moral feeling, and moral action (Cohen & Morse, 2014). According to this theory, Lickona claimed that moral behavior alone is insufficient and that understanding and feeling at ease are necessary to determine whether a behavior is moral (Astuti, 2024). The moral system contains two prescriptive which including proscriptive regulations depends on the behavioral activiy and inhibition regulatory systems (Janoff-Bulman and Carnes, 2013). These guidelines influence our actions, thoughts, and feelings. Moral motivations manifest in different forms, including personal ones (such as self-discipline and hard work), interpersonal ones (such as avoiding harm and helping), and those that operate at the group or collective level (such as maintaining social order and promoting social justice) (Rai & Fiske, 2011).

Research on moral education mostly concentrate on moral principles (Tan et al., 2017), innovative teaching methods (Gholami et al., 2011), experience (Shih, 2021), and problem-solving techniques (Chang, 2016). Studies show that moral principles, creative teaching methods, experience, and problem-solving techniques can all help to improve the efficacy of moral education initiatives in classrooms. According to Tan (2017), moral education textbooks built on moral principles have the power to create decent citizens and bolster Malaysia's multiethnic population's sense of national cohesion. To cultivate positive student morale in Taiwan, Shih (2021) suggested that parents be involved in moral education through experience sharing. Moral education textbooks in China are used to teach morality, and they contain material that challenges students' critical thinking and helps them answer moral conundrums based on actual situations (Chang, 2016).

2.2 Past Studies of Effectiveness of Teaching Strategies for Moral Education

Past research on the effectiveness of teaching strategies in moral education has highlighted the critical role that teaching methods play in shaping students' moral reasoning and moral behavior. Several studies have examined the impact of various teaching methods, such as direct teaching, discussion-based approaches, and experiential learning, on moral development (Pegu, 2021). For example, Berkowitz and Bier (2005) conducted a comprehensive review of character education programs and found that interactive and student-centered approaches (such as cooperative learning and service learning) are more effective in promoting moral development than didactic teaching. These approaches encourage students to actively engage with ethical dilemmas and promote a deeper understanding and internalization of ethical principles.

Similarly, a study by Narvaez and Lapsley (2008) highlights the importance of integrating moral education into the broader curriculum through approaches such as narrative ethics and moral discourse. Their findings suggest that when moral education is integrated into subjects such as history and literature, it helps students contextualize moral concepts, making them more relevant and applicable to their lives. This integration not only enhances students' moral reasoning skills, it also supports the development of a moral identity, which is essential for consistent ethical behavior (Nucci et al.,2021). In addition, research by Nucci and Narvaez (2008) shows that discussion strategies that encourage students to express their ideas and participate in debates about moral issues can significantly improve their moral reasoning skills. These interactive discussions provide a platform for students to explore different perspectives, challenge their assumptions, and develop a more nuanced understanding of ethical concepts, which argue that these strategies are particularly effective in cultivating critical thinking and empathy, which are key components

of moral development.

2.3 Strategies Change the Moral Education Effectiveness

Environments such as the home, school, and community can foster moral education. This inevitably makes it difficult for people to believe in the moral education of purpose. For example, many Chinese families pay little attention to moral education courses taught in schools or professional institutions (Asif et al., 2020). The goals of moral education in schools are to develop morals, decent mindsets, and well-behaved children. However, the effectiveness of moral education using specific educational methods is still controversial. Technology is developing quickly, and this has both beneficial and harmful effects. Technological advancements have the potential to improve people's efficiency in their daily lives, but they can also have the opposite effect, altering people's personalities and lifestyles (Abdul Rahman, 2018). Schools must undoubtedly adapt and alter to keep up with the ongoing developments in this area. Education is significantly impacted by the digitalization of daily life. Even with the most recent advancements in digital tools and instructional software, schools and teachers continue to struggle with how to incorporate technology into curricula and better prepare children for the future. The idea of digital literacy aids in the comprehension and fulfillment of the needs of schools and students in a digital society by researchers, educators, and education officials (Pangrazio, Godhe, & Ledesma, 2020). In a similar vein, educational institutions are attempting to incorporate technology into moral instruction. Reviving moral education has been the focus of a lot of effort over the past ten years to slow down the rise in criminal and deviant behavior that characterizes contemporary society (Zhang, 2018). Numerous studies demonstrate that bullying happens in schools and that students struggle with academic dishonesty, as seen by the many instances of plagiarism and cheating in the academic community (Schwitzgebel et al., 2020).

2.4 Theoretical Framework

Theoretical frameworks help develop research questions and theory-based research methods. First, constructivist theory can be used to explore how teaching methods that encourage active participation and reflection (e.g., group discussions, case studies) can contribute to improving the effectiveness of moral education programs. The theory supports the idea that when students are actively involved in constructing their moral understanding, they are more likely to internalize those values. This confirms the necessity of the effectiveness of moral education. In addition, social learning theory helps to explain how teachers' attitudes and behaviors affect students' moral development. This suggests that when teachers model ethical behaviors and create a positive, supportive classroom environment, students are more likely to adopt those behaviors on their own. This theory can be used to analyze the impact of the teacher's role in moral education beyond the formal strategies used in the classroom. It also develops the discussion of teaching methods in research question 3.

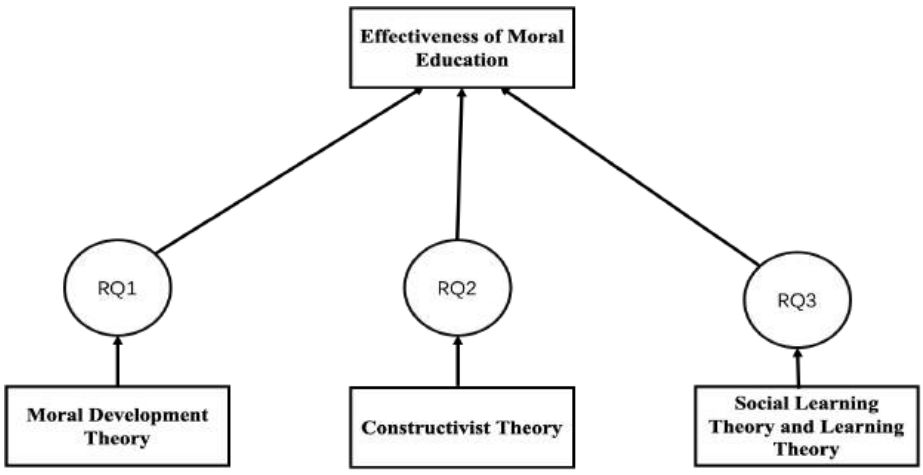

Figure 1. Theoretical framework.

2.4.1 Moral Development Theory

According to Kant (1785/1959, 1797/1991), moral actions are solely those performed out of a sense of duty. These actions must be carried out, regardless of the situation or the consequences for oneself or others, because they are intrinsically required. In contrast, actions taken in pursuit of personal goals or driven by desire or inclination hold no moral significance or value. An act can only be considered truly moral, and thus motivated by duty, when it contradicts one's own inclinations. Programs for stage-appropriate moral education could be developed using the study's findings and Kohlberg's theory of moral development (Esmaeili et al., 2021). While older students in the conventional or post-conventional phases could participate in more intricate ethical discussions and challenges, younger pupils in the pre-conventional stage, for instance, might benefit from more tangible instances of good and wrong (Uncu, 2021). This will enable educational institutions to customize moral education curricula to meet the needs of individual pupils.

Kohlberg identified six structural stages of moral reasoning, based on the formal nature of thinking about hypothetical moral dilemmas—situations that involve conflicting values and can be resolved in multiple ways. These stages are organized into three levels, each containing two stages. Progressing through these stages is believed to involve a gradual separation of moral principles from "prudential" considerations and social norms. In outlining these stages, we will adhere to the more well-known "ideal type" descriptions that Kohlberg provided in his earlier work (1969, 1971). The later framework, which uses the concept of "sociomoral perspective" (Colby et al., 1983), attempts to eliminate any traces of specific moral content from the stage descriptions. This approach has the practical effect (questionable at best) of eliminating the appearance of regressions at the more advanced stages of moral development, but it also makes achieving the higher stages more challenging.

2.4.2 Constructivist Theory

According to constructivist theory, which holds that students actively create their own understanding and knowledge via experiences, curriculum that promotes moral reasoning activities could be created using the study's results (Mohammed & Kinyó, 2020). Schools could create programs that let students investigate moral questions via dialogue, introspection, and practical exercises, helping them to build their own moral frameworks in a nurturing setting.

Constructivist teaching and teacher education have clearly gained prominence. Discussions on these subjects dominate academic and professional journals across various disciplines. Additionally, constructivist methods are evident in national and state policy documents aimed at shaping the curriculum and teaching methods in American schools, as well as in state and local policies. For instance, the Tucson, Arizona Unified School District is considering requiring early elementary teachers to discard their mathematics textbooks and instead teach math primarily through a constructivist approach using manipulatives.

2.4.3 Social Learning Theory and Learning Theory

According to social learning theory, which places an emphasis on imitation and observational learning, teacher preparation programs may benefit from the study's findings. Teachers can be instructed to model moral behavior and employ instructional practices that support students' moral development by knowing which strategies work best (Watson, 2022). According to this view, instructors are essential to moral education because of their contacts with students and their personal behavior in addition to their direct instruction.

On the other hand, identification in Learning process is another important composition for the explanation of this theory. Identificatory learning is often given significant importance among the various processes involved in socialization, regardless of whether explanatory theories prioritize psychological or sociological factors (Brandura, 2001). Several factors contribute to this emphasis. Informal observation clearly shows that the complex behaviors exhibited by members of society are largely acquired with minimal or no direct instruction, simply through observing the behavior patterns demonstrated by various socialization agents. This is especially the case for behaviors that lack a reliable eliciting stimulus, other than the cues provided by others' responses.

3.0 Methodology

3.1 Research Design

This study applies qualitative research design using case study approach to explore the effectiveness of moral education teaching strategies. Multiple case studies are used to investigate the experiences of different roles in teaching in teaching scenarios. The benefit of multiple case research is found in the ability to conduct cross-case analysis. This research design moves beyond the examination of a single case, focusing instead on the contrasts and commonalities between cases. Therefore, it involves more than simply performing additional case studies. Instead, it represents an advancement in formulating a theory about the elements influencing both the differences and similarities among cases (Hunziker & Blankenagel, 2021).

The primary approach is through focus groups, chosen for their ability to generate rich, detailed data and effectively capture the nuanced perspectives of participants within limited time and budget. Focus groups are particularly valuable in qualitative research because they provide a platform for interaction between participants, allowing for the emergence of different perspectives and greater insight into the research topic.

3.2 Sampling Method and Informers

The study involved purposive sampling to select participants who had relevant professional knowledge and experience in moral education, and they need to personally participate in moral education. Therefore, the purpose sampling method was adopted in this study to recruit participants in focus groups. To minimize observer bias and enhance the credibility of the findings, strict inclusion and exclusion criteria were established prior to participant recruitment, as outlined in Table 1.

Table 1. Sampling Inclusion and Exclusion Criteria.

Inclusion	Exclusion
People who can communicate in English	People in other languages
Get involved in education (teachers, administrators, students)	Not involved in education
Attended moral education classes/lectures	Never participated in a moral education class.

A total of 14 participants were selected to ensure a rich and comprehensive discussion. The participants were divided into three focus groups to encourage interaction and to allow for a variety of perspectives to be explored. The first group consisted of three teachers and one administrator, providing insights from the perspective of those who design and deliver moral education. The second group included four university students, offering a viewpoint from those who have experienced moral education firsthand. The third group was a mixed group, comprising three teachers and three students, to facilitate a dialogue between those who teach and those who learn. One of the reasons for this is so that different levels of sources can include discussion content on different topics and get answers from different groups of people under the same topic, which is more conducive to data. In addition, conducting multiple rounds of focus group discussions can facilitate questioning and further exploration of underlying topics. Use ongoing data analysis to facilitate further exploration of the topic in the next set of discussions.

3.3 Research Location

This study was conducted at a public university in Malaysia, and the research carried out in the region was approved by the ethics Committee of the region. The university's population structure and students' cultural background are relatively rich, and the acceptance of moral education is relatively high, so it is suitable for this research.

3.4 Pre-Test and Pilot Test

To ensure the high reliability and validity of the data collected in this study, pre-test and pre-test were

conducted before the formal study. In qualitative research, informants in a pre-test are persons or a small group of participants who are engaged in the initial evaluation of research instruments, processes, or interventions prior to the primary study (Gani et al., 2020). In the pre-test stage of this study, we invited experts from the research institution to evaluate the data collection process and the question setting of the focus group and revised the design of the session according to the opinions of experts and peer review. During the pilot test, informants are typically selected based on criteria like those used in the main study. According to the design of the focus group session, we simulated the discussion of the focus group and pre-considered the problems that might arise in it.

3.5 Data Collection Process

After identifying the callers, we selected a researcher as moderator and another researcher as recorder, using electronic recording devices to make audio recordings and mark some key statements. The moderator announces the start of the focus group after making sure all the informants are present. Each member can take the initiative to answer, and when some inactive members have not spoken for a long time, the moderator will directly ask the member a question. After this, the digital audio is manually transcribed and preserved as a verbatims.

3.6 Data Analysis

The data analysis method of this qualitative research is mainly carried out by the text content topic coding of verbatim transcribed manuscripts, so as to complete the research related to the effectiveness of moral education teaching strategies. First, recordings of focus group discussions are transcribed into text format. This ensures that all verbal data is accurately captured for analysis and, in order to ensure ethical compliance, statements are made regarding possible privacy concerns of informants. After this it enters the coding phase, where the record is systematically encoded by identifying and labeling important text fragments relevant to the research question. Coding involves assigning codes to sections of data that represent concepts or topics related to the effectiveness of ethical education teaching strategies, and grouping similar codes into broader topics. This process involves analyzing the code for patterns and relationships and organizing them into categories that reflect the main themes in the data. A thematic analysis of the following text content is carried out to explore the identified themes in depth. This involves how the research topics are related to each other and how they address the research question. The data in each topic was analyzed to understand how participants' experiences and perspectives influenced the overall research results. Finally, the results of thematic analysis are used to interpret the discussion results of the focus group in order to answer the research questions.

3.7 Ethical Consideration

The study was conducted in strict accordance with the academic code of ethics and was approved by the ethics committee of the study site before the study was carried out. In order to protect data security and the privacy of participants, the data collected in this study was anonymized prior to publication. At the same time, only researchers participated in the process of text transcription in this study.

4.0 Result and Discussion

From the result of the focus group, both educators and students reached a consensus during the focus group discussions that the most efficient teaching tactics for moral education involve the use of real-life events, conversations, and storytelling. Instructors highlighted the significance of including tangible scenarios and ethical predicaments to ensure moral teachings are relevant and captivating. Students expressed agreement with this viewpoint, highlighting that these tactics facilitated their ability to link moral principles with their own personal experiences, resulting in more profound and meaningful lessons. The focus group participants indicated that the success of moral education programs is closely linked to the pedagogical approaches employed by educators. Teachers who were passionate about moral education and used interactive methods, such as discussions and group work, were perceived as more effective. Students noted that when teachers genuinely cared about the subject and created a supportive learning environment, the moral lessons were more impactful.

Back to the focus group, participants noted the inconsistency in how moral education is delivered across different educators, with some teachers being more comfortable and effective than others. Additionally, students mentioned that discussions sometimes lacked depth, and there was a concern that moral education could feel forced when integrated into other subjects.

4.1 Effective Teaching Strategies for Moral Education

RQ1: What are the most effective teaching strategies to promote students' moral development?

The findings from the focus groups provide significant insights into effective teaching strategies for moral education. In response to RQ1, two key themes emerged: the use of real-life scenarios and storytelling. Real-life scenarios were highlighted as particularly effective in helping students relate moral principles to their personal experiences, thus fostering practical moral reasoning skills. This observation is consistent with Narvaez's (2002) argument that moral education is most impactful when students are encouraged to apply ethical principles in scenarios reflecting their own lives. Similarly, storytelling was identified as a powerful tool for engaging students both emotionally and cognitively in moral lessons. Coles (1989) supports this, emphasizing that narratives help students internalize moral values more deeply. The focus groups confirmed that these strategies, which combine emotional engagement and practical application, facilitate a more profound understanding of moral concepts among students.

RQ2: How do pedagogical approaches influence the successful implementation of moral education programs in schools?

In exploring RQ2, which examines the role of pedagogical approaches, two themes were prominent: the role of teachers as facilitators and the effectiveness of active learning through discussions. The study found that teachers who adopt a facilitative role, as supported by constructivist theory, significantly enhance moral education outcomes. Constructivist theory posits that students actively construct their understanding through experiences, and the focus group results affirmed that when teachers provide guidance and create a collaborative learning environment, students are more likely to engage with and retain moral lessons. This is consistent with findings by Berkowitz and Bier (2005), who stress the importance of teacher involvement in the success of character education programs. Additionally, active learning through discussions emerged as a critical strategy. By engaging students in moral reasoning through debates and dialogue, teachers encourage the construction of personal moral frameworks, which not only reinforces moral concepts but also promotes critical thinking and reflection—essential components of moral development.

RQ3: What challenges are associated with the implementation of moral education strategies?

The findings related to RQ3 reveal two significant challenges: inconsistent delivery across educators and the difficulty of integrating moral education into the curriculum. The focus groups indicated that some teachers are more comfortable and effective in delivering moral education, while others struggle, resulting in variability in how moral lessons are conveyed. This suggests a need for professional development programs focused on moral education pedagogy to ensure consistent and effective teaching practices. Another challenge lies in the integration of moral education into other subjects. While it was noted that incorporating moral lessons into various disciplines can enhance their relevance, participants cautioned that these efforts must be undertaken thoughtfully to avoid a sense of contrivance. Constructivist principles advocate for moral education to be naturally woven into everyday learning, rather than being treated as an isolated component. This requires careful curriculum design that ensures moral education is an integral part of students' overall educational experience.

5.0 Implication

The findings of this study have important ramifications for the creation and execution of moral education initiatives in educational establishments. The results emphasize the significance of employing a variety of interactive pedagogical approaches, such as ethical problems, storytelling, and group discussions, to successfully involve students in moral thinking. The study highlights the significant impact that teachers' views and the educational environment have on shaping students' moral growth. These observations indicate that for moral education to have a genuine impact, it should be seamlessly included into the wider curriculum

and reinforced by a school environment that emphasizes free discussion and analytical thinking. Furthermore, the findings of the study support the need for professional development programs that provide educators with the necessary skills to establish inclusive and introspective learning environments. This will ultimately cultivate a student population that is more conscious of ethical considerations and socially accountable.

6.0 Conclusion

To summarize, the results of this study support and expand upon previous studies regarding the efficacy of moral education methods. The study emphasizes the significance of practical applicability, teacher involvement, and the deliberate incorporation of moral education into the overall curriculum. This study emphasizes the importance of active, experiential learning and the essential role of instructors as facilitators in moral education, based on constructivist philosophy. To improve the efficiency of moral education programs in schools, it is crucial to address the mentioned problems by focusing on professional development and meticulous curriculum design. These observations offer a solid basis for further investigation and application in the realm of moral education.

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Revamping the Language of the Skies: Needs Analysis in ESP Context for Chinese Flight Attendant Students

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Abstract

The English requirements of flight attendants in airlines are not always consistent with the English training content of Chinese colleges and universities. In light of this understanding, this study was conducted to examine students' English needs, crucial English skills within flight attendance domain along with linguistic skills and activities in ESP curriculum for improving flight attendant English course. 186 students majoring in flight attendant at a vocational undergraduate university in China and five teachers took in this research. The data for this investigation was gained through various instruments, encompassing a questionnaire, semi-structured interviews with ESP and flight attendant subject instructors, and classroom observations. The results derived from the data analysis provided substantive insights concerning the instruction of the ESP course. The study uncovered that speaking skills received the dominance of attention in ESP lessons. Additionally, writing and reading along with listening were deemed less essential compared to other skills. Moreover, based on additional insights ascertained through needs analysis, the research culminated in a prototype guide intended for practitioners aiming to devise an English language curriculum pertinent to vocational contexts, utilizing the Wheeler curriculum development model. Finally, both ESP and flight attendant subject teachers issued a plea to improve ESP course to flight attendant students by fostering greater communication and collaboration.

Keywords: ESP; Needs Analysis; English Skills; Flight Attendant Program; Curriculum Development.

1.0 Introduction

China, as a huge market for aviation industry (Cao et.al, 2024). Since 2007, China has become the second largest aviation market around the world as to the volumes of passengers and air cargo moved in its domestic market (Jiang & Zhang, 2016). With the continuous development of the flight attendant industry and the increase in aircraft, a large number of new flight attendants are urgently required.

English as an important communication tool, plays an increasingly important role in flight attendance (Supriadi & Purbani, 2019; Wang, 2007). The regulation released by the Federal Aviation Authority (FAA), based on recommendations from the Aviation Rule making Advisory Committee (ARAC), also states that one of the significant requirements for flight attendants is to possess a sufficient understanding of English to effectively communicate, coordinate, and execute all necessary duties (Supriadi & Purbani, 2019). In order to improve passengers' satisfactory, many airline companies have increased English standards, including enhance the admitted requirements of potential flight attendants (Wang, 2007) and English language training (Uraipan, 2011). As a result, flight attendance major in many Chinese universities and colleges have taken English courses (Zhang, 2019).

However, research indicated that the English proficiency of flight attendant graduates is generally lower than that of specialists and fails to meet passengers' expectations, particularly when serving English-speaking individuals. (Kankaew, 2021; Lestari, 2017; Taghipour et al., 2020). Consequently, this shortfall leads to reduced satisfaction among passengers, which, in turn, negatively impacts the growth and profitability of airline companies by deterring potential customers from utilizing their services (Kalemba & Campa, 2018; Law et al, 2022).

Furthermore, there is often an incongruity between the English proficiency requirements for flight attendants set by airlines and the content of English language training provided by institutions of higher education (Sirikanjanawong, 2016; Wang, 2023; Zhou & Rui, 2023). This discrepancy results in graduates

from these institutions struggling to meet the standards set by airlines, thereby diminishing their competitiveness in the job market (Zhou & Rui, 2023).

Based on the aforementioned problems, therefore, it is pertinent to investigate what English skills are needed for flight attendance students in Chinese vocational undergraduate university by investigating flight attendance's present situation and target situation of English language use, for the aim of improving ESP course in flight attendance major. In turn, it can serve as a contributing factor to inform the broader framework of the local ESP context within higher education.

1.1. Needs Analysis in ESP Context

The research of needs analysis in ESP appeared in 1920s and became central in 1960s (West, 1994). Needs analysis is the fundamental to develop any language course successfully (Hutchingson & Waters, 1987; Kavaliauskiene & Uzapliene, 2003; Pranoto & Suprayogi, 2020; Sleezer et. al, 2014). Needs analysis has traditionally been carried out at the beginning of the course development process, serving as the first step before the course is launched. (Long, 2005; Mazdayasna & Tahririan, 2008). It has become a significant element in the field of ESP, which also plays a vital role in ESP course design (Dudley-Evans, 1998). Only if understand why learners need English, the reasonable content of language course could be designed and accepted from learners' awareness (Jin et al., 2014). Many researchers have taken somewhat related studies to interpret needs analysis diversely (Bhatia, 2002; Dudley-Evans & St. John, 1998; Haliday et al., 1964; Hutchinson & Waters, 1987; Hyland, 2013; Munby, 1978; Richterich & Chancerel, 1980). Therefore, different meanings and implications have been implied.

1.2. Needs Analysis Models

Jordan (1994) indicates that needs analysis can be divided into two main approaches, target situation analysis (TSA) and present situation analysis (PSA). The other approaches, such as learning needs analysis (LSA), register analysis, genre analysis. strategy analysis can be seen as the permutations of target situation analysis and present situation analysis.

1.2.1. Target Situation Analysis (TSA)

Target Situation Analysis, focuses on learners' needs at the end of a language course and is used to identify the target language needs of any group of learners (Munby, 1978). Munby formulated the well-known model named "Communication Needs Processor (CNP)". He used this model to identify learners' target language needs. This model has become the main reference in ESP despite some criticisms of its limitations (Habil et al., 2016).

Admittedly, Munby' s model exists some limitations, some researchers argues that this model is inflexible, time-consuming, overemphasis on target situation, fail to focus on learners' needs and has limited consideration of contextual and social-cultural factors (Hutchinson & Waters, 1987).

Thus, Hutchinson and Waters revised this model. Different from Munby's language centered approach, this model is learner-centered. It considers nearly all the variables (Wang, 2011). Target situation analysis according to Hutchinson and Waters (1987), is a term includes three aspects: necessities, lacks and wants.

In relation to existing studies, Syakur et al. (2020) characterize 'necessities' as the English language requirements of students within the aviation sector. 'Lacks' pertains to the aspects of aviation English that learners have not yet mastered, while 'wants' represents the content that learners desire to learn in the context of aviation. Pranoto & Suprayogi (2020) assert that 'necessities' should entail English instruction that is closely tied to the prospective professions envisioned by students. 'Lacks' refers to the students' areas of deficiency in practical English usage within their physical context, and 'wants' signifies the preferred topics of learners in an ESP course.

1.2.2. Present Situation Analysis (PSA)

Present situation analysis was first proposed by Richterich and Chancerel (1980). Different from target situation analysis, present situation analysis examines three aspects of information, including the learners, the language teaching establishment and the user institution (Richterich and Chancerel, 1980). This illustration is in accordance with Jordan (1997)'s opinion: students, academic institution and prospective employers. Meanwhile, Hutchinson and Waters (1987) specified the model of present situation analysis from the aspect of learners themselves and the language teaching establishment without considering the prospective employers. They illustrated a framework to examine learners' present needs of language learning. This framework examines five broad questions: (1) Who are the learners? (2) Why are the learners taking the course? (3) How do the learners learn? (4) What resources are available? (5) When and where the ESP course take place?

In the research undertaken by Syakur et al. (2020), it is asserted that the study focuses on learner-specific demographic information, including variables such as age, gender, academic stage, and current levels of English proficiency. Additionally, the study examines the challenges experienced in four distinct English sub-skills and the learners' perceptions of the English language.

In summary, TSA and PSA offer complementary perspectives in ESP study. TSA, with its focus on identifying the linguistic requirements of a language course, despite one of the limitations of this model is its inability to assess the current state of the learners and the learning strategies they need to effectively acquire the language. PSA, despite illustrating current language proficiency, fails to PSA encapsulate the workplace scenarios that learners must become proficient in and the methodologies for language acquisition (Nguyen & Ho, 2024). These deficiencies can be effectively addressed through the combination of TSA and PSA, as substantiated by recent studies (Basari, 2020; Mo, 2017; Nhut, 2021).

1.3. Needs Analysis in this Study

Needs analysis must adhere to the principles of applicability, utility, and reliability. This process can be systematically executed through a three-phase methodology: planning, information collection, and information analysis (Witkin & Altschuld, 1995). In the context of this research, both Target Situation Analysis (TSA) and Present Situation Analysis (PSA) were integrated to conduct a comprehensive investigation.

During the PSA segment of the study, flight attendant students' English language proficiency, as well as their language skills and tasks within the ESP course, were meticulously examined. Dudley-Evans and St. John's needs analysis model (1998) was applied to investigate the current needs. Concurrently, in the TSA segment, an in-depth exploration was conducted to apply needs analysis model proposed by Hutchinson and Waters (1987) to examine English language requirements of students within the flight attendance sector from the perceptions of ESP educators and subject teachers.

This approach examined a subtle understanding of current capabilities and future needs, ensuring that the results of the analysis would be not only accessible but also reflective of real-world requirements in the field of flight attendant studies.

Here are research questions of this study:

1. What are the language proficiency and English needs of Chinese flight attendant students?
2. What English language skills do ESP teachers and subject teachers perceive as the most important for flight attendant students in occupational context?
3. What are the language skills and activities much emphasized in flight attendant ESP course?

2.0 Method

2. 2.1. Research Design

The research design used in this study is the fully mixed sequential equal status design (Leech & Onwuegbuzie, 2009), which is one of the mixed methods models. It can greatly benefit practitioners and experienced researchers who want to expand their research and enhance the validity and reliability of the research (Baran, 2016). In this study, the quantitative data was obtained through questionnaire and the qualitative data was collected via interview and class observation subsequently for the purpose of gaining "validated and substantiated findings" (Creswell, 2009).

2.2. Participants and Context

This study was conducted by collecting data from Flight Attendant Program students in a Chinese university in Zhejiang province which has long history in offering this program. All of the participants were students majoring in flight attendant. Purposive sampling was adopted to select the sample based on their availability (have time and be willing to partake in the survey), gender and academic year (Etikan et.al., 2016). A total of 184 students took part in the study (See Table 1). Of these participants, there were 84 male and 102 female. 97 students (47 male and 50 female) were from the first academic year, 74 (32 male and 42 female) were from the second academic year and 15 (5 male and 10 female) were from the third academic year.

Table 1. Participants' information

	1st Year	2nd Year	3rd Year	Sum
Male	47	32	5	84
Female	50	42	10	102
Total	97	74	15	186

Five teachers were invited to take the interview, including three ESP teachers and two flight attendant subject teachers (See Table 2 below). This selection criterion was predicated on the premise that these individuals have a profound understanding of the students' linguistic capabilities and the specific requisites for the ESP curriculum. By engaging these educators in an interview setting, rich and authentic insights about the interview questions were aimed to be elicited, ensuring that the data collected is both accurate and reflective of their experiences and perceptions concerning the learners' needs and performance within the context of the ESP course.

Table 2. Interviewees' information

Name	Age	Gender	Teaching Experience (Years)
ESP Teacher A	28	Female	1 year
ESP Teacher B	40	Female	16 years
ESP Teacher C	43	Female	20 years
Subject Teacher A	28	Female	1 year
Subject Teacher B	28	Female	3 years

2.3. Data Collection Tools

In order to achieve triangulation and valid results of the needs analysis in ESP context for flight attendant students, three different data collection instruments were adopted: questionnaire, semi-structured interview and classroom observation.

2.3.1. Questionnaire

During the development process of the questionnaire, some of the items were adapted from Chatsungnoen (2015). A pilot study was conducted to test out the questionnaire. Items were constructed using a 5-point

Likert scale recommended by Croasmun and Ostrom (2011) to mark the extent of questions, for instance, the most need=1, relatively need=2, neutral=3, relatively not need=4, very unnecessary=5. This structured questionnaire consists of 18 items. The first section gathered participants' background information, including students' general information, interest and attitudes towards the ESP programme and self- evaluation of English competency. The second section gathered the data about needs to use general English skills in academic context and occupational context.

A valid questionnaire translation can ensure the validity and reliability of the research (Su & Parham, 2002). The questionnaire items were initially rendered into Chinese, subsequent to which an individual specializing in Chinese-English translation was engaged to perform a back-translation of all the questionnaire items. Furthermore, to assess the internal consistency of the online questionnaire, Cronbach's Alpha was computed, yielding a value of 0.927. Alpha ranging from 0.70 to 0.95 is regarded as the acceptable value (Tavakol & Dennick, 2011). The questionnaire has been proved as an appropriate method to measure participants' attitudes, beliefs and opinions (Dörnyei & Taguchi, 2009). To examine the English proficiency and requirements of the participants, employing a questionnaire as the data collection tool was deemed suitable.

2.3.2. Semi-structured Interview

The aim of interview was to examine which English language skills do ESP teachers and subject teachers perceive as the most important for flight attendant students in occupational context and which language skills and activities are much more emphasized in flight attendant ESP course.

The type of interview in this study was semi-structured interview which included ten questions for interview with ESP teachers and 12 questions for flight attendant subject teachers. These inquiries were formulated and subsequently refined following a preliminary study. The rationale behind the selection of semi-structured interviews was to afford interviewees expanded opportunities to articulate their perspectives and recommendations. This approach facilitates the elicitation of enriched and pertinent information from participants (Longhurst, 2003).

The open- ended questions in interview covered two aspects: present situation analysis and target situation analysis. Firstly, the present situation analysis covered two points: personal information and English language information about learners. Secondly, the target situation analysis covered what tasks and activities should be included and what English language skills are most important in ESP course.

2.3.3. Class Observation

The protocol of class observation was revised from the existing literature written by Hamzaoui-Elachachi and Graia (2014). This rubric form consists of five themes: content organization, presentation, interaction, instructional materials and environment, content knowledge and relevance. Each of these themes were recorded from three aspects: not observed, more emphasis recommended and accomplished very well.

2.4. Data Collection Process

Following the receipt of ethical approval from the university's Ethics Committee for this study, the data collection procedure was initiated. This commenced with the gathering of quantitative data through an online questionnaire distributed to students. The students were required to complete the questionnaire during a course period. Sequentially, for the collection of qualitative data,ESP teachers and subject teachers were invited to partake in interviews conducted in the campus meeting room, with each interview sustaining a duration of approximately 30 minutes. In the context of classroom observation, an ESP instructor and second-year students were subjected to a non-participatory observation over a duration of one and a half hours.

2.5. Data Analysis

Subsequent to the accumulation of quantitative and qualitative data, the process of data analysis was initiated. Descriptive analysis, encompassing metrics such as means, and standard deviations, was tabulated using data from questionnaire. In terms of the qualitative data procured from interviews and class observations, thematic

analysis adopted from Braun and Clark' s model (2006) was implemented to conduct the analytical procedure.

3.0 Results

This section presents and examines the findings of this study. The first section comprises a quantitative analysis derived from the student questionnaires, addressing the research questions pertaining to flight attendant students' linguistic competencies and their specific English language requirements. The subsequent section offers a qualitative analysis based on interviews and class observation conducted with ESP educators and instructors specializing in flight attendant studies, answering the research questions related to the linguistic skills and activities prioritized within the ESP curriculum, as well as identifying the most crucial English language skills within the professional domain.

3.1. Students' Perceptions of English Proficiency and Language Needs

The findings presented in this section provide a comprehensive analysis of the PSA, encompassing the linguistic competencies of flight attendant students and identifying their specific English language requirements for professional contexts.

3.1.1. Students' perceptions of their English proficiency in language skills

Table 3 shows that students' perceptions of their own language competency vary across different English skills. Reading ranked first (Mean=2.780, SD=1.050). Speaking ranked second with the mean value of 2.737 and the SD value of 1.050. Reading was less proficient (Mean=2.672, SD=0.978), followed by vocabulary (Mean=2.495, SD=0.977) and grammar (Mean=2.478, SD=1.015). Writing was students' weakest skill (Mean=2.392, SD=0.982).

Table 3. Students' perceptions of their English proficiency in language skills

English Language Skill	Mean	SD	Rank
Reading	2.672	0.978	3
Listening	2.780	1.050	1
Speaking	2.737	1.061	2
Writing	2.392	0.982	6
Vocabulary	2.495	0.977	4
Grammar	2.478	1.015	5

Note. .Very weak=1, weak=2, moderate=3, good=4, very good=5

3.1.2. Students' perceptions of English language needs

As indicated by the questionnaire results, 62 students (33.33%) strongly agree on the importance of English for both study and work, 59 students (31.72%) agree, 54 students (29.03%) remain neutral, and 11 students (6.92%) disagree, believing that English is not important.

The data presented in Table 4 reveals a diverse range of English language skill requirements among students. Notably, there is a pronounced emphasis on oral communication skills, as indicated by the mean score of 2.156 (SD=1.004). Vocabulary acquisition follows closely, with a mean value of 2.226 and a standard deviation of 0.971. Listening skills rank third, exhibiting a mean score of 2.274 and a standard deviation of 1.005. This is succeeded by an observed need for grammar comprehension, as reflected by a mean of 2.403 and a standard deviation of 1.057.

Reading skills are positioned next, with a mean score of 2.484 and a standard deviation of 0.988, while writing skills are identified as having the least imminent need, as demonstrated by a mean score of 2.559 and a standard deviation of 0.975.

Table 4
Students' Needs for English Language Skills in Academic Pursuits

Needs of English Language Skill	Mean	SD	Rank
Speaking	2.156	1.004	1
Vocabulary	2.226	0.971	2
Listening	2.274	1.005	3
Grammar	2.403	1.057	4
Reading	2.484	0.988	5
Writing	2.559	0.975	6

Note. .The most need=1, relatively need=2, neutral=3, relatively not need=4, very unnecessary=5

3.2 Perceptions of ESP Teachers and Subject Teachers

The data of qualitative analysis derived from semi- structured interview and classroom observation. In the first section, results of interview with ESP teachers and flight attendant subject teachers were analyzed to respond the second research questions: What English language skills do ESP teachers and subject teachers perceive as the most important for flight attendant students in occupational context? In the second section, results of classroom observation in ESP course were presented to answer the third research question: What are the language skills and activities much emphasized in flight attendant ESP course?

3.2.1. ESP Instructors' Perceptions of Importance of English

Before comprehending the teachers' perceptions concerning the most crucial English skill, it is imperative to initially grasp their attitude towards the English language. The initial segment of interview inquiries concentrated on ascertaining whether ESP teachers have a positive perspective on the utilization of the English language. Upon interview, the data results revealed that all ESP teachers strongly concur with the significance of English and are convinced of its profound impact on students' future professional lives. As illustrated by one ESP teacher as follows:

> Excerpt 1
> "English is very important. If we say one language sets you in a corridor for life, two languages will open every door along the way." (ESP Teacher A)

Several ESP instructors emphasized the multifaceted importance of English, highlighting its necessity in various contexts. They noted that proficiency in English is essential for daily communication, understanding and participating in English-language lessons, and for successfully completing English competency exams. Additionally, they stressed the significance of English in future professional environments and its role as a critical subject in entrance examinations for higher education.

> Excerpt 2
> "Proficiency in English is essential not only for students to engage in everyday communication but also to understand and actively participate in English-language lessons. In the context of ESP, students need to be able to follow the course content, interact with their instructors and peers, and demonstrate their understanding through discussions and written assignments." (ESP Teacher B)

> Excerpt 3
> "English is the lingua franca for communication across borders.....A flight attendant, for example, must be able to give announcements, handle customer inquiries, and manage emergencies in English, as it is the common language spoken by passengers from around the world." (ESP Teacher C)

3.2.2. ESP Instructors' Perceptions of English Language Skills

The second section of the interview focused on ESP teachers' opinions of the English skills. The findings of qualitative analysis revealed four themes which were called as "vital English speaking", "limited listening needs", "unnecessary writing in work", "occasional reading for special instructions".

3. Vital English Speaking

All ESP teachers reported prioritizing speaking skills in their lessons. They not only organize numerous speaking activities to enhance students' oral proficiency but also prepare a variety of speaking materials for the students. For instance, one ESP teacher emphasized “the importance of speaking in class” and “encouraged students to practice oral English in groups” as follows:

> Excerpt 4
> “I think oral communication is definitely the most important thing in combination with students' major.....I often ask students to simulate a scene dialogue in English through group cooperation.” (ESP Teacher A)

Additionally, the other ESP teacher illustrated that she occasionally obtains broadcast scripts from friends working in airline companies, providing students with authentic contexts for practice:

> Excerpt 5
> “I asked a friend who works in the airline company for some work manual of their company. Because the work manual comes from the real scene, by applying it to teaching, students can feel what this should be.” (ESP Teacher C)

4. Limited Listening Needs

There are few listening needs in work, as mentioned by some ESP teachers. As one ESP teacher expressed as follows:

> Excerpt 6
> “ I didn't train the students' listening skills in class. I don't think they will use a lot of listening skills in the future work, but to respond to some simple questions of passengers.” (ESP Teacher A)

One ESP teacher also indicated students can accumulated listening skills in future work:

> Excerpt 7
> “I think listening needs to be accumulated continuously in the work. The questions that passengers ask are nothing more than those. After working for a long time, they will become more and more skilled. The most important thing is students themselves in the future work to learn to adapt.” (ESP Teacher B)

5. Unnecessary Writing in Work

All ESP instructors indicated that writing is of limited utility in the professional role of a flight attendant. Given its service-oriented nature, the occupation seldom necessitates the use of written English, whether during the recruitment process or within the scope of daily duties. This perspective is further substantiated by the following responses from two ESP teachers:

> Excerpt 8
> “Although writing may be important for other jobs, it is not necessary for flight attendants, they are not asked to become academic writers. English is only a communicative tool for them to provide better cabin service.” (ESP Teacher A)

> Excerpt 9
> “Writing is infrequently required in tasks directly related to flight attendant responsibilities, and as such, it is often perceived as less essential compared to other language skills within this professional context.” (ESP Teacher C)

6. Occasional Reading for Special Instructions

Reading is only required when reading special instructions. One ESP teacher once worked in an airline company expressed as follows:

> Excerpt 10
> ".....reading is rarely used in work.....it is occasionally used in few scenarios, such as reading instructions on CIQ forms, reading the requests written by deaf guests". (ESP Teacher A)

3.2.3. ESP Instructors' Perceptions of Importance of English

Distinct from ESP educators, flight attendant subject instructors possess a robust and more compelling position to articulate their perspectives on the significance of English, attributed to their abundant and diverse work experiences in professional environments. As same as ESP teachers, the data results examined that they also strongly agree the importance of English from the occupational aspect. There were two themes emerged from the analysis called "acceptance into airline" and "future career promotion".

7. Acceptance into Airline

Proficiency in English is crucial for individuals aspiring to become flight attendants. During the airline interview process, candidates are required to undergo an English language interview and pass an English proficiency test. Only those who successfully meet the criteria of these assessments are eligible to progress to the subsequent stages of the selection process. As one subject teacher mentioned below:

> Extract 11
> "I always tell my students that English is very important. It is mainly emphasized in terms of interviews. For example, Xiamen Airlines arranges one-on-one English dialogues with interviewers during interviews, so if your English is very poor, you will definitely not be able to pass the interview test." (Flight Attendant Teacher A)

8. Future Career Promotion

Future career promotion was another reason for the importance of English from the view of subject teachers. Some subject teachers perceived that flight attendants who possess a strong command of English are likely to experience greater career advancement opportunities. This enhanced proficiency enables them to effectively communicate with a diverse range of international passengers and colleagues, which is highly valued in the airline industry. As a result, these flight attendants are more competitive candidates for promotions and specialized roles within the company. Consequently, they may enjoy increased earning potential and access to higher-paying positions compared to their peers with less proficient English skills. This is further demonstrated in the following teacher's response.

> Extract 12
> "...in terms of employment, every airline company will require flight attendants to take an English level certificate, which is an internal requirement of the airline company, and they must have this certificate before they can do broadcasting words, and the higher the level of the certificate, the more qualified they are to apply for higher positions." (Flight Attendant Teacher B)

3.2.4. Perceptions of subject teachers toward the most important English language skill

In the realm of English language proficiency, subject teachers contend that oral and aural skills are paramount. They maintain that speaking and listening are the most crucial aspects, while also underscoring

that reading and writing are indispensable facets that must not be overlooked. Two of these educators elucidated their stance by stating:

> Extract 13
> "I think definitely speaking and listening skills in English are the most important. Because sometimes you will meet some foreign travelers. If you can't communicate well with them, you can't serve them." (Flight Attendant Teacher A)

> Extract 14
> "I think that although flight attendants may use spoken English more, they will be tested on all aspects of English skills when applying for airline jobs, such as: self-introduction, announcement words, cabin service procedures, and reading comprehension" (Flight Attendant Teacher B)

3.2.5. Classroom Observation: Key Themes of "Skills Priority" and "Class Activities"

Based on classroom observations, the ESP teacher demonstrated a strong emphasis on speaking activities and frequently highlighted the importance of speaking skills. The thematic analysis of the observations revealed two main themes:"skills priority" and "class activities."

9. Skills Priority

Based on the classroom observations, it is evident that the ESP instructor demonstrates a clear prioritization of speaking skills. As shown in Table 5, speaking activities dominate the class time, constituting approximately two-thirds of the session (1 hour), while listening exercises are included as a complementary, secondary activity. The ESP instructor's statement—"speaking should be given high attention, while listening is regarded as having secondary importance"—reflects the pedagogical focus on developing students' oral communication skills, which are crucial for professional contexts like aviation.

Although the instructor allocated a significant portion of time to speaking activities, listening exercises were incorporated towards the end of the lesson. Students listened to an English pre-landing announcement, after which they completed a task that required them to process the auditory information. This activity reinforced the day's instruction, but the overall emphasis remained on speaking skills, aligning with the instructor's stated priorities for the course.

10. Class Activities

Role plays and simulation techniques were commonly used throughout the lesson, serving to engage students in realistic scenarios that would improve their ability to communicate in an English-speaking environment, such as when interacting with international passengers. This interactive approach supports student engagement, fostering an active learning atmosphere where students are encouraged to share their opinions and reflect on their responses in English.

Table 5
Thematic Analysis of Class Observation – Skills Priority and Class Activities

Aspect	Theme	Description	Examples from Observation	Context/ Frequency	Interpretation/ Analysis
Skills Priority	Speaking Skills Priority	A strong emphasis on speaking skills as the most critical competency in the lesson.	-The instructor stated: "Speaking should be given high attention, while listening is regarded as having secondary importance." -Speaking tasks dominated the class.	Predominant throughout the session.	Speaking is prioritized as the primary skill for flight attendants, suggesting its centrality in professional communication.
	Listening Skills Secondary	Listening is regarded as secondary to speaking but still used to reinforce communication skills.	-A listening exercise was included at the end of the lesson (pre-landing announcement). -Students completed a form based on the auditory information.	Limited use in the lesson (30 minutes).	Listening is incorporated to support speaking skills, but its role is secondary, reflecting a focus on oral communication for practical purposes.
Class activities	Role Plays and Simulations	The use of interactive activities, such as role plays and simulations, to foster practical speaking opportunities.	-Role plays focused on realistic scenarios, such as greeting international passengers. -Simulations were used to engage students in reflective thinking and active participation.	Frequently used throughout the lesson.	Role plays and simulations are integral to active learning, providing students with opportunities to practice real-life scenarios that enhance speaking proficiency.

In conclusion, the classroom observation reveals that the instructor prioritizes speaking over other language skills, employing a variety of interactive class activities such as role plays and simulations to engage students and promote real-world language use. These activities were consistently applied throughout the lesson, fostering an environment where students were encouraged to actively participate, reflect, and practice speaking in contextually relevant scenarios. While the listening exercises were incorporated towards the end of the lesson, they remained secondary to the primary focus on speaking. The exclusion of reading and writing activities in this particular session further highlights the instructor's emphasis on oral communication skills, which are considered crucial for the professional needs of flight attendant students. Thus, the balance of class activities reinforces the instructor's pedagogical strategy of prioritizing speaking as the most essential skill for professional communication in aviation.

4. Discussion

The results from questionnaire, semi- structured interview and classroom observation revealed that speaking is the most important skill in English. This is in consistent with Muntiningsih's (2015) study that communicative skills plays a vital role in ESP course for students of vocational school. This also accords with our earlier observations, which showed that speaking is important in ESP course and simulation and role play activities are effective to improve students' speaking ability (Wahyuni, 2015). However, the findings of the current study do not support the previous research by Alsamadani (2017), who concluded that writing is the most important English skill in ESP course.

Moreover, the data derived from the questionnaire and interviews with ESP educators revealed that writing is perceived as the least essential skill for students. In contrast, flight attendant subject instructors contended that the skill of writing cannot be overlooked within the professional context. This disparity suggests that students' responses may be influenced by the perspectives of their teachers. Given that ESP teachers deem writing to be less crucial, they may allocate minimal emphasis to it during instruction. Consequently, this attitude can affect students' perceptions, leading them to undervalue the importance of writing. Therefore, these influencing factors should be considered in course evaluation and curriculum design.

These findings offered preliminary, cautious indications that the ESP curriculum ought not to be purely focused on language teaching, it should also take into account the specific demands and requirements in the occupational context, even though it is recognized that the ESP course may not fully meet the comprehensive needs of all students. All of these findings were echoed by the conclusions of Muntiningsih's

(2015), Wahyuni (2015), Pranoto and Suprayogi (2020) and Zhou and Rui (2023), which have come up with many suggestions for an ESP. Nevertheless, prior researches have not yielded a tangible curriculum example or even a foundational guide illustrating the initiation points. As a contribution to the existing body of literature, this study introduces the subsequent sample methodologies for formulating a vocational English language curriculum tailored for students enrolled in the flight attendant program, constituting a supplementary component of this study.

Among various curriculum development models, the Wheeler model is appropriate in vocational education due to its technological advances used in the practical learning process can be seen by curriculum designers (Prihantoro, 2021). As indicated by Bhuttah et al. (2019), Wheeler Model is "a best illustration of flexibility, continuity in the curriculum developed". The key steps of the model, along with recommendations for developing an ESP curriculum based on needs analysis, are outlined below:

1. General and Specific Purposes: The initial stage entails the articulation of objectives, encompassing both broad and precise goals, with the intent to delineate educational aims (Prihantoro, 2021). This curriculum is specifically tailored for students pursuing flight attendant careers, and the objectives of the ESP course, as delineated previously, are intended to meet the demands of prospective workplace environments. As indicated by this study, these students need to improve their speaking, vocabulary, and listening skills, as well as address more specific sub-skills. Therefore, the objectives should be designed around these areas of need. It is advisable to adopt Vygosky's ZPD theory in L2 context (Fani & Ghaemi, 2011) when formulating objectives. Some sample objectives are listed as below:

a. Students are able to English names of meals, drinks and wines served on board and provide beverage and meal services before having related lessons.
b. Students are able to understand passengers' questions about flight information, destination time and weather conditions, transfer procedures, immigration and customs procedures with teacher's assistance.

2. Determining the Learning Experience: learning experience refers to class activities and tasks in the ESP course. The design of activities and tasks should be consistent with the educational objectives and students' wants. And Students can fully engage into the real experience (Fani & Ghaemi, 2011). Based on the findings of the research, speaking activities are welcomed by teachers and students, as mentioned above, role play or simulation techniques can arouse students' interest. For example, teachers can separate the whole class into different groups, some students act as flight attendant, some act as passengers. The students can practice the process of offering cabin service, such as providing food and drinks, offering help to vulnerable passengers.

3. Determining the Content of The Material According to the Learning Experience: the learning materials can be various based on students' learning experience (Fani & Ghaemi, 2011). The learning materials should connected to future career settings and be assigned with students' needs. Some sample suggestions are given below:

a. The material of broadcast can be delivered in the form of detailed listening. After playing audio, students are asked to fill in the blanks about the detailed information, such as destination, weather, arrival time, etc.

b. The material of emergency service can be speaking activity. Role play in groups or pairs can be applied after sharing ideas about the effective solutions in class.

4. Organizing Learning Experiences with Materials: It can be organized into two ways, vertically and horizontally (Fani & Ghaemi, 2011). Taking the content of cabin service as a example:

a. The former emphasizes the depth. The content of meal service are delivered through listening activities (listen for gist and details) and speaking activities (role play) at different levels, students can have a deep understanding of this section.

b. The latter concentrates on width. By organizing listening activities in meal service and other cabin service at the same level, students can connect different contents by classification and analogy.

5. Evaluating and Achieving Goals: Evaluation constitutes a pivotal phase in curriculum design and must not be overlooked. It represents a systematic methodology that involves the collection, analysis, and presentation of data to inform educational decision-making. This process substantiates the efficacy and efficiency of the course and ascertains whether the prescribed objectives have been fulfilled. In this curriculum, the speaking, vocabulary and listening skills should be assessed.

To sum up, an effective ESP program must strike a balance between linguistic proficiency and practical application, ensuring that students are equipped not only with theoretical knowledge but also with the essential skills to function effectively in their future professions. ESP teachers and flight attendant subject teachers should strengthen communication and cooperation. The latter have solid subject knowledge, and have a deeper understanding of students' professional learning status and learning needs. Through communication and cooperation with teachers of specialized courses, ESP teachers can understand students' learning needs faster, improve the efficiency of lesson preparation, and make teaching more targeted. As such, the design of an ESP course must be a dynamic process, responsive to the evolving nature of professional environments and the diverse needs of students who aspire to succeed in those domains.

5. Conclusion

This study set out to evaluate English needs of Chinese students' majoring in flight attendance for the aim of investigating the effect of ESP course. The most obvious finding to emerge from this study is that speaking skill is the most important and most needed skill for flight attendant students according to data from questionnaire and interview along with class observation. Although this study focuses on ESP course in airline context, the findings may well have a bearing on other ESP course, especially highlight the importance of carrying out needs analysis. This study establishes a quantitative and quantitative framework for detecting the effectiveness of ESP course. However, it should be recognized that the generalisability of these results is subject to certain limitations. For instance, the occupational context only concentrated on flight attendant major, the students were all from the same university. But because it is a case study which only focused on "individualized unit in particular circumstances". However, it is still useful in the preliminary stages of an investigation since providing hypotheses, as evidenced by Flyvbjerg (2011). To conclude, the findings of this study have a number of important implications for future practice. Further investigation and experimentation into ESP needs analysis is strongly recommended.

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Response Time Model: Estimating Cognitive Processes in Computer-Based Tests

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Abstract

The objective of this study is to derive a mathematical model of the time response that can accurately describe the realistic conditions of computer-based testing. This study represents a development of a measurement model for estimating test outcomes. The primary analysis of this study is the development of a time response model framework. The time response model in this study is constructed using a joint model approach with a hierarchical structure. The time response model framework is composed of two levels. The first level of the model is constructed at the individual level and comprises two separate two-parameter of Response Theory Models to Item models with a lognormal distribution. The second level of the model is constructed of two bivariate normal models. The first bivariate normal model is used to model the latent variable representing the participants' ability and the speed of answering, while the second bivariate normal model is used to model the latent variable representing the item difficulty and the intensity of the item.

Keywords: Bivariate Normal, Hierarchical, Item Response Theory, Joint, Lognormal

1.0 Background

A test is a tool used to assess, evaluate, and quantify one or more characteristics of an individual. The results of a test are considered valid evidence in determining whether an individual passes or fails a selection process, advances to the next grade level, or is promoted to a specific position within an institution or company.

The advancement of information technology in the field of education has resulted in enhanced administrative services, expedient and convenient reference searches, technology-based learning resources, and an improvement in the quality of assessment procedures. The transition from conventional paper-and-pencil tests to computer-based assessments has become a prevalent phenomenon.

In essence, there is no distinction between conventional and computer-based testing. Each examinee will complete the same set of items, which will have the same characteristics of the test items, a fixed length, a time limit for completion, and a fixed weighting. The distinction between the two lies in the method of item delivery, which is no longer reliant on paper (paperless). Computer-based tests are conducted in computer laboratories that are connected to a network. The process of correction, scoring, and evaluation is conducted directly by the computer, allowing test participants to view their results promptly.

Computer-based testing (CBT) addresses the shortcomings of conventional testing, including the potential leakage of questions during duplication and distribution, cheating during the test, such as copying from other students, duplication, distribution of questions, and scanning of answer sheets, as well as scoring, which requires significant financial, human, and temporal resources. Conversely, computer-based testing is perceived as advantageous due to its flexibility, enhanced security, ability to reduce question leakage, and potential to foster technological literacy. Additionally, it is considered "more cost-effective and time-efficient", as scoring and result interpretation can be completed rapidly (Georgiadou, Triantafillou, & Economides, 2006, p. 264). Computer-based testing is believed to enhance the accuracy and impartiality of assessment outcomes. The automated correction of responses reduces the potential for measurement error.

Computer-based tests provide two crucial pieces of information that can be utilized to assess an individual's ability. These are the accuracy of the responses (also known as response accuracy) and the time taken to respond (response time). Response accuracy provides information about the pattern of responses exhibited by the examinee, whereas response time indicates the amount of time required by the examinee to answer the item. Response accuracy is employed as "an indicator to assess the accuracy of participants'

responses about the difficulty level of the items, whereas response time serves as an indicator to gauge the speed of cognitive processes involved in participants' responses to the items" (De Boeck, 2019, p. 1). The ability of the test taker can be gauged by the degree of difficulty of the items in the test and the speed with which they process information to arrive at a solution. Response time is modelled to provide information about the speed of answering the test items. There will likely be considerable variation in the speed of answering the test items between different test takers.

The theoretical study of cognitive psychology posits that the time taken to respond to a test item can be used to assess the cognitive performance of the test-taker in processing the information or knowledge they possess in order to identify the solution to the problem presented in the item. The success of a test-taker in answering the items correctly is determined by cognitive processes. This cognitive process information can "assist test administrators in comprehending the true nature of the test, providing more informative feedback, and facilitating more valid conclusions" (Boeck & Jeon, 2019, p. 2). Information regarding response times on tests also assists test administrators in enhancing the quality of test implementation about the optimal time frame for a test, namely, the development of a system that allows for an ideal time limit and standard, as well as the calibration of test items, which serves as a foundation for the selection of suitable items on adaptive tests.

Empirical evidence indicates that when two different test-takers answer the same number of items correctly but take different amounts of time to respond, it is necessary to consider the timing of their responses. Such discrepancies are likely to occur due to the inherent differences in cognitive processes among individuals, stemming from the varying amounts of information they possess and their distinct strategies for problem-solving, particularly when responding to specific test items. The inclusion of response time data allows for the selection of the more rapid of the two participants in a test, thus providing a basis for decision-making. This demonstrates that "response time data can be a valuable indicator for test administrators, particularly in selection tests" (Rubinstein, 2013, p. 540).

To date, there has been a paucity of research in the fields of education and psychometrics that has developed a measurement model to answer test items with the aid of data on response time. Previous research in these fields has been primarily focused on the measurement of response accuracy, with less attention paid to the processes by which participants in tests arrive at the accuracy of their responses. The utilization of response time information for the assessment of test results has not been fully exploited. Therefore, the researcher of this study was interested in deriving a mathematical model of the time response that can accurately describe the realistic conditions of computer-based test.

2.0 Methodology

This study is a development of mathematical equations using a quantitative descriptive approach. The development of the model was conducted in accordance with the following steps: firstly, the results of previous relevant studies were reviewed to identify the necessary parameters for developing the mathematical model of the response time. Secondly, the advantages and limitations of the previous models were studied to provide a rationale for the development of a new model. Secondly, the IRT 2-parameter model was selected to model the data on the accuracy of the response at the first level of the model, while the Lognormal distribution model was chosen to model the time response. Subsequently, the mathematical equations for both models were formulated. Thirdly, the estimated latent parameters or variables in the first-order model are grouped into two categories, and the approach used to model these two groups of latent variables is then formulated. This is followed by the formulation of the corresponding mathematical equations and the generation of two mathematical equations for the bivariate normal distribution.

The empirical data, comprising the results of the 2019 Computer-Based National Admission Test for the Elite Islamic State Madrasah Aliyah Negeri Insan Cendekia (MAN IC) in Indonesia, was analysed using a time response model. The sample size was 1,559 examinees who responded to the mathematics type A test out of the four mathematics tests that were administered. Each mathematics test consisted of 15 items, with a 30-minute time limit for completion.

3.0 Results

In the primary model structure, the accuracy of the response data is modelled separately from the response time. Three models of item response theory (IRT) can be employed for modelling data on the accuracy of responses as an indicator of the measurement of test-takers' ability parameters.

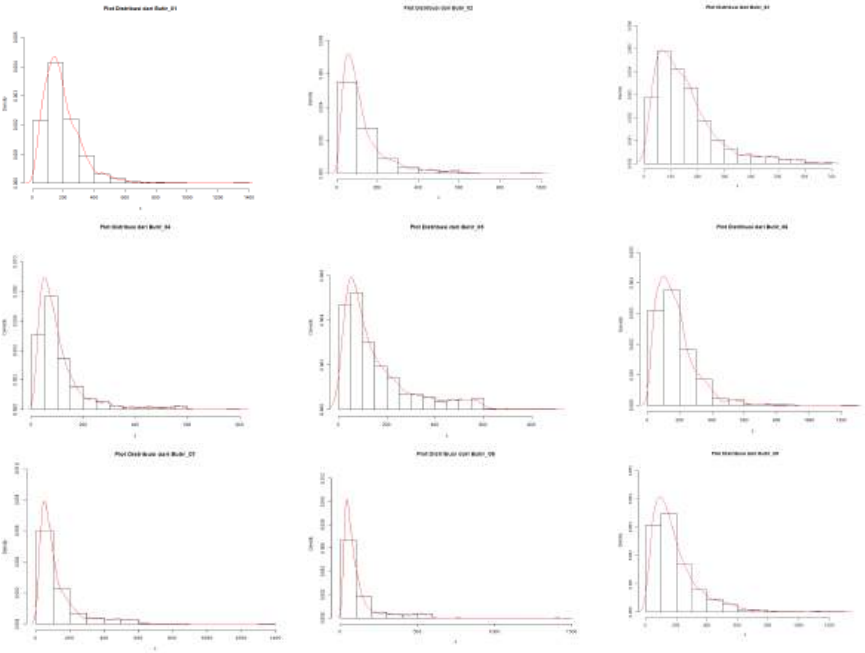
The empirical data distribution accuracy of the 15 items on the test is more accurately represented by the IRT 2-parameter model than by the IRT 1-parameter or IRT 3-parameter models. This finding provides a rationale for researchers to model the 1,559 data points representing the accuracy of responses to the national selection process for the prestigious Islamic Boarding School (MAN Unggulan Insan Cendekia) in Indonesia in 2019 using a two-parameter IRT model at the initial level. The equation for the two-parameter IRT model is as follows:

$$P\left(X_{ij}=1\middle|\theta_i,a_j,b_j\right)=\frac{\exp\left(a_j\left(\theta_i-b_j\right)\right)}{1+\exp\left(a_j\left(\theta_i-b_j\right)\right)}$$

(X_{ij}= 1|θ_i, a_j, b_j) represents the probability that a participant in the test who has the ability θi will answer correctly to item j. It is known that θ_i is the level of ability of participant i, and b_j is the item difficulty index for item j. Additionally, a_j is the item discrimination index for item j with a total of 1559 participants and 15 items. In theory, "the two-parameter IRT model (Equation 37) is assumed to be distributed according to a cumulative normal distribution" (Hambleton, Swaminathan, & Rogers, 1991, p. 15).

In order to model the time response data at the first level of the model, the researchers employed a theoretical distribution model with a positive value, given that the time response data exceeded zero or were positive. To demonstrate that the empirical data for the response time is positive, the empirical data will be plotted on a Cartesian plane to show its distribution. The empirical data distribution was plotted using the R software. The distribution of the empirical data on the time taken to respond was used to verify and prove that the data on the time taken to respond from each participant on each item of the test followed a positive or skewed distribution. As the empirical data consisted of 15 items, there were 15 plots of the empirical data on the time taken to respond, with the results shown below.

Figure 1. Time Response Test PPDB Data Distribution Plot for Mathematics Package A in 2019 at Insan Cendekia Madrasah Aliyah (MAN IC) under the Ministry of Religion of the Republic of Indonesia.



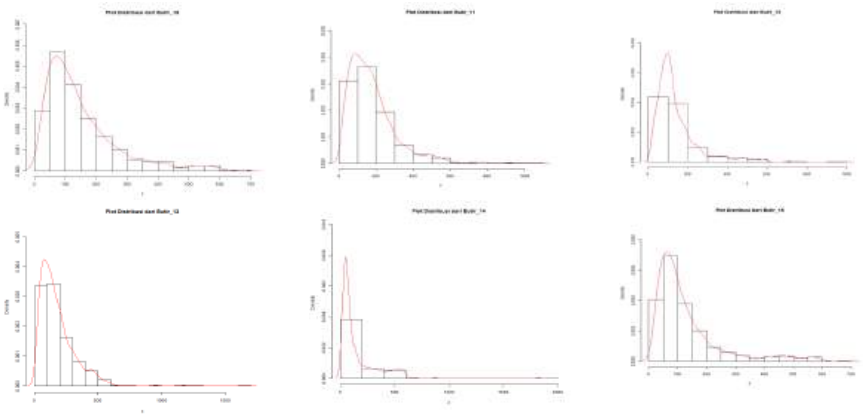


Figure 1 illustrates that the empirical data for the time response of the 15 items exhibited a positive value. The distribution of the data regarding the time taken to respond to each item is skewed to the right, indicating that the probability of participants answering an item quickly is greater than the probability of participants answering an item slowly or of participants answering an item with a shorter response time being more likely to answer than those who respond more slowly.

The appropriate theoretical distribution model for the empirical distribution of the time response data is "the Lognormal, Weibull, or Gamma distribution" (Lindsey, 2004, pp. 203–206). The theoretical distribution model for response time is employed to illustrate the cognitive processes of test-takers in answering test items. The researchers selected the Lognormal distribution to model the response time data. The transformation of the Lognormal data for response time follows a normal distribution. The random variable for response time, when logarithmically transformed, follows a normal distribution (Schnipke and Scrams, 1997).

The distribution of the model was constructed in order to model the data regarding the time taken to respond, with the mean value (μ) of the model being parameterized, while the variance (σ^2) of the model was maintained. The mean (μ) of the Lognormal model is parameterized based on the concept of speed in answering tests, which the researcher analogizes to the concept of speed in physics, namely the distance travelled from a specific point as a function of time. The equation for the Lognormal distribution model is as follows:

$$\ln t_{ij} \approx N\left(\left(\beta_j - \tau_i\right), \sigma^2\right) \quad (2)$$

$$f(t;\beta,\tau) = \frac{1}{t_{ij}\sigma\sqrt{2\pi}} exp\left(-\frac{1}{2}\left[\frac{(\ln t_{ij} - (\beta_j - \tau_i))}{\sigma}\right]^2\right) \text{ for t > 0} \quad (3)$$

$$f(t;\beta,\tau) = 0 \text{ for another t}$$

The parameters of each model were estimated and subsequently grouped into two categories with similar characteristics. These categories were designated as "person parameters" and "item parameters," respectively. The "person parameters" category encompassed parameters related to the examinee's ability and speed in answering the items, while the "item parameters" category included parameters pertaining to the item difficulty and time intensity.

The second-order structure is composed of a joint model of the participants' test parameters (person parameters) and the test items' parameters. The joint model of the participants' test parameters is based on a bivariate normal distribution, as expressed by the following equation:

$$f(\theta,\tau) = \frac{1}{2\pi\sigma_\theta\sigma_\tau\sqrt{\left(1 - \rho_{\theta\tau}^2\right)}} exp\left\{\left(-\frac{1}{2(1 - \rho_{\theta\tau}^2)}\right)\left[\frac{(\theta - \mu_\theta)^2}{\sigma_\theta^2} - \frac{2\rho_{\theta\tau}(\theta - \mu_\theta)(\tau - \mu_\tau)}{\sigma_\theta\sigma_\tau} + \frac{(\tau - \mu_\tau)^2}{\sigma_\tau^2}\right]\right\} \quad (4)$$

Where $-\infty < \theta < \infty; -\infty < \tau < \infty; -1 < \rho_{\theta\tau} < 1; \theta \sim N\left(\mu_\theta, \sigma_\theta^2\right); \tau \sim N\left(\mu_\tau, \sigma_\tau^2\right)$

The item parameter group was also modelled together using a bivariate normal distribution model, with the following equation:

$$f(b,\beta) = \frac{1}{2\sigma_b\sigma_\beta\sqrt{(1-\rho_{b\beta}^2)}} exp\left\{\left(-\frac{1}{2(1-\rho_{b\beta}^2)}\right)\left[\frac{(b-\mu_b)^2}{\sigma_b^2} - \frac{2\rho_{b\beta}(b-\mu_b)(\beta-\mu_\beta)}{\sigma_b\sigma_\beta} + \frac{(\beta-\mu_\beta)^2}{\sigma_\beta^2}\right]\right\} \quad (5)$$

Where $-\infty < b < \infty$ and $-\infty < \tau < \infty$; $-1 < \rho b\beta < 1$.

The normal bivariate distribution structure model allows for the exploration and explanation of the relationships or correlations that occur between the two-person parameters. The aforementioned description elucidates that the correlation between ability and speed is intricate and contingent upon the observer's perspective. However, the correlation between the aforementioned person parameters represents a significant potential source of variation in the model, thereby reducing measurement error. By reducing measurement errors, we can ensure the accuracy and validity of the test results.

4.0 Conclusion

The mathematical model of response time in research is structured in two levels. The first level is individual-level and the second is group-level. The response time model is comprised of three groups of parameters: the participant parameters, the item parameters, and the correlation parameters. The rho parameter is comprised of person rho and item rho. Person rho elucidates the interdependence between parameter capability and parameter velocity, whereas item rho illuminates the interdependence between parameter intensity time item and item difficulty. A joint model approach allows for the exploration of interdependence between parameters within a response time model.

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The Significance of the Virtue of Friendliness for Moral Education in the Age of Artificial Intelligence (AI)

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Abstract

Advances in AI technology have changed human lifestyles and productivity and posed new challenges to traditional moral views and ethical frameworks. The AI technology is also more closely integrated with the progress of human society. The AI tools represented by ChatGPT have prompted people to re-examine the relationship between humans and technology and the ethical principles to be followed in this relationship. In the face of these changes, this article aims to explore the concept of the virtue of friendliness and its importance in moral education, especially in the context of interaction with AI technology. This study first addresses the concept of the virtue of friendliness based on Aristotle's virtue ethics and traditional Chinese Confucian ethics. According to Aristotle, friendliness is not only the understanding and expression of goodness by the 'self-lover' but also expresses the goodness of the human heart. In practice, the virtue of friendliness not only maintains emotional ties between people but also demonstrates care for others and society. At the same time, the concept of 'benevolence' in Confucianism also emphasises the value of friendliness. According to Confucian philosophy, friendliness is the expression of 'benevolence' and the basis of the moral behaviour of a person with noble qualities. The virtue of friendliness also embodies care and respect for others and emphasises the gentleman's pursuit of a commonwealth and a harmonious society. In conclusion, moral education about friendly virtues is of great significance in the age of artificial intelligence. The researcher advocates that moral education should shift from external moral norms to internal virtue cultivation and that the cultivation of friendly virtues should be further strengthened in moral education. By advocating the virtue of friendliness, individuals will be able to maintain moral self-awareness in the midst of technological advancement and effectively cope with the ethical issues brought about by technological change. Focusing on the cultivation of friendly virtues is not only an effective way to cope with ethical challenges but also an important guarantee for the sustainable development of human science and technology. Future research can further explore the performance of the virtue of friendliness in different cultural contexts and the effectiveness of its educational methods to provide more comprehensive theoretical support and practical guidance for moral education.

Keywords: Virtue of Friendliness; Moral Education; Artificial Intelligence.

1.0 Introduction

On November 30, 2022, ChatGPT, a generative Artificial Intelligence (AI) released by OpenAI, America, triggered a global AI race. Many tech companies from different countries quickly joined this battle for the age of AI and released products and services with different features (Alex, 2024; Kothari, 2024). According to statistics, about 92% of Fortune 500 companies now use AI technology (Howarth, 2024). Bill Gates (2023), co-founder of Microsoft Corporation, declared that generative AI is an essential technological revolution that will bring a whole new era in the development of AI technology and various industries. AI, represented by ChatGPT, has added new productivity and economic driving force to human society and gradually integrated into people's work and lives.

However, some scholars argue that the development of AI technology has created numerous ethical problems for users, technicians and human society (Huang, Zhang, Mao & Yao, 2022). Du and Xie believe that the key ethical issues regarding AI are raised, including bias, privacy protection, security and human well-being. Khogali and Mekid (2023) argued that AI might have long-term impacts on human society and require the development of stricter ethical standards. In a nutshell, human society. While AI technology is developing, ethics should also be placed within the framework of technological development to mitigate its impact on human society (Paraman & Anamalah, 2023). AI technology is emerging as a potential threat to human society, which requires further research and resolution of this issue based on ethical theories.

2.0 Literature Review

Aristotle talks about the two noble qualities of friendliness and friendship in the Nicomachean Ethics. The friendship emphasises the love and care between friends. Friendliness is the outward expression of a human being's virtuous heart and represents the undifferentiated goodwill of the "self-loving one" toward all people, things, and objects (Crisp, 2014). In other words, the virtue of friendliness based on goodness generates and includes fraternity. Goodness is the beginning of friendliness, which in turn extends to friendship (Crisp, 2014). Therefore, friendliness is more advanced than friendship because it takes care of more than just the emotions between friends.

Chinese Confucianism asserts that the superior man is watchful over himself when he is alone (Legge, 2013). In other words, a person of noble character is first confronted neither with others nor with the social community but with the self or the heart. A similar view is emphasised in the Nicomachean Ethics. According to Aristotle, a person is first and foremost his own friend and feelings for friends are derived from feelings for self (Crisp, 2014). Friendliness should be rooted in love for oneself. Only by being a friend to oneself first can one then realise love for others and for the social community. Therefore, the virtue of friendliness should also concern the person himself first while emphasising the goodness of the person's heart and love for himself.

The virtue of friendliness originates from self-love and develops into love for others in interpersonal interactions. According to Biniek (2013), love for others is a virtue among friends. Therefore, a person who possesses the virtue of friendliness tends to show patience and care for those he loves or admires, as well as genuine feelings of wishing others a better life. Not only are they honest, truthful, trusting, and understanding towards others, but they also show concern, sympathy, and help in others' situations without expecting anything in return. They also point out others' shortcomings appropriately and correct them patiently.

Human beings are not just abstract concepts but, in reality, are the sum of all social relations (Marx, 2016). In other words, no individual can survive apart from the community. Together, countless individuals form a social community (Moffett, 2019). Social community will also provide the basis for the existence and development of each individual, and people are linked together through love and kindness (Lynch, 2019; Easterling, 2022). Xu and Huang (2019) argue that the virtue of friendliness is a key element in the stability and social harmony of social relations and an important spiritual force that promotes social development. In other words, the virtue of friendliness promotes harmony and solidarity among members of a social community and also supports people's pursuit of a happy life.

3.0 Implications

Human Values in AI Interaction: With AI increasingly mediating communication, the virtue of friendliness encourages individuals to prioritize genuine human connections over interactions with AI, helping sustain core human values in an age of technological dependency. Fostering friendliness may act as a buffer against the adverse psychological impacts of prolonged AI interactions, such as loneliness or excessive reliance on AI for social fulfilment.

Guiding Ethical AI Development: For AI developers, incorporating friendliness as a guiding principle may enhance the ethical orientation of their designs. By embedding values like fairness, inclusiveness, and respect for privacy, friendliness can influence AI products to better align with societal values and promote trust in these technologies. Such ethical underpinnings are particularly critical in sectors like healthcare, finance, and education, where trust and transparency are paramount.

Strengthening Social Cohesion and Interpersonal Trust: Encouraging friendliness helps build stronger interpersonal relationships, fostering a sense of mutual care and community cohesion. Ethical education focused on friendliness can reinforce social bonds, making individuals more inclined to support others, particularly as rapid technological changes may marginalize certain groups. Friendliness also fosters empathy, promoting a cooperative and inclusive society where individuals feel respected and valued.

Long-term Cultural Benefits: Finally, the virtue of friendliness supports the cultivation of morally resilient communities capable of adapting to technological changes. As people experience care and respect

within their social circles and communities, they are more likely to extend these values broadly, contributing to a positive social atmosphere and ultimately strengthening societal harmony.

4.0 Recommendations

Integrate Ethical Education on Friendliness into Curricula: Educational institutions should incorporate ethical education focused on the virtue of friendliness into their curricula, especially in programs related to technology and AI. This will help students develop a moral framework that emphasizes self-love, empathy, and social harmony, preparing them to navigate interactions with both humans and AI responsibly.

Promote Ethical AI Design Principles: For AI developers, friendliness as a virtue should guide the design of AI products, ensuring that these technologies are inclusive, respectful of users' privacy, and oriented toward social well-being. Governments and regulatory bodies could support this by introducing policies that promote ethical considerations in AI development, encouraging developers to prioritize human-centered values.

Develop Supportive Policies for Vulnerable: Users: Policymakers should consider the potential impact of AI on vulnerable groups, such as those with social anxiety or loneliness. Specific guidelines for AI use among such populations can help mitigate risks related to excessive dependency or isolation. This could include promoting balanced interaction between humans and AI while fostering real human connections.

Establish Community Programs Fostering Virtue of Friendliness: Social programs and community initiatives should encourage the practice of friendliness within communities. By cultivating interpersonal relationships based on empathy and mutual respect, these programs can foster a supportive environment that values kindness and social cohesion in the digital age.

5.0 Conclusion

In summary, the virtue of friendliness in moral education has significant implications for creating a balanced interaction between humans and AI, enriching both personal well-being and social integrity as AI becomes deeply embedded in daily life. The development of artificial intelligence (AI) technology has led to unprecedented challenges to universal moral principles, and there is an urgent need to revisit the core content of moral education. This study emphasises the significance of the virtue of friendliness in moral education in the complex AI environment and redefines the concept of the virtue of friendliness based on Aristotle's virtue ethics and traditional Chinese Confucian ethical thought. The researcher argues that the virtue of friendliness is the root of an individual's expression of love based on goodness and benevolence, the key to enhancing one's noble qualities, and an essential factor in promoting interpersonal relationships and social harmony. Moral education on the virtue of friendliness is an effective way to deal with the moral challenges in the age of artificial intelligence and an important guarantee for the sustainable development of human science and technology.

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Moral Behaviour Practice among Students in the Digital Era: A Conceptual Exploration

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Abstract

The rapid growth of digital technologies has reshaped the educational landscape, significantly influenced students' moral behaviors and presented new ethical challenges. This conceptual exploration investigates the influence of digital environments on students' moral behaviors in academic and social spheres, examining how interactions on social media and the use of artificial intelligence (AI) tools affect students' ethical decision-making. Traditional moral development theories, such as Kohlberg's stages of moral development and Gilligan's ethics of care, provide a basis for understanding students' moral reasoning. However, these frameworks require adaptation to reflect unique challenges of the digital era, including online anonymity, information overload, and social media influences. This paper identifies ethical dilemmas arising in the digital context, such as privacy concerns, cyberbullying, academic dishonesty, and the pressures of online identity curation. By applying frameworks like moral disengagement theory and traditional moral development theories, the study examines mechanisms by which digital environments may weaken students' moral responsibility, amplify peer pressure, and promote moral disengagement through online anonymity. Digital platforms offer both positive and negative influences on moral behavior. The accessibility of online interactions can encourage collaboration, and engagement yet may also foster unethical practices like plagiarism or misinformation sharing. Additionally, social media platforms intensify peer pressure, often prioritizing instant gratification over ethical considerations, while AI tools blur boundaries between original work and assisted content. Educational institutions play a critical role in addressing these moral challenges by promoting digital literacy, empathy, and digital citizenship. Institutions are encouraged to develop integrated curricula on digital ethics, emphasizing moral responsibilities and the ethical implications of AI tools. Effective intervention requires an approach that balances technical skills with ethical judgment, fostering students' moral development in online and offline contexts. As digital technologies continue to shape the educational landscape, it is imperative for educational institutions to adapt their strategies for moral education. By embedding digital literacy and ethical decision-making into their curricula, schools can equip students with the skills needed to navigate the complex ethical terrain of the digital world, promoting integrity, empathy, and responsible digital citizenship.

Keywords: Moral Behaviour; Practice; Students; Digital Era.

1.0 Introduction

The digital era has profoundly reshaped the experiences of students, introducing both opportunities and ethical dilemmas. With the proliferation of digital communication tools, the widespread use of social media, and the increasing reliance on AI in education, students face a complex environment where traditional moral guidelines may no longer suffice. Online platforms offer students a unique space to interact, collaborate, and learn, but they also present significant challenges regarding privacy, authenticity, and ethical decision-making (Boyd, 2014). In the digital era, unethical behaviors such as cyberbullying, spreading rumors, and plagiarism are common among students (Anderson,2020). These behaviors may weaken students' sense of moral responsibility and affect their moral behavior practices (Ali,2021). The development of digital technology has made information dissemination faster and more convenient. According to Schroeder (2022), this convenience may lead students to be bombarded with a lot of information in moral judgment, making them more confused and conflicted when facing moral decisions. The online environment allows some students to display different moral behaviors than in real life. According to Wang and Tchernev (2021), online anonymity may lead some students to show lower levels of responsibility and moral standards online. On the other hand, the digital era also provides new means and approaches for moral education, such as online courses and social media (Balakrishnan, 2022). These new educational methods may have a positive impact on students' moral behavior. However, if the content and methods of moral education cannot adapt to the characteristics of the digital era, they may not be able to effectively guide students to form good moral behavior (Barbera, 2023).

2.0 Literature Review

This research focuses on the literature review. The moral dilemmas that students face in the digital age include information ethics dilemmas, behavior ethics dilemmas and value confusion. In the digital environment, the role of educational institutions includes disseminators of moral education, guides of digital ethics, and nurturers of critical thinking.

2.1 Moral Dilemmas for Students in the Digital Age

First, the dilemma of information ethics. When using social media, online learning platforms and applications, students often have to deal with the conflict between personal privacy protection and information sharing. Students often have to choose between privacy protection and information sharing when using social media and online services. Improper information sharing can lead to privacy breaches and identity theft (Smith & Brown, 2018). In the digital environment, academic misconduct such as plagiarism has become easier. Students have greater access to others' academic work in a digital environment, which increases the risk of plagiarism and plagiarism (Johnson & Lee, 2020). Students need to be clear about how to properly cite and respect the intellectual property of others (Johnson & Lee, 2020). Students need to face a large amount of unfiltered information, and students may inadvertently become the disseminators of false information, which may lead to the wide spread of misleading information (Li Miao & Li Yifan, 2022). Students need to develop good information screening skills to identify and resist false information (Buckingham, 2008).

2.2 The Role of Educational Institutions in the Digital Environment

First, the communicator of moral education. Educational institutions are important places for transmitting social mainstream values and moral codes, and guide students to form correct moral concepts through curriculum Settings, teaching activities and campus culture (Beck, 2020). Ethical education courses offered by educational institutions to develop students' moral judgment and ethical awareness to enable them to meet the information ethics challenges of the digital age (Nussbaum, 1021).

Second, educational institutions are the leaders of digital ethics. Educational institutions have a responsibility to establish clear digital codes of conduct that provide clear guidance for students to behave in the digital environment (Paul, 2020). Educational institutions are responsible for teaching students the basic concepts of digital ethics, including privacy protection, respect for intellectual property rights, cybersecurity, etc. (Floridi, 2013). Educational institutions can also reinforce the implementation of digital codes of conduct through school discipline (Moor, 2021). Appropriate disciplinary action is given to students who violate the digital Code of Conduct (Nussbaum, 2019).

3.0 Suggestions

Institutional Responses: Promoting Ethical Behavior in the Digital Ear

3.1 Enhancing Digital Literacy and Moral Education

As digital technologies continue to evolve, institutions must prioritize the development of digital literacy that incorporates ethical decision-making. Teaching students how to responsibly use digital tools, evaluate the credibility of online information, and respect the intellectual property of others is critical for fostering integrity in the digital era (Selwyn, 2011). Recent research suggests that embedding moral education into digital literacy programs can help students navigate the ethical complexities of the digital world, particularly when it comes to understanding the ethical implications of AI tools and online interactions (Keats, 2022).

3.2 Updating Institutional Policies for Digital Integrity

Educational institutions must also update their codes of conduct to reflect the challenges of the digital era. Policies should address issues such as the ethical use of AI tools, online harassment, and digital privacy,

ensuring that students are aware of their responsibilities in digital spaces (Bynum,2018). Institutions should also implement proactive measures, such as digital ethics training and transparent reporting mechanisms for online misconduct, to uphold moral standards in academic settings.

4.0 Conclusion

The digital era has introduced a new set of moral challenges for students, from issues of academic integrity to the ethical implications of online identity and peer pressure. As digital technologies continue to evolve, so too must the approaches that educational institutions take to foster moral development. By integrating digital literacy, promoting empathy, and addressing the ethical dimensions of technology use, institutions can better prepare students to navigate the complex ethical landscape of the digital world.In the digital era, students face a new set of ethical challenges that extend from issues of academic integrity to the ethical dilemmas of online identity and the far-reaching implications of peer pressure. With the continuous advancement and popularization of digital technology, educational institutions are faced with new tasks and requirements in cultivating students' moral development. The issue of academic integrity is particularly acute in the digital age, where plagiarism and plagiarism have become easier, placing higher demands on students' moral judgment and behavioral choices. At the same time, the construction and expression of online identity has also triggered ethical disputes, such as privacy protection, identity theft and other issues. In addition, peer pressure is amplified in cyberspace and can lead to the imitation of bad behavior and ethical decisions.

To meet these challenges, educational institutions must update their approach to fostering ethical development. Integrated digital literacy education is the foundation. Educational institutions should make digital literacy one of their core curricula to educate students on how to use digital technologies safely and responsibly. This includes not only technical operational skills, but also an understanding of digital ethics and privacy protection. Promoting empathy is equally important. By teaching students to understand the feelings and positions of others and developing respect and care for others, they can help them make more ethical decisions in their online interactions. Addressing the ethical dimensions of technology use cannot be ignored. Educational institutions should offer courses on ethical principles and standards for the use of technology to enable students to make sound ethical judgments in the face of complex technological issues.

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Education Financial Management as an Effort to Improve the Quality of Education

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Abstract

Education has a very important role in the context of the success of a country. The quality of education has a very important role in the success of an educational institution. The objectives of this study are; To find out Educational Financial Management as an effort to improve the quality of education. In this study, the researcher used a qualitative research method. Research is carried out by investigating and describing the state of the research object at the present time based on facts or as it is. The data obtained are the results of observations, interviews and documentation which are then analyzed and conclusions can be drawn. The results of this study include; 1. Financial planning in schools has been planned as best as possible and is used for activities to improve the quality of education, including Improving the Quality of Teachers, Curriculum Development, Provision of Adequate Facilities and Infrastructure, Improving School Management, Providing Scholarships and Financial Assistance, Evaluation and Accreditation, and Student Character Development; 2. Organizing for planning that has been determined, including making a budget, recording all transactions, and conducting analysis related to expenditure evaluation. 3. The implementation of school finance is used in accordance with the previously prepared RKAS so that the goal of improving the quality of education can be achieved; 4. Financial accountability from the implementation of planning so that it can improve the quality of education.

Keywords: Education Financial Management; Quality of Education.

1.0 Introduction

Within the National Instruction Framework Law Number 20 of 2003 article 1 explains that, instruction may be a cognizant and arranged exertion to make a learning environment and learning handle so that understudies effectively create their potential to have devout otherworldly quality , self-control, identity, insights, respectable ethics, and abilities required by themselves, the community, the country and the state (Ihamiyah, 2022, hal. 2). According to E. Mulyasa, quality education could be a necessity to realize an progressed, advanced, and affluent nation's life. Education too plays an imperative part in making strides human assets, particularly in Indonesia (Weny, 2023). As is known, numerous nations don't have copious common assets but can realize the success and welfare of their individuals (Mulyasa, 2009, hal. 4–6). This can happen because the education is of high quality and quality, so as to produce quality and reliable human resources.

One of the ways to realize a quality school is to move forward the quality of the school which can be influenced by the management of Educational Financial Management in the school. The understanding in question includes incorporates sources of instruction financing, its assignment framework and instrument, adequacy and effectiveness in its utilize and responsibility of its comes about measured by quantitative and subjective changes that happen at all levels, especially at the school level (Pujiati, 2016). One of the assets that has to be overseen appropriately in instructive educate is financial problems. Financial problems need to be managed properly so that every manager of an educational institution can maximize education funds from various sources of funds and can be accounted (Weny & Dhari, 2024). In this context, finance is a source of funds that are indispensable for schools as a device to total the equipment of different learning offices and foundation in schools.

SMA Negeri 1 Plemahan is one of the public high schools located in Plemahan District, Kediri Regency, East Java, Indonesia. As time went by, SMA Negeri 1 Plemahan continued to grow and received attention from the local community. In 2010, SMA Negeri 1 Plemahan received financial assistance from the Kediri Regency Government to build a new building that is more representative. In a fairly short period of time, SMA Negeri 1 Plemahan has managed to record achievements in various fields, such as sports, arts and culture, and academics. From the results of observations made at SMA Negeri 1 Plemahan Kediri, various efforts were made to attract the attention of customers or prospective students, by offering learning programs and facilities owned by the school. Educational Financial Management in moving forward the

quality of education at SMA Negeri 1 Plemahan is carried out by the Administration section which also prepares the School Expenditure Budget Plan (RABS). The school budget plan consists of school needs, namely, electricity, water, operational costs and maintenance costs of facilities and infrastructure. The financial resources themselves consist of BOS funds, BBOP, student funds, teacher and employee cash, school committees, and student semester money.

Based on the depiction over, analysts are fascinated by researching phenomena related to financial management. So the researcher is interested in conducting a study entitled **"Educational Financial Management in Improving the Quality of Education".**

2.0 Theoretical Overview

2.1 Management

According to Terry, management is a process, specifically an movement consisting of four sub-activities, each of which may be a crucial work, the four subjectivities in management are Planning, planning, organizing, actuating, and controlling. Magginson, Mosley and Piettri explain the notion that management can be interpreted as a collaborative activity of people using financial resources, and other physical facilities to achieve organizational goals.

2.2 Education Financial Management

According to Sulisyorini in Syaifulloh, Education Financial Management is an act of monetary management/administration which incorporates recording, arranging, usage, responsibility and announcing. In the process of Educational Financial Management, educational institutions or schools will explore funds optimally and creatively, use the budget openly and honestly, develop the budget objectively (Syaifulloh, 2021, hal. 11–12). According to Sulistryorini in financial management planning, school principals must be able to prepare a School Budget and Expenditure Revenue (RAPBS) plan. For this reason, school principals must know the sources of funds that are the source of school funds. After knowing the source of funds, the school then made a RAPBS.

Planning according to Fattah is the activity of preparing education budget planning, which is an operational arrange that's expressed quantitatively within the form of a unit of cash that's utilized as a guideline in an institution for a certain period of time (Fattah, 2006, hal. 47). Implementation is when the educational financial management process must be carried out according to the principles of financing management, namely transparency, accountability, effectiveness, and efficiency. The implementation of the school budget at least consists of receipts and expenditures (Mulyasa, 2011, hal. 171). School financial accountability can be given according to the needs starting quarterly, once a year or every change of leadership of the principal. These financial reports can be addressed to: the head of the education office, the head of the Regional Financial Administration Agency (BAKD), the regional education office, and others (Arwildayanto, 2017, hal. 24).

2.3 Financial Management Objectives

The FIP Education Administration Lecturer Team (UPI Bandung) explained that there are several objectives of education financial management, including 1) ensuring that the available funds can be used for educational institution activities and using excess funds to be reinvested, 2) maintaining school assets, 3) maintaining regulations and practices for receiving, recording and disbursing money.

2.4 Improving the Quality of Education

According to Faisal in Fadli, the quality of instruction will be affected by the degree to which the institution is able to oversee all possibilities ideally, beginning from instruction staff, understudies, learning forms, instructive offices, fund and counting its relationship with the community. The meaning of the over presentation to a quality school or madrasah has a few markers, specifically: To begin with, the huge number of understudies emphatically shows that the public's excitement for instructive teach is exceptionally tall. Moment, having scholarly and non-academic accomplishments. Third, graduates are pertinent to the reason of the instructive institution, meaning concurring to the benchmarks set by the school or madrasah(Fadli,

2021, hal. 8).

The quality of education has indicators, including:

1. Educators and Education Personnel
   With the existence of competent educator facilities, it will affect students' interest in learning and improve student achievement. Education personnel also greatly affect the quality of education. Effective human resource management by education staff will also support the process of teaching and learning activities carried out by educators (Israpil, 2018).
2. Facilities and Infrastructure
   Framework implies an roundabout device to attain objectives in education, for case: location/place, school building, sports field, cash, etc. Whereas means means a coordinate apparatus to realize instructive objectives. For illustration: Spaces, books, libraries, research facilities, and so on. The organization of instructive offices and framework are all components that directly or by implication back the course of the instructive prepare to realize the objectives within the education (Iwan, 2022, hal. 61).
3. Student Achievement
   Learning achievement is realized by a score report listed on the report book, or study result card. The results of this achievement can be used to monitor the level of progress or setback, experienced by each student as long as they follow the teaching supervised by the subject teachers. This can measure student achievement in improving the quality of education (Erieca, 2020, hal. 36).
4. Curriculum
   The curriculum is a fundamental guideline in the process and teaching in the world of education. The curriculum will run viably and proficiently if it is implemented by teachers who have professional abilities (Nur, 2020).

3.0 Method

In this study, the researcher used a qualitative research method. According to Abussamad, qualitative research is an approach in conducting research that is oriented towards natural phenomena or symptoms (Abdussamad & Sik, 2021). The research approach used in this study is a qualitative approach of descriptive methods. This research was conducted in a secondary school, more precisely on Jalan Raya Pare.

4.0 Implication

4.1 Financial planning in improving the quality of education

4.1.1 Financial Planning in determining Activities in Improving the Quality of Education

A. Teacher Quality Improvement
   Improving the quality of teachers can be realized with several activities, including:
   1. Continuing Education and Training: Giving openings for instructors to take part in education and training to improve pedagogic, professional, and personality competencies.
   2. Teacher Certification: Establish clear teacher competency standards and conduct certification regularly.
   3. Giving Incentives: Providing incentives or awards to outstanding teachers to improve motivation and performance.

B. Curriculum Development
   In the curriculum, there are several important points in the implementation of learning, including:
   1. Relevance to the Needs of the World of Work: Adapting the educational programs to the improvement of the times and the needs of the world of work.
   2. Utilization of Technology: Applying technology in the learning process to increas within the learning prepare to extend effectiveness and efficiency.

3. Risk Management-Based Learning: Encouraging students to actively seek arrangements to the issues they face.

C. Provision of Adequate Facilities and Infrastructure
Facilities and infrastructure are important because they support the teaching and learning process, as a learning medium, practicum, and comfortable classrooms. Facilities and infrastructure can also increase learning motivation. In addition, it can also support the performance of teachers.

D. School Management Improvement
Improvement of School Management such as giving autonomy to schools in managing their budgets and programs, increasing school accountability in achieving educational goals and Involving the community in the decision-making process in schools.

E. Scholarship and Financial Aid
One of the endeavors to move forward the quality of instruction is to provide scholarships to outstanding students to continue their studies to a higher level. In addition, educational institutions can also provide assistance to students.

F. Evaluation and Accreditation
The quality of education can be assessed from periodic evaluations of the learning process and the results achieved. Therefore, educational institutions are required to accredit schools to ensure that schools meet the quality standards that have been set. So that from the results of the evaluation, it can be assessed how the quality of education.

4.1.2 Planning system and time for the implementation of financial planning in improving the quality of education

Time of the implementation of financial planning is held at the beginning of each year, for the preparation process is approximately 2 weeks. Where the planning discusses the planning of school activities for the next year. From the design of the activity, an estimate of the budget needed by the school next year will be determined. Then the budget is estimated to be received by the treasurer in the new school year.

As in Nanang Fattah's theory, the preparation of the education is an operational arrange that's expressed quantitatively within the form of a unit of cash that's utilized as a guideline in the institution for a certain period of time (Fattah, 2006, hal. 47). The comes about of the ponder appear that monetary arranging in making strides the quality of instruction has been carried out well. Planning is done at the beginning of every year or once a year.

4.1.3 Committee in budget planning consisting of organizational bodies and important parties related to budget preparation

The financial planning meeting activities were carried out by several parties, namely: school principals, treasurers, curriculum officers, sarpras officers, and others. The meeting was held in order to discuss the planning of activities held by the school within a period of one year. From the results of the meeting, an estimate of the budget needed within a period of one year can be determined and approved. The meeting began by evaluating activities from last year. Then it will be continued with the collection of data on needs next year and continued with the preparation of the RKAS.

As in Blocher's theory in Anwar cited by Sukma and Nasution, the budgeting process involves informal tasks in small government institutions (Sukma & Nasution, 2022). The important parties related to the preparation of the budget in improving the quality of education are: school principals, school treasurers, and school administrators. Meanwhile, the informal government institution is a party from the BOS or it can also be a party from BPOPP. These parties have carried out their duties as best as possible in order to improve the quality of education. This is evidenced by the implementation of financial planning in improving the quality of education which is routinely held every year.

4.2 Organizing financial planning to improve the quality of education

Organizing financial management is the process of systematically managing your income, expenses, and assets to keep your finances healthy and achieve your financial goals. It involves careful planning, record-keeping, and analysis.

Steps to Organize Financial Management:

1. Create a budget: determine revenue, expense identification, and allocate funds.
   a. Record all transactions: use an app or notebook and deal categories.
   a. Analyze: expense evaluation and identify financial leaks.
2. Review Regularly
   Review your budget and financial plan regularly to adjust to changing financial conditions and life goals.

4.3 Financial implementation in improving the quality of education

4.3.1 Sources of funds for financial implementation

Where the source of funds has its own function. In accordance with Government Regulation of the Republic of Indonesia Number 48 of 2008 concerning Instruction Financing Article 2 section 1 and Article 46 passage 1 of Law Number 20 of 2003, there are three sources of instruction reserves, specifically: the central government, neighborhood governments, and from the community (Undang-Undang Nomor 20 Tahun 2003). The results of the study show that there are three sources of funds for financial implementation, namely from the BOS, BPOPP, and the committee or parents of students.

4.3.2 The process of implementing the budget in improving the quality of education

The procedure for obtaining the funds begins with recording the budget and school activities. Then it was continued with the preparation of the RKAS, and identifying urgent needs. After that, a proposal was submitted to the principal. The budget implementation process uses a cash scale. The implementation of finance in improving the quality of education is carried out by equipping facilities that aim to make students comfortable and there are no obstacles from teaching and learning activities. So that it can improve the quality of education.

Financial management in improving the quality of education is carried out by equipping facilities that aim to make students comfortable and there are no obstacles from teaching and learning activities. Another activity carried out to improve the quality of education is the budget for campus expo activities which are carried out in order to increase students' knowledge about universities that they can later choose to continue their education. The second is the district level competition, in this activity the school provides the best budget and facilities to support students. Third, there are activities to improve the quality of education personnel, there are seminars and workshops. The seminar and workshop itself are carried out every month. So the holding of the seminar will certainly improve the quality of educators. The school also provided facilities in the form of transportation money and equipment costs for the seminar.

As E. Mulyasa said, in the implementation of madrasah finance into two activities, namely receipts and expenditures (Mulyasa, 2007, hal. 201). The results of the study show that the implementation of the budget in improving the quality of education has been carried out, namely by using the priority scale method. The implementation of finance in improving the quality of education is carried out by meeting needs that have been planned in advance, and prioritizing more urgent needs.

4.3.3 Expenses that should be prioritized

Expenditures that are more prioritized are the need for student activities that are routinely carried out every year, and the improvement of infrastructure. The needs of the students themselves are usually obtained from BOS funds, if the BOS funds are not enough, they are taken from the BPOPP funds. Then if the BPOPP funds are still insufficient, then hold a meeting with the student's parents.

In accordance with the opinion of Durotun Nafisah, et al., that in the implementation of madrasah finances, it is possible to know the expenses that must be prioritized (Nafisah, 2017). The results of the study show that the expenditure that must be prioritized to improve the quality of education in schools is the needs of students.

4.4 Financial accountability/reporting

4.4.1 Transparency

From the research conducted by researchers, accountability/reporting in improving the quality of education has been carried out transparently. For the past few years, we have used *e-money*, making it easier to spend on school. All payments are also available at BRI, BNI, and also KPPN. Purchases of goods are carried out by e-money, where the recap has been written transparently at KPPN and BRI or BNI. From the report, bookkeeping is carried out according to the juknis that have been determined by BOS and BPOPP. The report is written by the treasurer every 1-2 months called SPJ (Letter of Responsibility).

As stated by Arwildayanto, transparency means openness in managing an activity in an educational institution. The results of the study show that transparency is evidenced by the preparation of a report called SPJ (Letter of Responsibility) which is written with a period of 1-2 months (Arwildayanto, 2017, hal. 10).

4.4.2 Accountability and participation from related parties

The reporting/accountability prepared by the party concerned, namely waka, is then submitted to the treasurer to be recapped with budget arrangement data by the treasurer. For accountability reporting, reporting uses SPJ (Letter of Accountability). The report is written according to a period of 2-3 months, according to the many needs in that period. The SPJ contains evidence of spending goods for activities carried out at school, both student and teacher activities.

In accordance with Huriyah's opinion, one of the main pillars of building accountability is transparency for educational institution administrators through involvement in various components in education (Pusvitasari & Sukur, 2020). Parties from the school participate in accordance with the directions given by the superior or principal. The school treasurer writes an accountability report every 1-2 months. The report is proof of the fulfillment of the needs of schools in improving the quality of education with the budget that schools have received from the government.

5.0 Conclusion

Based on the comes about of investigate conducted on Madrasah Education Financial Management is move forward the quality of education, the following conclusions were obtained:

1. Financial planning in schools has been planned as best as possible and used for activities to improve the quality of joint education can absorb all funds including improving the quality of teachers, curriculum development, provision of adequate facilities and infrastructure, improvement of school management, provision of scholarships and financial aid, evaluation and accreditation, and student character development.
2. Organizing for the planning that has been determined, including making a budget, recording all transactions, and conducting analysis related to expenditure evaluations
3. The implementation of school finances is used in accordance with the previously prepared RKAS. All funds are absorbed, so it can be categorized as good because it can use the funds as much as possible to help activities at school.
4. Reporting/accountability of cooperation between school principals, teachers, administration, so that it can help the implementation of financial accountability in improving the quality of education.

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Multimedia Teaching Resources in Technical and Vocational Education and Training (TVET) Schools: Issues and Challenges

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Abstract

Technology plays an increasingly important role in all types of schools, such as general schools, Technical and Vocational Education and Training (TVET) schools, and special schools; the gap between urban and rural regions regarding access to multimedia teaching resources has widened. Urban areas benefit from well-equipped schools, highspeed internet connectivity, and abundant multimedia tools. However, rural areas often need more resources. This disparity in multimedia resources creates a significant challenge to equal educational opportunities for students across all provinces in China. Urban TVET schools have easier access to the latest multimedia teaching tools due to their proximity to technology providers. This geographic advantage makes them more able to quickly purchase and update multimedia teaching tools, while TVET rural schools may need to catch up in updating due to geographic disadvantages. The study aims to identify the influencing factors that affect the imbalanced development of multimedia resources in TVET schools in urban and rural areas. Moreover, this research aims to determine solutions for the imbalanced development of multimedia resources in TVET schools in urban and rural areas. Recommendations for the solutions are allocating human resources, social charity fundraising, and government regulations to education distribution funds. For the impact, the government needs to arrange information technology personnel for schools across the country, urban TVET schools need to organize information technology teachers, and local TVET schools need to hire potentially skilled and talented teachers to join the school.

Keywords: Multimedia, Information Technology, Resource, Technical and Vocational Education and Training (TVET).

1.0 Introduction

According to the response ‘Proposal No. 3372 of the Second Session of the 13th National People's Congress’ issued by the Ministry of Education of the People's Republic of China, which states that "the state regards educational equity as the basic national policy and vigorously promotes the balanced development of education, especially compulsory education" (The Ministry of Education of the People's Republic of China, 2019), as well as the ‘Several Opinions of the State Council on Coordinating the Reform and Development of Urban and Rural Compulsory Education Integration in Counties’ issued by the State Council of the People's Republic of China "Accelerate the unification of standards for the construction of compulsory education schools in urban and rural areas within the county, the standardization of teacher staffing, the standardization of per capita public funds, and the standardization of basic equipment configuration." (The State Council of the People's Republic of China, 2016). We can see that the education imbalance between urban and rural areas is a serious problem.

As technology continues to play an increasingly important role in all types of schools, such as general schools, Technical and Vocational Education and Training (TVET) schools, and special schools, the gap between urban and rural regions regarding access to multimedia teaching resources has widened. This situation is because urban areas benefit from well-equipped schools, high-speed internet connectivity, and abundant multimedia tools. In contrast, rural areas often struggle with limited resources and infrastructure (Kruk et al., 2018). This disparity in multimedia resources creates a significant challenge to equal educational opportunities for students across all provinces in China.

Integrating multimedia teaching resources in Technical and Vocational Education and Training (TVET) schools has become increasingly important in enhancing educational outcomes. However, several issues and challenges accompany the implementation of these resources. This synthesis draws on various studies to explore the benefits and obstacles associated with multimedia in TVET.

Multimedia resources have been shown to enhance student engagement and learning outcomes in TVET settings significantly. For instance, Razali et al. (2023) found that incorporating multimedia elements into digital teaching and learning improves students' knowledge and comprehension, aligning with the demands of 21st-century education. Similarly, Budiastuti et al. (2018) reported that multimedia can increase efficiency and motivation among students, facilitating active and experiential learning. Interactive multimedia clarifies complex concepts and supports the development of essential competencies that are challenging to achieve through traditional teaching methods (Budiastuti et al., 2018).

Moreover, the application of multimedia resources can address specific educational needs. Wu (2023) demonstrated that multimedia technology in logistics education significantly improved students' understanding of warehouse management processes, indicating its effectiveness in practical training scenarios. This aligns with findings from Yu (2023), who emphasized that multimedia tools can enhance teaching methods and engage students more effectively in vocational training.

Integrating multimedia teaching resources in TVET schools presents opportunities and challenges. While multimedia can enhance student engagement and learning outcomes, inadequate teacher training, rapid technological advancements, and insufficient institutional support must be addressed to maximize their effectiveness. Future efforts should focus on developing comprehensive training programs for educators, establishing robust management frameworks for multimedia resources, and ensuring that institutions provide the necessary infrastructure to support innovative teaching practices.

Therefore, the objectives of this study are (1) to determine the influencing factors affecting the imbalanced development of multimedia resources in TVET schools in urban and rural areas and (2) to determine solutions for this imbalance.

2.0 Factors of Unbalanced Distribution of Multimedia Teaching Resources in Technical and Vocational Education and Training (TVET) Schools

There are significant differences in the distribution of multimedia equipment between urban and rural Technical and Vocational Education and Training (TVET) schools. Urban TVET schools have easier access to the latest multimedia teaching tools due to their proximity to technology providers. This geographic advantage allows them to quickly purchase and update multimedia teaching tools, while TVET rural schools may lag in updating due to geographic disadvantages.

The investment in education by different regional governments directly impacts the distribution of multimedia equipment in TVET schools. Some local governments attach more importance to education and would rather invest less in urban development than education, so they are more likely to invest more in education, for example, in purchasing and maintaining multimedia teaching equipment. On the contrary, the governments of some localities, when faced with the decline of the economy, consider the development of the urban areas more, thus leading to the fact that the investment of funds in education has started to decrease. This situation is more probable in the rural areas because they are more eager to develop the local economy quickly and transform themselves from rural areas to urban areas than education development.

The financial situation of a school is an important factor affecting the allocation of multimedia equipment. Schools with better financial status usually have more funds to purchase and maintain multimedia teaching equipment. On the contrary, schools in poorer financial situations may be constrained by limited funds to keep up with technological developments and update their equipment.

The distribution of multimedia teaching resources in TVET schools is often unbalanced, leading to disparities in educational quality and student outcomes. Various factors, including institutional, infrastructural, and socio-economic elements influence this issue. Institutional support plays a critical role in the effective distribution of multimedia resources. Many TVET institutions lack adequate frameworks for resource allocation, which can lead to disparities in access to multimedia tools. Joo (2018) emphasizes the importance of competent teachers and effective leadership in improving school performance, suggesting that gaps in institutional support can hinder the development of comprehensive multimedia resources that align with industry needs.

Moreover, the study by Mala et al. (2020) highlights the challenges faced during the implementation of national curricula in vocational education, including insufficient public testing and socialization efforts, which can affect the availability of multimedia resources. Without robust institutional frameworks, the distribution of these resources remains inconsistent across different TVET schools.

Infrastructural limitations significantly impact the availability and utilization of multimedia teaching resources. Feng (2024) discusses how the development of digital teaching resources must align with technological advancements in vocational education. However, many TVET institutions may lack the necessary infrastructure, such as high-speed internet and modern equipment, to implement these resources effectively. This technological gap can lead to unequal access among students and educators, particularly in rural or underfunded institutions.

Additionally, research emphasizes the need for industry-education integration training bases, which are essential for providing practical training and resources (Song, 2024). The absence of such facilities can further exacerbate the imbalance in resource distribution, limiting students' exposure to modern teaching methods and technologies.

Socioeconomic disparities also play a crucial role in the unbalanced distribution of multimedia resources in TVET schools. Hsu and Chen (2021) highlight the importance of adapting vocational training organizations to rapid changes in the industrial environment, which often requires significant investment in multimedia resources. Schools in affluent areas may have better access to funding and resources, while those in economically disadvantaged regions struggle to provide adequate multimedia tools for their students.

Furthermore, Joo (2018) suggests that socioeconomic factors can influence the quality of education and resource allocation. This suggests that institutions in lower socioeconomic contexts may find it challenging to keep pace with these changes, leading to a further divide in the quality of vocational education provided.

The effectiveness of multimedia teaching resources also depends on educators' training and professional development. Lu (2022) discusses the importance of constructing "dual-qualified" teachers with industry experience and pedagogical skills. However, many TVET teachers may lack adequate training in utilizing multimedia resources effectively, which can hinder their ability to integrate these tools into their teaching practices.

Moreover, research indicates that workplace learning opportunities for vocational education teachers are essential for enhancing their skills and knowledge (Yun-yu & Ko, 2018). Without ongoing professional development, teachers may struggle to adapt to new technologies and teaching methods, perpetuating the cycle of unbalanced resource distribution.

The unbalanced distribution of multimedia teaching resources in TVET schools is a multifaceted issue influenced by institutional support, infrastructural challenges, socio-economic factors, and educators' professional development. Addressing these challenges requires a comprehensive approach that includes strengthening institutional frameworks, improving infrastructure, and investing in teacher training. By doing so, TVET institutions can create a more equitable educational environment that enhances student learning outcomes.

3.0 Methodology

3.1 Research Design

This study used a qualitative research design with a focus on interviews to gain a detailed understanding of the imbalanced distribution of multimedia teaching resources in Technical and Vocational Education and Training (TVET) schools in Shandong Province. This method allowed for an in-depth exploration of the experiences and opinions of the main stakeholders. The participants included two important experts in TVET from Shandong Province: 1. Mr. X. One of the leaders of the Vocational Education Department of

the Shandong Provincial Department of Education. 2. Mr. Yang. Vice President of a TVET college in Shandong Province. Both experts have extensive experience and expertise in the management and development of TVET, which can provide valuable insights for this study.

3.2 Data Collection

The interview was conducted online via Tencent Meetings and took around 1.5 hours. It was semi-structured to allow flexibility in exploring specific issues while maintaining consistency with the research objectives. The interview questions were designed based on previous research and some news reports from China and focused on topics such as the current state of multimedia resource allocation, factors leading to imbalances, and strategies to address these challenges and issues.

The primary data were collected through semi-structured interviews. Questions were carefully designed according to the study objectives, focusing on topics such as multimedia resource allocation, urban-rural school disparities, viable solutions, and funding. For reasons of confidentiality, we have not included a detailed meeting recording, but the questions were designed to ensure depth and relevance, enabling experts to share their insights in a comprehensive manner.

3.3 Limitation

Semi-structured interviews were used as the primary data collection method for this study, and while this method was effective in exploring opinions, but it also had some limitations.

The study is based on interviews with only two participants, which may not fully represent the diverse perspectives across all stakeholders in the TVET system of Shandong Province. A larger sample size could provide a more comprehensive understanding of the issue.

And the nature of semi-structured interviews provides flexibility but may also present the interviewer's bias that the wording or focus of the questions may influence the participant's responses, which may affect the data collected.

4.0 Findings and Discussion

4.1 Solution 1: Allocation of Human Resources

Multimedia teaching stimulates TVET students' interest in learning, creates situations, and cultivates their thinking and expression abilities. It has also significantly changed the traditional teaching mode (Liu, 2023), so teachers' teaching methods have also changed. However, in rural areas with information blockage and lagging traffic, we think the following problems need to be solved in order to use multimedia technology effectively in teaching.

Solve the problems of lack of equipment, outdated technology, low computer application ability of teachers, and inability to keep up with the times' development.

Some TVET classrooms still do not have modern teaching equipment, and teacher-designed slides and films can only be used in a special multimedia classroom, so there are often multiple teachers competing for a multimedia classroom, and the only multimedia classroom cannot meet all teachers' requirements. On the other hand, teachers do not have their office computers and can only go to the computer room to prepare lessons and find materials when students are not in class. Many teachers find it inconvenient, and the amount of equipment available hinders the development of modern education in schools (Deng et al., 2023).

Teachers' ability to apply computer networks needs to be improved. With the advent of the information age, the network has shortened the distance between people. At the same time, the network contains a large number of teaching resources; through the network, we can absorb the advantages of others, make up for our own shortcomings, make use of our strengths, and avoid our weaknesses. Meanwhile, the

network provides a platform for our teachers to learn from each other and communicate with each other, and through the network, we can also learn a lot about education and teaching. Therefore, skilful use of the network is one of the basic qualities necessary for qualified people's teachers in the new era and new situation, and it is also one of the problems that teachers in rural areas need to solve.

The equipment lacks professional maintenance personnel. The educational conditions in rural areas are poor, and a teacher has to do a lot of work in addition to taking a good course. If the doors and windows are broken, the teacher repairs them himself; The sewer is blocked, and the teachers dig it up themselves; the lights do not turn on, and the teachers repair them themselves; it can be said that every teacher is an "all-rounder," but not a "professional." Maintaining modern teaching equipment requires professionals, especially in rural areas where there are no real professionals. When computers fail for unknown reasons, there is often a situation where everyone gets nervous. Therefore, equipping professional maintenance personnel to ensure the regular operation of equipment is an important problem to solve using multimedia teaching in remote rural areas.

Given the above problems, in the process of multimedia teaching, the TVET school must not only ensure that the multimedia equipment can be used commonly but also allocate at least one professional and technical personnel for the school to improve the multimedia management mechanism so that when the multimedia equipment fails, the personnel can solve the problem in time without affecting the regular progress of multimedia teaching. If there are no professional and technical personnel in rural areas, the person in charge of the local education department can deploy personnel and deploy professional and technical maintenance personnel.

4.2 Solution 2: Social Charity Fundraising

Community Involvement Donation

To foster stronger connections with the community, the TVET school can regularly organize quarterly meetings, extending a warm invitation to community members. The aim is to convey the school's imperative for multimedia education and foster collaboration, encouraging community donations. The school should transparently communicate its aspirations for enhanced educational experiences within the meetings, including improved teaching resources, multimedia equipment, and comprehensive training programs. These contributions serve a dual purpose – not only as a means to raise essential funds but also as a powerful mode of community engagement. By involving the community in this manner, the aim is to collectively create an environment that fosters optimal learning conditions for every student.

Building partnerships with IT and Multimedia Businesses

The TVET school can work closely with local IT and multimedia businesses, seeking their support and longterm partnerships. Instead of just asking for money, the school should build relationships beyond financial help. These partnerships are not just about getting money; the school should treat this as a chance for students to get hands-on experience, internships, and practical projects. Businesses can also use internships to select skilled students as employees that they can employ in the future.

Promotion on social platforms

The TVET school can regularly use social platforms like TikTok and YouTube to conduct live broadcasts. These live broadcasts serve a purpose beyond soliciting donations; they are also an opportunity for the TEVT school to connect with the public, share stories, and inspire community engagement. During these live broadcasts, the school will provide updates on ongoing projects, answer questions in real time, and create an inclusive atmosphere where everyone feels heard and valued. These live broadcasts are not only just fundraising events but also chances for the school and the community to come together, share ideas, and actively contribute to a shared cause.

4.3 Solution 3: Government Regulates the Distribution of Education Funds

It is well known that there are significant differences in multimedia resources between urban and rural China. Urban areas often have better access to advanced technology, Internet connectivity, and media resources than rural areas. The government's education funds will be concentrated on more developed areas, while schools in less developed areas are easily neglected. Therefore, the government should evaluate the existing allocation of education funds to determine any differences or imbalances, analyze how funds are allocated among different TVET schools, districts or regions, and strengthen corresponding supervision and management, to improve the imbalance of multimedia resources.

In order to make education funds play a leading role in the promotion of multimedia educational resources, the government can improve the allocation of education funds and strengthen related supervision and management. To be specific, on the one hand, the government can set up special funds and reduce unnecessary expenditures. On the other hand, the government can develop clear guidelines and reporting mechanisms based on actual conditions to monitor the allocation and use of funds. Firstly, it can help reduce the gap between resource-rich and resource-poor schools, which can help provide students from disadvantaged backgrounds with better-quality learning resources. Secondly, stronger regulations can help bring funding transparency, prevent mismanagement and corruption, and ensure that funds are used effectively to benefit students and improve the overall quality of education.

5.0 Conclusion

The imbalance of multimedia teaching resources between urban and rural areas is a significant issue that affects educational equity and access to quality education. Urban areas typically have better infrastructure, technology, and resources, including multimedia tools and equipment, than rural areas. This imbalance creates a disparity in the learning experiences and opportunities available to students in urban and rural schools. In urban areas, multimedia teaching resources such as computers, projectors, and internet connectivity are more readily available, enabling teachers to integrate multimedia content into their lessons effectively. Students in urban schools have greater exposure to interactive and engaging learning materials, including educational videos, online simulations, and virtual reality experiences. These resources enhance their understanding and retention of concepts and foster critical thinking and problem-solving skills.

In contrast, rural areas often face limited infrastructure, inadequate funding, and limited access to technology. Many rural schools need more basic facilities like electricity, computers, and internet connectivity, making incorporating multimedia resources into the teaching process difficult. This lack of access can result in a more traditional and less engaging learning environment for students in rural areas, which may hinder their educational development and future opportunities. The imbalance of multimedia teaching resources between urban and rural regions exacerbates the educational divide and widens the gap between students from different socioeconomic backgrounds. It is essential to address this issue to ensure equal educational opportunities for all students, regardless of their geographical location. Efforts should be made to improve infrastructure, provide necessary resources, and bridge the digital divide in rural areas. This could involve government investments in educational technology, partnerships with private organizations, and the development of online educational platforms specifically tailored for rural communities. By narrowing the gap in multimedia teaching resources, we can create a more inclusive and equitable education system, enabling students in both urban and rural areas to access the benefits of modern multimedia tools and enhance their learning experiences.

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Quantifying Digital Competence (DigCompEdu) of Agriculture Teachers in Technical and Vocational Education and Training (TVET) Institutions

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Abstract

The purpose of this study is to identify the level of digital competence among agriculture teachers in vocational colleges by using the Digital Competence Framework for Educators (DigCompEdu). The differences in the level of digital competence were analyzed according to demographic variables. A survey was conducted with 177 agricultural teachers from six vocational colleges in Malaysia using a proportionate stratified sampling method. This quantitative study was conducted to determine differences between 6 areas in digital competence with age, gender, and teaching experiences. The findings revealed that most agriculture teachers in vocational colleges fell into category B1, known as Integrators, and possessed moderate levels in all areas of digital competence. The data showed that gender did not significantly affect any of the digital competence areas examined. There was a significant difference in digital competence among agriculture teachers based on age and teaching experience in several areas. For Professional Engagement, younger teachers exhibited higher engagement levels, while for Digital Resources, teachers with 6–14 years of experience showed a significantly greater usage than those with 0–5 years. These findings underscore the importance of enhancing teachers' digital competence and understanding the various factors influencing it to meet future professional quality expectations and better prepare students for the digital world.

Keywords: Digital competence, information technology, resource, TVET.

1.0 Introduction

The Fourth Industrial Revolution (IR 4.0) has reshaped teaching and learning, with digital competence now crucial as technology-driven education becomes widespread (Rosnani, 2018; Kuntadi et al., 2022). The European Commission's 2018 plan emphasized digital education, prioritizing technology use to enhance learning experiences. In Malaysia, digital competence for educators is integral, as highlighted in the 12th Malaysia Plan and the Malaysia Education Blueprint 2013-2025, which includes initiatives like MyDIGITAL to improve digital literacy and skills (Ministry of Education Malaysia, 2013). The MOE aims to strengthen Technical and Vocational Education and Training (TVET) in areas like agriculture, empowering teachers to incorporate realistic digital tools and simulations for interactive agricultural training (Derapa et al., 2020; Antonietti et al., 2022).

The agricultural branch of TVET is undergoing significant digital transformation, aligned with Malaysia's Shared Prosperity Vision 2030 and the push for Smart Agriculture using sensors, robotics, and drones (Behera et al., 2024). Teachers in vocational colleges play a pivotal role in this shift, needing both traditional qualifications and advanced digital skills to integrate modern technologies effectively (Ismail et al., 2017). Despite the benefits, challenges persist, including teacher attitudes and digital skill gaps, which impact technology adoption in education (Tzafilkou et al., 2023). Developing digital competence within TVET supports an engaging, self-directed learning environment and prepares students to meet industry demands in a rapidly advancing agricultural sector.

In the current era of rapid technological advancements, the digital competence of teachers is essential for the effective integration of technology into educational practices. A comprehensive evaluation in 2021 involving 297,018 teachers revealed that only 2.2% reached the Advanced level of digital literacy, while 39.9% were at the Intermediate level, and a majority, 57.9%, were at the Basic level. Meanwhile, only 36% of vocational teachers in Malaysia possess sufficient technological competency, which may hinder the ability of vocational colleges to adequately prepare students with the skills needed for the job market, especially in alignment with the Fourth Industrial Revolution (IR 4.0) (Damit & Omar, 2019).

Moreover, vocational colleges often lack modern digital infrastructure, leaving teachers without the necessary resources to enhance their digital skills (Ovcharuk et al., 2020). In this dynamic environment, various teacher profiles may respond differently to the imperative of developing digital competence.

The rapid evolution of agricultural technology, encompassing advancements such as the Internet of Things (IoT), Artificial Intelligence (AI), smart farming, and precision farming (Cipta, 2019), underscores the critical need for enhanced digital competence among agriculture teachers (Ramjattan et al., 2020). Integrating these digital technologies effectively into teaching and learning processes within agricultural education at vocational colleges has the potential to enrich knowledge acquisition, making the learning experience more dynamic, interactive, and inclusive (Quendler, 2019).

This study sought to address the gap in understanding digital competence among agriculture teachers in Malaysian vocational colleges using the Digital Competence Framework for Educators (DigCompEdu). Its purpose was to evaluate teachers' digital competence and examine how demographic factors, including age, gender, and teaching experience, influenced digital competence levels across six areas. By identifying these factors, the study aimed to enhance teacher skills and improve the quality of agricultural education in vocational colleges.

2.0 Digital Competence of Teachers

Digital competence described as the capacity to confidently, critically, and creatively utilize ICT to fulfill objectives relating to work and employment, study, leisure, and being part of society (Ferrari, 2013). Krumsvik (2011) defines a teacher's digital competence as a teacher's capacity to utilize ICT with an excellent understanding of teaching strategy via ICT and to be aware of how this may affect students' learning techniques and educational development. Digital competence in the context of this study refers to teachers' ability to use digital technology confidently, critically, and creatively to convey the content of the lesson to the students.

The DigCompEdu framework categorizes digital competence into six areas: professional engagement, digital resources utilization, teaching and learning practices, assessment, empowering learners, and facilitating learners' digital competence. This framework guides the enhancement of digital skills among educators (European Commission, 2017).

In this study, the factors influencing technology adoption, as outlined in the Unified Theory of Acceptance and Use of Technology (UTAUT), are closely linked to the development of teachers' digital competence, particularly in education. Venkatesh et al. (2003) highlights that demographic variables such as age, gender, and teaching experience significantly impact how teachers perceive the usefulness and ease of use of digital tools, which influences their integration into teaching practices. These factors shape the adoption process by influencing users' perceptions of ease and benefits, ultimately impacting the effectiveness of technology integration (Lock & Abdullah, 2021).

3.0 Methodology

A quantitative approach was employed, surveying 177 agriculture teachers from six vocational colleges in Malaysia. Correlational research was chosen for this study to examine associations between variables. The survey instrument was designed based on the DigCompEdu framework and included measures of digital competence across its defined dimensions. The samples selection for the study was stratified random sampling based on proportion or rate. The population grouped into strata or sub-groups based on vocational college offered agriculture before random selection was carried out. Subsequently, the study sample was taken based on the location of each vocational college using a simple random method determined by the required percentage of the sample. The instruments for this study are in Bahasa Melayu and consists of Section A demographics of the respondents while Section B is consisting of items that measure digital competence of teachers. Data analysis included correlation analysis to examine relationships between demographic variables and digital competence levels. The data obtained from the study conducted was analyzed using IBM Statistical Packages for Social Science (SPSS).

4.0 Findings and Discussion

4.1 Demography

Table 1 showed that out of 177 respondents of the study, 117 (66.1%) were females and 60 (33.9 %) were males. This implies that majority of the teachers who participated in this study were females. Teachers aged 30 to 39 years old (n = 151, 85.3%) were most of the respondents. This is followed by the respondents of 20 to 29 years old (n = 21, 11.9 %) and 5 (2.8%) respondents have been identified as 50 years old and above. This study categorized teaching experiences in 3 categories which are novice (0-5) years, mature (6-14 year) and expert (15-25) years. This study found out that most of the respondents were teaching for 6-14 years= 89, 50.3%). This is followed by the respondents who teach 0-5 year and 15-25 years (n = 50, 28.2 %), and 0-5 years (n= 38, 21.5 %). For teaching in agriculture field, there were not much difference. Most teachers have 6-14 years of experience (n=86, 48.6 %) followed by 15-25 years (n=52, 29.4 %) and 0-5 years (n=39, 22%).

Table 1: Demographic information of respondents

Demography	Frequency (N)	Percentage (%)
Gender		
Male	60	33.9
Female	117	66.1
Age		
20 to 29 years old	21	11.9
30 to 49 years old	151	85.3
50 years and above	5	2
Experience		
0 to 5 years	38	21.5
6 to 14 years	89	50.3
15 – 25 years	50	28.2

4.2 Level of Digital Competence

The analysis of digital competence among 177 agriculture teachers from six vocational colleges revealed that most teachers were classified in the Integrator (B1) stage (39%), followed closely by the Expert (B2) stage (37.9%). Smaller proportions of teachers were at the Leader (C1) level (16.4%), with very few at the Explorer (A2) (4.5%) and Newcomer (A1) (0.6%) levels, and a small percentage (1.7%) reached the highest stage, Pioneer (C2). These findings suggest that the majority of teachers are at the intermediate stages of digital competence, actively integrating digital technology into their teaching. This is consistent with prior research, which identifies most teachers as possessing basic ICT skills (Hanifah et al., 2023; Umar & Yusoff, 2014).

Table 2: Level of Digital Competence of Agriculture Teachers at VC

	Proficiency	Frequency (N)	Percentage %
1	A1 (Newcomer)	1	0.6
2	A2 (Explorer)	8	4.5
3	B1 (Integrator)	69	39.0
4	B2 (Expert)	67	37.9
5	C1 (Leader)	29	16.4
6	C2 (Pioneer)	3	1.7
	Total	177	100

Table 3 showed that teachers performed best in empowering learners (61.0%), indicating a strong commitment to enhancing student digital skills. However, areas such as digital resources (58.2%) and teaching and learning (56.4%) showed room for improvement, aligning with studies that emphasize the need for continuous professional development (Muammar et al., 2023; Perifanou et al., 2021). The lower performance in assessment (51.8 %) reflects a common weakness in digital competence, which has been

highlighted in previous studies (Hinojo-Lucena, 2019) and suggests that teachers are not fully prepared to integrate advanced agricultural technologies (Cipta, 2019; Quendler, 2019).

Moreover, the study revealed challenges in areas like teaching and learning, assessment, and facilitating learners' digital competence, which could be attributed to factors such as limited resources and inadequate training (Hutchison & Reinking, 2010). These challenges underscore the need for targeted professional development to help teachers improve their digital skills and effectively incorporate technology into their teaching practices. This is particularly crucial in the context of rapidly evolving agricultural technologies. As Abdul Raof and Musta'amal (2022) noted, fostering a culture of continuous learning and providing institutional support is essential for addressing these digital competence gaps, ensuring that teachers effectively integrate emerging digital tools and technologies into agricultural education.

Table 2: Level of Digital Competence Base on Area in DigCompEdu

Area	Mean Score/ Total score	Percentage (%)	Level of competence
Professional engagement	8.42/16	52.6	Integrator (B1)
Digital resources	7.01/12	58.4	Integrator (B1)
Teaching and learning	9.02/16	56.4	Integrator (B1)
Assessment	6.22/12	51.8	Integrator (B1)
Empowering learners	7.32/12	61.0	Integrator (B1)
Facilitating learners' digital competence	11.04/20	55.2	Integrator (B1)
Total	49.03/88	100	Integrator (B1)

4.3 Digital Competency According to Gender, Age and Experience

Table 4 revealed both significant and non-significant differences in digital competence based on gender, age, and teaching experience across various competencies. Specifically, there were no significant differences for professional engagement based on gender ($p = 0.741$) or teaching experience ($p = 0.282$). However, a significant difference was found between age groups (F-test $p = 0.043$*), indicating that age influences the level of professional engagement in digital competencies. This suggests that older and younger teachers may engage with digital tools for professional purposes differently, potentially due to familiarity or comfort with technology (Venkatesh et al., 2016). In the case of digital resources, no significant differences were observed based on gender ($p = 0.677$) or age ($p = 0.067$). However, a significant difference was noted based on teaching experience (F-test $p = 0.035$*). More experienced teachers with 6–14 years of experience were found to use digital resources more frequently than newer teachers with 0–5 years of experience. This aligns with previous research suggesting that experience plays a crucial role in adopting and effectively using technology in educational settings (Muammar et al., 2023).

Further insights were provided by the post-hoc analysis, which showed a significant difference in professional engagement between teachers aged 18–29 years and those over 50 years, with younger teachers (mean difference of 0.7833, $p = 0.033$*) showing higher engagement with digital tools for professional purposes. This supports the idea that younger educators may be more adept at integrating digital tools into their practices, likely due to greater exposure to technology during their education (Hu et al., 2021). Similarly, the analysis revealed that teachers with 6–14 years of experience used digital resources more frequently than those with 0–5 years of experience, suggesting that experience enhances teachers' ability to leverage digital tools effectively for teaching purposes (Lock & Abdullah, 2021). These findings emphasize the importance of targeting professional development to specific groups, particularly younger teachers and those with less experience, to bridge the digital competence gap.

Table 4: Differences of Digital competence among agriculture teachers according to gender, age and experience

Digital Competency	Gender		Age		Experience	
	t-test	p-value	F-test	p-value	F-test	p-value
Professional Engagement	1.051	0.741	3.195	0.043*	1.274	0.282
Digital resources	2.183	0.677	2.743	0.067	3.412	0.035*
Teaching and learning	1.224	0.386	1.036	0.357	1.431	0.242
Assessment	2.106	0.586	2.310	0.102	0.586	0.558
Empowering learners	2.170	0.575	2.607	0.770	0.644	0.527
Facilitating learners	0.399	0.625	0.589	0.556	0.417	0.659

* significant at 0.05 confidence level

Table 5: Post-hoc test of Professional Engagement according to Age

Pair		Mean Difference	p-value
18-29 years	>50 years	0.7833	0.033*

Table 6: Post-hoc test of Digital Resources according to teaching experience

Pair		Mean Difference	p-value
0-5 years	6-14 years	0.316	0.049*

5.0 Conclusion and Implication

5.1 Conclusion

In conclusion, the findings of this study provide valuable insights into the digital competence of agriculture teachers in Malaysian vocational colleges. Most teachers were classified in the Integrator (B1) and Expert (B2) stages, indicating moderate digital competence. While teachers are actively incorporating digital tools into their pedagogical practices, there is a clear need for improvement in areas such as digital resources, teaching and learning, and assessment. This gap suggests that teachers are not fully prepared to integrate advanced agricultural technologies, which are essential for enhancing the dynamic nature of agricultural education. Furthermore, challenges related to resource limitations and inadequate training were identified, underscoring the need for targeted professional development programs that can help teachers strengthen their digital skills, particularly in areas like assessment and teaching with technology.

Additionally, the study revealed significant differences in digital competence based on age and teaching experience. Younger teachers (aged 18–29 years) were found to be more engaged with digital tools for professional purposes than their older counterparts, likely due to their greater familiarity and comfort with technology. Furthermore, teachers with 6–14 years of experience were more proficient in using digital resources than their less experienced peers. This supports the notion that experience plays a key role in the effective adoption and use of technology. These findings highlight the importance of tailoring professional development to the needs of specific teacher groups, particularly younger and less experienced teachers, to close the digital competence gap and ensure the effective integration of technology in agricultural education. By fostering a culture of continuous learning and providing institutional support, vocational colleges can equip teachers to effectively integrate emerging digital tools and technologies into their teaching practices, thereby improving the overall quality of agricultural education.

5.2 Implication

The practical implications of this study emphasize the need for tailored professional development programs to address the digital competence gaps identified among agriculture teachers. Specifically, vocational colleges should focus on providing targeted training for younger teachers and those with less teaching experience to enhance their digital skills. Additionally, addressing resource limitations and providing adequate support for teachers to integrate digital tools effectively into teaching practices is essential. These

efforts can help bridge the digital divide, improve teaching quality, and better prepare students for technological advancements in the agricultural sector.

Theoretical implications suggest that the findings contribute to the understanding of how demographic factors, such as age and experience, influence the digital competence of teachers. By applying frameworks like the DigCompEdu and UTAUT, this study advances knowledge on the relationship between individual characteristics and the adoption of digital technologies in education. The results also support the idea that digital competence is a multifaceted construct that varies across different areas of teaching and learning, which could inform future research on the development of digital competence frameworks for educators.

5.3 Recommendation

Based on the results of this study, it is recommended that vocational colleges focus on enhancing teachers' digital competence, particularly in the areas of digital resources, professional engagement, and assessment. Although most teachers fall into the Integrator (B1) and Expert (B2) levels, indicating that they are actively integrating digital tools, there is still significant room for improvement, especially in the use of digital resources and effective assessment strategies. The study also highlighted the influence of age and teaching experience on teachers' digital engagement, with younger teachers and those with more years of experience showing higher levels of competence. As such, tailored professional development programs should be implemented, targeting specific gaps in skills and knowledge to help teachers advance to higher competence levels in these areas.

For further studies, it is recommended to expand the sample size and explore the impact of more specific demographic factors, such as teaching subjects or the type of vocational colleges, on digital competence. Additionally, longitudinal studies could offer deeper insights into how digital competence evolves over time with continuous professional development. Further research could also investigate how different teaching methods, including blended learning or the use of emerging agricultural technologies, influence teachers' digital competence, especially in terms of their ability to integrate these tools into their teaching practice effectively.

To enhance digital competence among teachers in vocational colleges, institutions should prioritize providing continuous professional development programs that focus on practical skills and integration strategies for using digital tools in teaching. Training should be designed to address the specific needs of teachers based on their career stages and demographic characteristics. Moreover, fostering a culture of collaboration and peer learning can further support teachers in sharing best practices and strategies for integrating digital technology into their lessons. Ensuring access to adequate resources and offering support for integrating advanced technologies, such as IoT and AI in agriculture, will enable teachers to improve their teaching practices and, in turn, better equip students for future challenges in the agricultural sector.

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Effectiveness of Teaching Strategies for Moral Education

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Abstract

The strategic research of moral education plays an important role in the field of education. Exploring the effectiveness of moral education is a major topic for improving and promoting educational strategies. This study examines the effectiveness of moral education through focus groups. Through the results of this study, it is found that the strategy of enhancing life reality and experiential learning and using teachers as facilitators to conduct moral education is more effective, it is effective for students to participate in moral education in life while seeking strategic education courses. This study may provide a theoretical basis for this field and may help policy designers in curriculum design.

Keywords: Effectiveness; Teaching Strategies; Moral Education.

1.0 Introduction

As modern education pays more and more attention to teaching and strategy, moral education also begins to emphasize the importance of strategy application under the influence of other science education (Asif et al, 2020). In today's educational landscape, moral education is seen as a critical component of fostering not just academic success, but also the overall character development of students. This has led to the adoption of various teaching strategies that aim to engage students in ethical thinking and moral decision-making. Character education programs, which emphasize the teaching of core values like respect, responsibility, and fairness, have become widely implemented in schools (Biesta, 2021). These programs often involve purposeful instruction, as well as activities that encourage students to practice these values in real-life situations.

The effectiveness of these strategies varies depending on factors such as the educational environment, the commitment of educators, and the cultural context in which they are applied. As schools continue to face challenges such as bullying, social inequality (Tan, 2008), and the influence of digital media, the need for effective moral education strategies remains pressing. Educators are increasingly seeking to create programs that are not only effective in promoting ethical behavior but also adaptable to the diverse needs of students in a globalized world (Narayanti et al., 2024; Andreotti, 2011).

1.1 Problem Statement

Despite the widespread adoption of ethical education programs, there is still debate about the most effective strategies for teaching moral values. Empirical studies have had mixed results, with some methods being more successful in some Settings than others (Thambu et al., 2021; Zhang et al., 2022). This variability underscores the need for continued research into the effectiveness of different pedagogical strategies, especially as societies become more diverse and face new ethical challenges. For educators seeking to prepare students for the complexities of modern life (Lukovitskaya, 2020), understanding which approaches best promote ethical development is critical.

In addition, the teaching strategies of moral education have long been difficult to be tested effectively in the complex cultural context (Watson, 2022). It is mainly reflected in the application of teaching strategies in diverse cultures, which have different performances in different regions (Shang & Cai, 2021). Effective ethical strategies are difficult to define due to the interference of many different factors.

1.2 Research Questions

This study aims to answer the following research questions:

1. What are the most effective teaching strategies to promote students' moral development in different educational Settings?
2. How do cultural and social contexts influence the effectiveness of different ethical education strategies in cultivating ethical behavior and decision making?
3. What role do pedagogical approaches play in the successful implementation of moral education programs in schools?

2.0 Literature Review

2.1 Moral Education

The goal of moral education is to develop virtues of character. Moral character consists of three elements: moral knowledge, moral feeling, and moral action (Cohen & Morse, 2014). According to this theory, Lickona claimed that moral behavior alone is insufficient and that understanding and feeling at ease are necessary to determine whether a behavior is moral (Astuti, 2024). The moral system contains two prescriptive which including proscriptive regulations depends on the behavioral activiy and inhibition regulatory systems (Janoff-Bulman and Carnes, 2013). These guidelines influence our actions, thoughts, and feelings. Moral motivations manifest in different forms, including personal ones (such as self-discipline and hard work), interpersonal ones (such as avoiding harm and helping), and those that operate at the group or collective level (such as maintaining social order and promoting social justice) (Rai & Fiske, 2011).

Research on moral education mostly concentrate on moral principles (Tan et al., 2017), innovative teaching methods (Gholami et al., 2011), experience (Shih, 2021), and problem-solving techniques (Chang, 2016). Studies show that moral principles, creative teaching methods, experience, and problem-solving techniques can all help to improve the efficacy of moral education initiatives in classrooms. According to Tan (2017), moral education textbooks built on moral principles have the power to create decent citizens and bolster Malaysia's multiethnic population's sense of national cohesion. To cultivate positive student morale in Taiwan, Shih (2021) suggested that parents be involved in moral education through experience sharing. Moral education textbooks in China are used to teach morality, and they contain material that challenges students' critical thinking and helps them answer moral conundrums based on actual situations (Chang, 2016).

2.2 Past Studies of Effectiveness of Teaching Strategies for Moral Education

Past research on the effectiveness of teaching strategies in moral education has highlighted the critical role that teaching methods play in shaping students' moral reasoning and moral behavior. Several studies have examined the impact of various teaching methods, such as direct teaching, discussion-based approaches, and experiential learning, on moral development (Pegu, 2021). For example, Berkowitz and Bier (2005) conducted a comprehensive review of character education programs and found that interactive and student-centered approaches (such as cooperative learning and service learning) are more effective in promoting moral development than didactic teaching. These approaches encourage students to actively engage with ethical dilemmas and promote a deeper understanding and internalization of ethical principles.

Similarly, a study by Narvaez and Lapsley (2008) highlights the importance of integrating moral education into the broader curriculum through approaches such as narrative ethics and moral discourse. Their findings suggest that when moral education is integrated into subjects such as history and literature, it helps students contextualize moral concepts, making them more relevant and applicable to their lives. This integration not only enhances students' moral reasoning skills, it also supports the development of a moral identity, which is essential for consistent ethical behavior (Nucci et al.,2021). In addition, research by Nucci and Narvaez (2008) shows that discussion strategies that encourage students to express their ideas and participate in debates about moral issues can significantly improve their moral reasoning skills. These interactive discussions provide a platform for students to explore different perspectives, challenge their assumptions, and develop a more nuanced understanding of ethical concepts, which argue that these strategies are particularly effective in cultivating critical thinking and empathy, which are key components of moral development.

2.3 Strategies Change the Moral Education Effectiveness

Environments such as the home, school, and community can foster moral education. This inevitably makes it difficult for people to believe in the moral education of purpose. For example, many Chinese families pay little attention to moral education courses taught in schools or professional institutions (Asif et al., 2020). The goals of moral education in schools are to develop morals, decent mindsets, and well-behaved children. However, the effectiveness of moral education using specific educational methods is still controversial. Technology is developing quickly, and this has both beneficial and harmful effects. Technological advancements have the potential to improve people's efficiency in their daily lives, but they can also have the opposite effect, altering people's personalities and lifestyles (Abdul Rahman, 2018). Schools must undoubtedly adapt and alter to keep up with the ongoing developments in this area. Education is significantly impacted by the digitalization of daily life. Even with the most recent advancements in digital tools and instructional software, schools and teachers continue to struggle with how to incorporate technology into curricula and better prepare children for the future. The idea of digital literacy aids in the comprehension and fulfillment of the needs of schools and students in a digital society by researchers, educators, and education officials (Pangrazio, Godhe, & Ledesma, 2020). In a similar vein, educational institutions are attempting to incorporate technology into moral instruction. Reviving moral education has been the focus of a lot of effort over the past ten years to slow down the rise in criminal and deviant behavior that characterizes contemporary society (Zhang, 2018). Numerous studies demonstrate that bullying happens in schools and that students struggle with academic dishonesty, as seen by the many instances of plagiarism and cheating in the academic community (Schwitzgebel et al., 2020).

2.4 Theoretical Framework

Theoretical frameworks help develop research questions and theory-based research methods. First, constructivist theory can be used to explore how teaching methods that encourage active participation and reflection (e.g., group discussions, case studies) can contribute to improving the effectiveness of moral education programs. The theory supports the idea that when students are actively involved in constructing their moral understanding, they are more likely to internalize those values. This confirms the necessity of the effectiveness of moral education. In addition, social learning theory helps to explain how teachers' attitudes and behaviors affect students' moral development. This suggests that when teachers model ethical behaviors and create a positive, supportive classroom environment, students are more likely to adopt those behaviors on their own. This theory can be used to analyze the impact of the teacher's role in moral education beyond the formal strategies used in the classroom. It also develops the discussion of teaching methods in research question 3.

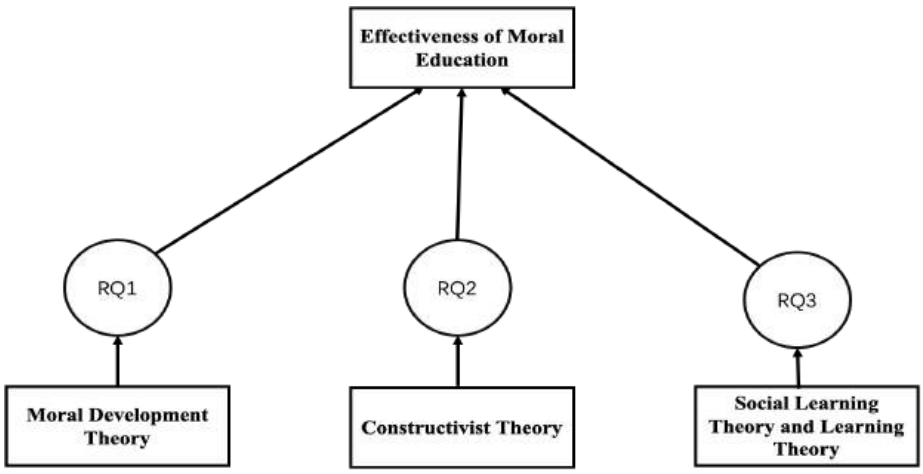

Figure 1. Theoretical framework.

2.4.1 Moral Development Theory

According to Kant (1785/1959, 1797/1991), moral actions are solely those performed out of a sense of duty. These actions must be carried out, regardless of the situation or the consequences for oneself or others, because they are intrinsically required. In contrast, actions taken in pursuit of personal goals or driven by desire or inclination hold no moral significance or value. An act can only be considered truly moral, and thus motivated by duty, when it contradicts one's own inclinations. Programs for stage-appropriate moral education could be developed using the study's findings and Kohlberg's theory of moral development (Esmaeili et al., 2021). While older students in the conventional or post-conventional phases could participate in more intricate ethical discussions and challenges, younger pupils in the pre-conventional stage, for instance, might benefit from more tangible instances of good and wrong (Uncu, 2021). This will enable educational institutions to customize moral education curricula to meet the needs of individual pupils.

Kohlberg identified six structural stages of moral reasoning, based on the formal nature of thinking about hypothetical moral dilemmas—situations that involve conflicting values and can be resolved in multiple ways. These stages are organized into three levels, each containing two stages. Progressing through these stages is believed to involve a gradual separation of moral principles from "prudential" considerations and social norms. In outlining these stages, we will adhere to the more well-known "ideal type" descriptions that Kohlberg provided in his earlier work (1969, 1971). The later framework, which uses the concept of "sociomoral perspective" (Colby et al., 1983), attempts to eliminate any traces of specific moral content from the stage descriptions. This approach has the practical effect (questionable at best) of eliminating the appearance of regressions at the more advanced stages of moral development, but it also makes achieving the higher stages more challenging.

2.4.2 Constructivist Theory

According to constructivist theory, which holds that students actively create their own understanding and knowledge via experiences, curriculum that promotes moral reasoning activities could be created using the study's results (Mohammed & Kinyó, 2020). Schools could create programs that let students investigate moral questions via dialogue, introspection, and practical exercises, helping them to build their own moral frameworks in a nurturing setting.

Constructivist teaching and teacher education have clearly gained prominence. Discussions on these subjects dominate academic and professional journals across various disciplines. Additionally, constructivist methods are evident in national and state policy documents aimed at shaping the curriculum and teaching methods in American schools, as well as in state and local policies. For instance, the Tucson, Arizona Unified School District is considering requiring early elementary teachers to discard their mathematics textbooks and instead teach math primarily through a constructivist approach using manipulatives.

2.4.3 Social Learning Theory and Learning Theory

According to social learning theory, which places an emphasis on imitation and observational learning, teacher preparation programs may benefit from the study's findings. Teachers can be instructed to model moral behavior and employ instructional practices that support students' moral development by knowing which strategies work best (Watson, 2022). According to this view, instructors are essential to moral education because of their contacts with students and their personal behavior in addition to their direct instruction.

On the other hand, identification in Learning process is another important composition for the explanation of this theory. Identificatory learning is often given significant importance among the various processes involved in socialization, regardless of whether explanatory theories prioritize psychological or sociological factors (Brandura, 2001). Several factors contribute to this emphasis. Informal observation clearly shows that the complex behaviors exhibited by members of society are largely acquired with minimal or no direct instruction, simply through observing the behavior patterns demonstrated by various socialization agents. This is especially the case for behaviors that lack a reliable eliciting stimulus, other than the cues provided by others' responses.

3.0 Methodology

3.1 Research Design

This study applies qualitative research design using case study approach to explore the effectiveness of moral education teaching strategies. Multiple case studies are used to investigate the experiences of different roles in teaching in teaching scenarios. The benefit of multiple case research is found in the ability to conduct cross-case analysis. This research design moves beyond the examination of a single case, focusing instead on the contrasts and commonalities between cases. Therefore, it involves more than simply performing additional case studies. Instead, it represents an advancement in formulating a theory about the elements influencing both the differences and similarities among cases (Hunziker & Blankenagel, 2021).

The primary approach is through focus groups, chosen for their ability to generate rich, detailed data and effectively capture the nuanced perspectives of participants within limited time and budget. Focus groups are particularly valuable in qualitative research because they provide a platform for interaction between participants, allowing for the emergence of different perspectives and greater insight into the research topic.

3.2 Sampling Method and Informers

The study involved purposive sampling to select participants who had relevant professional knowledge and experience in moral education, and they need to personally participate in moral education. Therefore, the purpose sampling method was adopted in this study to recruit participants in focus groups. To minimize observer bias and enhance the credibility of the findings, strict inclusion and exclusion criteria were established prior to participant recruitment, as outlined in Table 1.

Table 1. Sampling Inclusion and Exclusion Criteria.

Inclusion	Exclusion
People who can communicate in English	People in other languages
Get involved in education (teachers, administrators, students)	Not involved in education
Attended moral education classes/lectures	Never participated in a moral education class.

A total of 14 participants were selected to ensure a rich and comprehensive discussion. The participants were divided into three focus groups to encourage interaction and to allow for a variety of perspectives to be explored. The first group consisted of three teachers and one administrator, providing insights from the perspective of those who design and deliver moral education. The second group included four university students, offering a viewpoint from those who have experienced moral education firsthand. The third group was a mixed group, comprising three teachers and three students, to facilitate a dialogue between those who teach and those who learn. One of the reasons for this is so that different levels of sources can include discussion content on different topics and get answers from different groups of people under the same topic, which is more conducive to data. In addition, conducting multiple rounds of focus group discussions can facilitate questioning and further exploration of underlying topics. Use ongoing data analysis to facilitate further exploration of the topic in the next set of discussions.

3.3 Research Location

This study was conducted at a public university in Malaysia, and the research carried out in the region was approved by the ethics Committee of the region. The university's population structure and students' cultural background are relatively rich, and the acceptance of moral education is relatively high, so it is suitable for this research.

3.4 Pre-Test and Pilot Test

To ensure the high reliability and validity of the data collected in this study, pre-test and pre-test were conducted before the formal study. In qualitative research, informants in a pre-test are persons or a small

group of participants who are engaged in the initial evaluation of research instruments, processes, or interventions prior to the primary study (Gani et al., 2020). In the pre-test stage of this study, we invited experts from the research institution to evaluate the data collection process and the question setting of the focus group and revised the design of the session according to the opinions of experts and peer review. During the pilot test, informants are typically selected based on criteria like those used in the main study. According to the design of the focus group session, we simulated the discussion of the focus group and pre-considered the problems that might arise in it.

3.5 Data Collection Process

After identifying the callers, we selected a researcher as moderator and another researcher as recorder, using electronic recording devices to make audio recordings and mark some key statements. The moderator announces the start of the focus group after making sure all the informants are present. Each member can take the initiative to answer, and when some inactive members have not spoken for a long time, the moderator will directly ask the member a question. After this, the digital audio is manually transcribed and preserved as a verbatims.

3.6 Data Analysis

The data analysis method of this qualitative research is mainly carried out by the text content topic coding of verbatim transcribed manuscripts, so as to complete the research related to the effectiveness of moral education teaching strategies. First, recordings of focus group discussions are transcribed into text format. This ensures that all verbal data is accurately captured for analysis and, in order to ensure ethical compliance, statements are made regarding possible privacy concerns of informants. After this it enters the coding phase, where the record is systematically encoded by identifying and labeling important text fragments relevant to the research question. Coding involves assigning codes to sections of data that represent concepts or topics related to the effectiveness of ethical education teaching strategies, and grouping similar codes into broader topics. This process involves analyzing the code for patterns and relationships and organizing them into categories that reflect the main themes in the data. A thematic analysis of the following text content is carried out to explore the identified themes in depth. This involves how the research topics are related to each other and how they address the research question. The data in each topic was analyzed to understand how participants' experiences and perspectives influenced the overall research results. Finally, the results of thematic analysis are used to interpret the discussion results of the focus group in order to answer the research questions.

3.7 Ethical Consideration

The study was conducted in strict accordance with the academic code of ethics and was approved by the ethics committee of the study site before the study was carried out. In order to protect data security and the privacy of participants, the data collected in this study was anonymized prior to publication. At the same time, only researchers participated in the process of text transcription in this study.

4.0 Result and Discussion

From the result of the focus group, both educators and students reached a consensus during the focus group discussions that the most efficient teaching tactics for moral education involve the use of real-life events, conversations, and storytelling. Instructors highlighted the significance of including tangible scenarios and ethical predicaments to ensure moral teachings are relevant and captivating. Students expressed agreement with this viewpoint, highlighting that these tactics facilitated their ability to link moral principles with their own personal experiences, resulting in more profound and meaningful lessons. The focus group participants indicated that the success of moral education programs is closely linked to the pedagogical approaches employed by educators. Teachers who were passionate about moral education and used interactive methods, such as discussions and group work, were perceived as more effective. Students noted that when teachers genuinely cared about the subject and created a supportive learning environment, the moral lessons were more impactful.

Back to the focus group, participants noted the inconsistency in how moral education is delivered across

different educators, with some teachers being more comfortable and effective than others. Additionally, students mentioned that discussions sometimes lacked depth, and there was a concern that moral education could feel forced when integrated into other subjects.

4.1 Effective Teaching Strategies for Moral Education

RQ1: What are the most effective teaching strategies to promote students' moral development?

The findings from the focus groups provide significant insights into effective teaching strategies for moral education. In response to RQ1, two key themes emerged: the use of real-life scenarios and storytelling. Real-life scenarios were highlighted as particularly effective in helping students relate moral principles to their personal experiences, thus fostering practical moral reasoning skills. This observation is consistent with Narvaez's (2002) argument that moral education is most impactful when students are encouraged to apply ethical principles in scenarios reflecting their own lives. Similarly, storytelling was identified as a powerful tool for engaging students both emotionally and cognitively in moral lessons. Coles (1989) supports this, emphasizing that narratives help students internalize moral values more deeply. The focus groups confirmed that these strategies, which combine emotional engagement and practical application, facilitate a more profound understanding of moral concepts among students.

RQ2: How do pedagogical approaches influence the successful implementation of moral education programs in schools?

In exploring RQ2, which examines the role of pedagogical approaches, two themes were prominent: the role of teachers as facilitators and the effectiveness of active learning through discussions. The study found that teachers who adopt a facilitative role, as supported by constructivist theory, significantly enhance moral education outcomes. Constructivist theory posits that students actively construct their understanding through experiences, and the focus group results affirmed that when teachers provide guidance and create a collaborative learning environment, students are more likely to engage with and retain moral lessons. This is consistent with findings by Berkowitz and Bier (2005), who stress the importance of teacher involvement in the success of character education programs. Additionally, active learning through discussions emerged as a critical strategy. By engaging students in moral reasoning through debates and dialogue, teachers encourage the construction of personal moral frameworks, which not only reinforces moral concepts but also promotes critical thinking and reflection—essential components of moral development.

RQ3: What challenges are associated with the implementation of moral education strategies?

The findings related to RQ3 reveal two significant challenges: inconsistent delivery across educators and the difficulty of integrating moral education into the curriculum. The focus groups indicated that some teachers are more comfortable and effective in delivering moral education, while others struggle, resulting in variability in how moral lessons are conveyed. This suggests a need for professional development programs focused on moral education pedagogy to ensure consistent and effective teaching practices. Another challenge lies in the integration of moral education into other subjects. While it was noted that incorporating moral lessons into various disciplines can enhance their relevance, participants cautioned that these efforts must be undertaken thoughtfully to avoid a sense of contrivance. Constructivist principles advocate for moral education to be naturally woven into everyday learning, rather than being treated as an isolated component. This requires careful curriculum design that ensures moral education is an integral part of students' overall educational experience.

5.0 Implication

The findings of this study have important ramifications for the creation and execution of moral education initiatives in educational establishments. The results emphasize the significance of employing a variety of interactive pedagogical approaches, such as ethical problems, storytelling, and group discussions, to successfully involve students in moral thinking. The study highlights the significant impact that teachers' views and the educational environment have on shaping students' moral growth. These observations indicate that for moral education to have a genuine impact, it should be seamlessly included into the wider curriculum and reinforced by a school environment that emphasizes free discussion and analytical thinking.

Furthermore, the findings of the study support the need for professional development programs that provide educators with the necessary skills to establish inclusive and introspective learning environments. This will ultimately cultivate a student population that is more conscious of ethical considerations and socially accountable.

6.0 Conclusion

To summarize, the results of this study support and expand upon previous studies regarding the efficacy of moral education methods. The study emphasizes the significance of practical applicability, teacher involvement, and the deliberate incorporation of moral education into the overall curriculum. This study emphasizes the importance of active, experiential learning and the essential role of instructors as facilitators in moral education, based on constructivist philosophy. To improve the efficiency of moral education programs in schools, it is crucial to address the mentioned problems by focusing on professional development and meticulous curriculum design. These observations offer a solid basis for further investigation and application in the realm of moral education.

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Exploring the Essential Role of Employability Skills in TVET

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Abstract

In the 21st century, new technologies are rapidly transforming manufacturing processes, workplaces, and lifestyles; rapid technological advancements are reshaping industries and redefining workplace requirements, leading to a pronounced skills gap in the labor market. This paper focuses on the critical role of employability skills within Technical and Vocational Education and Training (TVET) systems in addressing this challenge. Employability skills—such as communication, problem-solving, and adaptability—are increasingly essential for bridging the skills gap, enhancing graduate employment, and fostering sustainable career development. By integrating these skills into TVET curricula, educational institutions can better align training programs with the evolving needs of the labor market. This paper synthesizes existing research on the impact of employability skills on employment, career success, and labor market demands. It highlights the importance of their systematic inclusion in TVET programs to prepare graduates for the modern workforce and promote inclusive economic progress.

Keywords: Employability Skills, TVET, Career Development.

1.0 Introduction

Vocational education has long been recognized as a vital policy tool for poverty alleviation, with global frameworks such as UNESCO's Education for All (1990), The Dakar Framework for Action (2000), and the Revised Recommendation concerning Technical and Vocational Education (2001) emphasizing its importance in addressing socioeconomic disparities (UNESCO, 1990, 2000, 2001). Against this background, the employment outcomes and quality of employment for students graduating from vocational programs have a far-reaching impact—not only improving individual job satisfaction and quality of life but also promoting the efficient utilization and allocation of human resources (Samuelson, 1954). Ensuring such effective outcomes is crucial for sustained economic growth and the development of social stability and harmony.

However, the demands of the labor market are undergoing significant shifts due to the rapid advancements in new technologies and the increasing pace of globalization. These factors are creating an environment where the skills required by employers are evolving continuously, making labor market demands on graduates more diverse and complex than ever before (Song, 2018). Many nations are experiencing structural employment challenges, including elevated rates of graduate unemployment, largely attributed to mismatches between the structure of labor supply and the dynamic needs of the market (Amarathunga et al., 2024). This issue is particularly pronounced within the vocational education sector, where students' skills often lag behind the latest technological and practical industry requirements.

To bridge this gap, vocational education institutions must focus on equipping students with the skills and competencies that align with current labor market expectations. Research has shown that employers are increasingly finding that recent graduates lack critical employability skills, while graduates themselves report challenges in securing positions that match their training (Chen, 2019). This disconnect highlights the need for a more responsive educational framework that adequately prepares students for the demands of modern employment (Ozer, 2020; Capranos & Magda, 2023). As UNESCO (2020) emphasizes, the enhancement of employability skills within vocational education is not only a strategy to improve individual employment outcomes but also a means to support sustainable economic and social development. This paper focuses on the significance of employability skills and their roles within the context of Technical and Vocational Education and Training (TVET).

2.0 Definition and Importance of Employability

Employability skills have become a focal point in recent years as globalization and the digital revolution reshape the competencies demanded in today's workplaces. These skills are increasingly seen as essential determinants of employability for inexperienced job seekers, directly impacting their chances of securing employment and advancing within their careers. Employability is a blend of skills, knowledge, and personal attributes that enhance graduates' ability to gain employment and succeed in their chosen fields (Yorke, 2006). This concept has evolved beyond job attainment, as recent studies suggest that employability encompasses an individual's sustained competitiveness in the labor market, essential for long-term career success (Akkermans et al., 2015).

The definition of employability skills varies across contexts but generally includes a combination of technical, soft, and personal skills. Within the realm of Technical and Vocational Education and Training (TVET), employability skills are recognized as encompassing both occupational and transferable skills, as well as personal attributes that prepare graduates not only for employment but also for entrepreneurship and sustainable career development (ILO, 2020; UNESCO, 2020). These skills are pivotal for TVET programs as they equip students with competencies that align with specific industry demands and support adaptability in diverse workplace settings (UNESCO, 2020).

International studies underscore the need for a wide array of employability skills, many of which overlap with those offered in vocational education curricula. For instance, according to UNESCO (2020), employability skills cover technical expertise and soft skills such as communication, teamwork, problem-solving, and adaptability. These competencies are integral to successful career development, with research indicating that graduates who possess a strong foundation in these areas tend to experience smoother transitions into the workforce. They are better equipped to adapt to evolving labor market demands, thus bridging the gap between education and employment and contributing to lower unemployment rates (World Bank, 2020).

The emphasis on employability skills also raises questions about whether current TVET programs need to update their definitions and frameworks for cultivating these skills. As workplace expectations shift with technological and economic changes, TVET institutions must continually assess and refine their approaches to teaching employability skills to ensure that graduates remain competitive. A workforce proficient in these skills is more likely to drive productivity and efficiency, fostering innovation and economic growth (Cedefop, 2016). This paper will explore the evolving landscape of employability skills within TVET, examining international statistics on skill demands, the role of vocational education in skill provision, and the potential need for updating TVET strategies to align with the requirements of the modern labor market.

3.0 New Technologies, Career Development and Employability Skills

The rapid advancement of new technologies across industries has fundamentally reshaped the labor market, making employability skills essential for individuals to adapt, learn quickly, and sustain their relevance in this dynamic environment (OECD, 2019). Graduates who possess a strong foundation in employability skills are better equipped to navigate technological changes and respond effectively to industrial transformations. These skills act as a critical bridge, aligning the technical training provided in Technical and Vocational Education and Training (TVET) programs with the competencies currently sought by employers. By reducing the mismatch between the qualifications of job seekers and the evolving requirements of the labor market, employability skills help to address structural employment issues (Cedefop, 2016). As technological advancements continue to accelerate, these skills ensure that workers remain adaptable, able to meet the complex demands of modern workplaces, and thereby secure sustainable employability in diverse, changing job landscapes.

The impact of employability skills extends beyond job attainment, significantly influencing career development by enabling graduates to secure roles that are aligned with their strengths, interests, and long-term professional goals. This alignment leads to higher job satisfaction and increased retention rates, underscoring the importance of employability skills in career success (ILO, 2020). Awareness of these skills' value also fosters student motivation and engagement, leading to improved academic performance and enhanced practical skill application in real-world settings (World Bank, 2020). Furthermore, employability

skills such as effective communication and problem-solving enhance the ability of technicians and other skilled workers to convey complex information to non-technical colleagues, promoting collaborative problem-solving and innovation (ILO, 2020). Thus, these skills equip graduates with resilience and adaptability, positioning them for sustained and fulfilling careers.

4.0 Global Emphasis on Integrating Employability Skills in TVET Programs

Recognizing the importance of employability skills, there is a growing global emphasis on integrating these competencies into TVET programs. Various initiatives have emerged to improve the alignment of TVET curricula with industry needs, quality standards, and workforce expectations. For instance, the Commonwealth's updated TVET Toolkit includes resources for evaluating and strengthening TVET systems, emphasizing governance, employer engagement, and quality standards to develop a highly skilled workforce (Ramanathan, 2022). In the United States, competency-based training is increasingly incorporated within traditional TVET programs, showing promising results in skill acquisition and fostering self-employment, highlighting the necessity for educational institutions to focus on both technical and employability skills (Malik et al., 2022).

In China, the emphasis on employability skills in TVET is a strategic response to meet the rapidly evolving demands of the labor market. Research indicates that embedding employability skills in the curriculum significantly enhances students' self-assessment capabilities, readiness for employment, and entrepreneurial intentions (Romanova, 2022). By incorporating these skills, TVET programs prepare graduates not only to meet current labor market needs but also to adapt as these needs change, thereby supporting individual career development and overall economic progress. Across countries, a well-equipped workforce is shown to boost productivity, drive innovation, and support sustainable economic growth, underscoring the essential role of employability skills in national workforce development strategies (Cedefop, 2016).

The importance of employability skills within the framework of Technical and Vocational Education and Training (TVET) is evident. These skills provide graduates with the foundational capabilities necessary for success in today's competitive labor market, enhancing their prospects for career advancement and supporting long-term social integration. By systematically embedding employability skills in TVET curricula, educational institutions can more effectively bridge the gap between education and employment, aligning training with industry requirements and contributing to economic growth and social development. Future research should delve further into innovative strategies for integrating employability skills within TVET, with an emphasis on optimizing career success rates and reinforcing the relevance of vocational education amid a rapidly changing global economy

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The Impact of Artificial Intelligence on Teaching and Learning: Opportunities and Challenges in Tertiary Education in Klang Valley, Malaysia.

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Abstract

Artificial Intelligence (AI) is revolutionizing the landscape of tertiary education worldwide. However, AI has not yet gained widespread usage in higher education. As a result, there is insufficient evidence about their pedagogical impact on teaching and learning. Therefore, this research paper aims to investigate the impact of AI on teaching and learning in tertiary education, including opportunities and challenges. This paper employed a quantitative research design, using a structured questionnaire to collect data from participants selected through simple random sampling. The research participants will be 200 educators. Data will be recorded in SPSS Statistics 29.0 and analysed using descriptive statistics to summarise the data and regression analysis to investigate the relationship between AI usage and instructional effectiveness. By understanding the impact of AI on teaching and learning in higher education, educators and other stakeholders will be able to embrace quality education for all students. The paper will conclude with numerous proposals for improving the acceptance and application of AI at institutions. These include developing specialized AI adoption strategies at the institutional level and effectively training educators to integrate AI into teaching and learning. This study adds to the increasing literature on AI in education, providing actionable insights for policymakers, educators, and institutions looking to use AI to improve teaching and learning outcomes.

Keywords: Artificial Intelligence (AI), Teaching and Learning, Tertiary Education, Challenges in AI, Opportunities in AI.

1.0 Introduction

1.1 Background of the Problem

Artificial Intelligence (AI) refers to machines that can accomplish activities similar to human thought process (Dörfler, 2023). Artificial Intelligence is transforming how we interact with technology and live our lives. The integration of Artificial Intelligence (AI) into the educational domain has grown, transforming teaching methodologies and learning experiences. This study explores the impact of AI on tertiary education in Klang Valley, Malaysia with focus on opportunities and challenges faced by academicians. Any technology has potential benefits, but they are always accompanied by drawbacks or undesirable outcomes which leads to challenges (Akinwalere, 2022).

1.2 Problem Statement

Research on the impact of artificial intelligence on teaching and learning has been a hot topic. studies found numerous opportunities of AI on teaching and learning, such as Improving quality of teaching, enhancing teaching skills, access to high quality educational resources, identifying knowledge gaps, identifying learning styles, facilitating personalised learning for educators and students (Jamal, 2023).

The findings of this study will increase the educational stakeholders' understanding of the challenges that raises due to integration of AI in education, such as Etical and social implication, Technical challenges, cultural challenges, combating plagiarism in research (Jamal, 2023).

The purpose of this study is to evaluate the impact of artificial intelligence on teaching and learning in tertiary education within Klang Valley. The research aims to identify both the opportunities and challenges given by AI integration, as well as investigate how AI technologies are being used to improve educational practices and what obstacles are encountered in the process.

1.3 General Objectives

To investigate the impact of Artificial Intelligence (AI) on teaching and learning in tertiary education within Klang Valley, Malaysia including the opportunities and challenges. Therefore, the specific objectives are as follows;

1. To analyze the existing degree of understanding and familiarity with Artificial Intelligence (AI) among instructors at Klang Valley tertiary education institutions.
2. To investigate the extent to which AI is being used in teaching and learning processes at tertiary education institutions in the Klang Valley.
3. To identify the problems and barriers of using AI into teaching and learning, such as infrastructure, faculty training, data protection, and the digital divide.
4. To assess lecturers' perspectives on the future use of AI in tertiary education in the Klang Valley.

1.4 Hypothesis

The hypothesis is as follows;

1. There is a significant variation in the degree of understanding and familiarity with Artificial Intelligence (AI) among lecturers at tertiary education institution in Klang Valley.
2. The extent of AI usage in the teaching and learning process at tertiary education institution in Klang Valley is positively correlated with the availability of infrastructure and training
3. Challenges related to infrastructure, training, data protection and the digital divide significantly hinder the effective integration of AI into teaching and learning in Klang Valle's tertiary education institutions.
4. Lecturers hold optimistic views regarding the future use of AI in tertiary education in Klang Valley, believing it will play a significant role in enhancing educational outcomes.

1.5 Significance of Research

The findings of this research will provide insight into the effectiveness of AI in improving educational outcomes and offer recommendations for optimising AI adoption in tertiary education.

1.6 Assumptions

The following assumptions were considered when conducting this research.

1. Study participants will freely provide the researcher their rating.
2. The tool to be used will yield dependable results.
3. The respondents will completely comprehend the questions posed.

2.0 Review of Literature

AI in education is fast growing, with studies demonstrating its ability to improve learning outcomes and expedite educational processes. According to the literature, AI-driven solutions such as intelligent tutoring systems, adaptive learning platforms, and AI-powered assessment tools have shown promise in facilitating tailored learning pathways (Zawacki-Richter et. al., 2019). However, studies have identified substantial hurdles, such as data privacy concerns, a lack of proper faculty training, and the high costs of AI adoption (Liyanaarachchi el. al., 2021).

In Malaysia, there is rising recognition of AI's potential benefits; yet, higher institutions face significant impediments to deployment. Infrastructure restrictions and discrepancies in digital access exacerbate these issues, making it difficult for students and staff alike to realize the full potential of AI in education (Ainin & Naqiyah, 2022). Furthermore, improved AI literacy among educators and students is critical for closing the digital divide and ensuring fair access to the benefits of AI (Chen & Chen, 2020).

To synthesize the literature, this study looks at the advancement of AI technology and its application in education as well as empirical research into AI's impact on learning experiences, student engagement, and educational quality. Additionally, barriers to AI adoption include training to faculty members, expenses, and infrastructure issues unique to Klang Valley universities.

3.0 Methodology

This conceptual paper employs a quantitative approach to assess the perceived impact of AI on teaching and learning and to evaluate its current use within tertiary education in the Klang Valley, Malaysia. The data were collected by distributing copies of the questionnaires with close-ended questions to prospective respondents. The items in the questionnaires were divided into seven sections, and the first section is respondent demographics background including basic demographic, institution-specific demographic, and technological demographics. The next sections are awareness and use of AI in education, opportunities, challenges, and future outlook. The survey will use a Likert scale to gauge educators' views on AI-driven changes in teaching practices, opportunities for personalized learning, and potential barriers, such as infrastructural or training constraints. This data will provide statistical evidence to support the discussion on AI's integration in tertiary education and allow for an objective analysis of educators' attitudes and the institutional readiness for AI adoption.

4.0 Implication

The employment of AI is a double-edged sword, although it opens up new pedagogical opportunities, it also introduces significant problems. For educators, AI might simplify administrative work, freeing up time for more engaging and students-centred activities. However, without sufficient support and training the promise of these instruments goes untapped. Furthermore, resolving ethical concerns, particularly those surrounding data protection, will be critical to ensuring responsible and sustainable AI integration.

5.0 Future Work

Future research should focus on creating frameworks for AI literacy programs designed specifically for educators. Additional research might look into scalable solutions that solve the infrastructural gaps highlighted in Klang Valley, Malaysia. Furthermore, multidisciplinary collaborations between tech businesses and educational institutions may result in successful AI solutions that are aligned with educators' requirements and capabilities.

6.0 Conclusion

The conclusion summarizes the main findings, emphasizing the necessity of understanding instructors' views when guiding AI integration in postsecondary education. The importance of continual assistance, training, and ethical considerations is emphasized in order to create positive and inclusive AI use in education.

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Bridging the Gap: An In-depth Analysis of Moral Education Curriculum Implementation and Outcomes in Henan Primary Schools (2020-2024)

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Abstract

Moral education is essential for fostering ethical values and social responsibility among students. This study evaluates the implementation and effectiveness of moral education curricula in Henan Province's primary schools between 2020 and 2024, focusing on curriculum content, delivery methods, and its impact on students' moral development. It explores the content, delivery methods, challenges faced by educators, and the overall outcomes of the curriculum in shaping students' moral development. This study uses secondary data analysis, reviewing research studies, educational reports, and textbooks from 2020 to 2024. The analysis involves content analysis to identify trends, challenges, and areas of success within the moral education framework. The evaluation reveals that the moral education curricula during 2020-2024 were comprehensive, addressing key values such as patriotism, respect, and social responsibility. The findings highlight both the successes of the moral education framework and areas in need of improvement, particularly in ensuring more consistent and effective moral instruction across all schools in the region. This study contributes to a deeper understanding of the current state of moral education and offers recommendations for enhancing its delivery and impact.

Keywords: Moral Education, Curriculum Evaluation, Primary School, Henan Province, Secondary Data Analysis.

1.0 Introduction

This study aims to evaluate primary moral education curricula in Henan Province over the past five years. In recent, moral education become more important part for children' education and development, especially during the primary education. Henan is often considered the "cradle of Chinese civilization," home to ancient capitals and cultural landmarks such as Luoyang and Kaifeng (Guangming Daily, 2022). The current phenomenon of formalization and proceduralization of moral education has led to a significant reduction in the quality of moral education. According to the Notice of the Ministry of Education on the issuance of the "Guidelines for Moral Education in Primary and Secondary Schools", it requires that educating and guiding students to love the motherland, love the people, love their relatives and elders, love the collective, and love their hometown; gain a preliminary understanding of the natural and social common sense in life and knowledge about the motherland; protect the environment, cherish resources, develop basic civilized behavior habits etc., (Ministry of Education of the People's Republic of China, 2017). The implementation of moral education in primary schools mainly focuses on cultivating students' moral awareness, behavioral norms and values, which conforms to the overall requirements of China's basic education and is carried out in combination with local characteristics and educational goals (Social Affairs Bureau of the High-tech Development Zone Management Committee, 2020).

1.2 Objectives

The main objective of this study is to analyze the content of the curricula in relation to national moral education goals and evaluate the methods used to deliver moral education, including teaching strategies, and resource availability, and investigate the challenges faced by educators in implementing the curriculum, particularly in under-resourced schools. Therefore, the research questions of this study are as below:

(1) How have moral education policies and curriculum frameworks been implemented across primary schools in Henan?
(2) What are the teaching methods, materials, and strategies used by educators to promote moral education?

2.0 Research Methodology

This research employs a comprehensive secondary data using the documentation analysis to evaluate the moral education curricula and its implementation. Sources include educational reports from the Ministry of Education, research studies, and curriculum documents from primary schools in Henan Province. This research primarily draws on data from CNKI, China's largest academic database. This study screened 7492 articles related to primary school moral education from the China National Knowledge Infrastructure (CNKI) database. Through a series of screening criteria (such as relevance of educational content and policy guidance basis), 363 CSSCI core journal papers were finally included, and analyzed in combination with education reports and textbooks from 2020 to 2024.

3.0 Findings

According to relative literature review and analysis, the key elements of moral education policies and curriculum frameworks include: (1) clarifying the guiding principles and objectives of textbook development, (2) adopting a multi-dimensional and integrated approach that reflects the core competencies of the subject, (3) optimizing textbook structure to connect more closely with children's real-life experiences, and (4) enriching textbook presentation to foster innovation in students (Yao & Xu, 2022).

An analysis of the "Morality and the Rule of Law" textbooks for grades 1 to 6 reveals that schools provide a comprehensive and progressive moral education that adapts to children's developmental stages and life experiences. For instance, the grade 1 textbook focuses on helping students adjust to new school environments and make new friends. It also emphasizes teaching polite behavior through everyday scenarios. In grade 2, the content expands to include various settings, guiding students on proper behavior not only in classrooms but also in public spaces and their hometowns. The grade 3 textbook emphasizes overcoming challenges in school and includes basic first-aid knowledge. With the rise of digital information, the grade 4 textbook introduces healthy and responsible internet usage while encouraging students to recognize their social responsibilities, such as environmental protection and low-carbon living. By grade 5, the curriculum covers broader topics such as managing extracurricular activities and learning about national heritage and culture, while continuing to promote the moral traditions of the Chinese nation. Grade 6 serves as a transition between primary and secondary education, introducing students to basic legal concepts and the rights and duties of citizens. It also covers topics related to national institutions and the role of People's Congress representatives (People's Education Press, 2019).

About question 2, educators promote moral education through various methods, including direct instruction on ethical values, discussion-based learning on moral dilemmas, and social practice activities to practice ethical decision-making (Bao, 2024). Except the moral class, Chinese learning is also an important way to provide moral education for students. In the process of teaching, teachers should be good at exploring the content contained in the textbooks, interacting with students in terms of morality and intelligence, and better improving students' Chinese proficiency to promote their all-round development (Fu, 2022).

4.0 Discussion

The findings suggested that more attention should be given to the practical aspects of moral education, such as fostering critical thinking and ethical decision-making, rather than focusing solely on rote learning of values. In the study "Research on the selection of moral stories in primary school moral education textbooks", it noted that among the 106 moral stories in the People's Education Press textbook, "loving the motherland" appears most frequently, followed by "self-reliance" and "civilized dedication", and the rest appear very rarely (Wang & Chen, 2022). As the grade increases, the number of stories in the textbook increases. it found

that the form teacher usually plays a significant role for Primary moral education. Because they are responsible to manage and supervise students' daily behavior habits (Tang, 2024). Besides, more research pays more attention to the connection between moral education with different disciplines of education, such as Chinese, math, English, music etc. Chinese teaching is an important way for students to receive moral education. It allows students to have close conversations with authors with excellent qualities and noble ideas during the Chinese learning process, thereby being influenced and edified by excellent cultural ideas, which can promote students' healthy growth and all-round development (Shi, 2020).

5.0 Conclusion

This study provides an evaluation of the moral education curricula implemented in Henan Province from 2020 to 2024, identifying both successes and areas for improvement. Primary schools in Henan Province use the national unified textbook "Morality and the Rule of Law". Through grade-based content design, it gradually cultivates students' moral cognition from first to sixth grade. By enhancing curriculum designing and implementation, and using digital technology to assist moral education, or enhance students' moral cognition and critical thinking skills through interdisciplinary approaches, the moral education system in Henan Province can become more uniform and impactful. Future research should explore the long-term effects of moral education on students' ethical development and civic participation.

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Exploring the Best Pedagogical Approach for Implementing Education for Sustainable Development in Higher Education Institutions Curriculum from the Perspective of University Students

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Abstract

Education for Sustainable Developments (ESD) aims to equip learners with the knowledge, skills, and values necessary to promote sustainable development, yet many Higher Education Institutions (HEIs) face challenges in integrating it effectively. Previous studies highlight the lack of guidelines for ESD implementation as a significant barrier for educators. This paper investigates the best pedagogical approach for implementing ESD in HEIs curriculum from the perspective of university students. This study employed a qualitative study approach involving interviews and focus group discussions with six students from public universities in Malaysia. Preliminary findings suggest that the best pedagogical approach for implementing ESD involves student-centered learning by incorporating final year projects and application-based learning. Students emphasized the need for application-based learning through case studies and real-world projects, as well as incorporating ESD elements into final year projects. These insights offer valuable guidance for policymakers and educators aiming to enhance ESD implementation. By addressing the suggestions proposed by students, HEIs can foster impactful learning experiences that not only promote sustainable development but also equip students with the skills and competencies necessary to address global sustainability challenges.

Keywords: *Education for Sustainable Development, Pedagogy, Student Perspectives, Sustainable Development Goals, Higher Education Institutions.*

1.0 Introduction

Education for Sustainable Development (ESD) serve as a channel that help the achievement of Sustainable Development Goals (SDGs). UNESCO (2013) had stated the aim of ESD is to provide everyone with the opportunity to acquire knowledge, skills, attitudes and values necessary to shape a sustainable future. Therefore, higher education institutions (HEIs) play important role in producing global citizenship in every individual. That show the need to highlight ESD implementation in HEIs. Even though, there is an effort on integrating ESD in Malaysia HEIs policies but there are no proper guideline or instruction in integrating ESD into the curriculum (Syed-Abdullah, 2023). For that reason, this study will explore the best pedagogical approach for implementing ESD in HEIs curriculum from the perspective of university students. University students are recipients and users of the curriculum and the data from student representatives is important in contributing information about their wants, needs and expectations about the importance of ESD in their learning and career in the future. The United Nations (2015) also had recognized them as agents of change who can help addressing sustainability challenges. For this study, the researcher had employed qualitative approach to answer following research questions:

- What are the best pedagogical approaches for implementing Education for Sustainable Development (ESD) in the curriculum of Higher Education Institutions (HEIs) from the perspective of university students?

2.0 Theoretical Framework

Transformative Learning Theory (TLT) is well-suited for this study on Education for Sustainable Development (ESD) due to its emphasis on critical reflection, student-centred learning, and fostering real-world competencies. Transformative learning encourages learners to challenge their existing beliefs and assumptions, leading to a shift in worldview (Mezirow, 1997). This aligns with the goals of ESD, which seeks to equip students with the knowledge, skills, and values necessary to address sustainability challenges. This theory has broad applications, especially in higher education, focusing on critical reflection, disorienting dilemmas, and experiential learning (Taylor, 2008; Nohl, 2014). Critical reflection fosters deeper engagement with sustainability issues, encouraging students to reassess their beliefs (Taylor, 2008; Pugh et al., 2017). Disorienting dilemmas challenge learners to seek new perspectives, thereby enhancing the learning process (Taylor, 2008; Nohl, 2014). Experiential learning enables students to integrate new insights into practical, real-world contexts, reinforcing the relevance of their learning experiences. By recognizing the importance of personal experiences, the theory also explains how student-centred learning promotes self-awareness and fosters the competencies needed to address sustainability challenges, directly addressing the study's research questions (Aboytes & Barth, 2020; Nwagu, 2020).

3.0 Methodology

This research utilized a qualitative study approach to examine university students' perspectives on Education for Sustainable Development (ESD). Interviews were conducted with six (6) participants from various public universities, including research universities, comprehensive universities, and specialized institutions. For the participants sample profile, refer Table 1.

Table 1. Participants sample profile

Students	University	Background of study		Level of study
1	Research University	Science	Mechanical Engineering	Undergraduate
2	Research University	Science	Plant Physiology	Postgraduate
3	Research University	Social Science	Counselling	Postgraduate
4	Research University	Science	Wildlife Ecology	Postgraduate
5	Comprehensive University	Social Science	Da'wah and Islamic Management	Undergraduate
6	Focused University	Science	Electronics and Computer Technology Engineering	Undergraduate

The researcher employed a semi-structured interview technique with the participants, enabling the use of varying language levels in questioning. This approach is crucial, as each participant has different levels of comprehension regarding academic language (Chua, 2020). Additionally, the researcher acknowledged that not all participants were familiar with the term ESD, thus, the term Sustainable Development Goals (SDG) was utilised during the interviews. The researcher also provided infographic materials on SDG/ESD to inform participants about this agenda. Below are the key questions outlined in the interview protocol:

- What did you understand about SDG?
- Do you think SDG is important to all students and needs to be learned?
- How is SDG integrated into the curriculum of your institution / your class?
- How have you applied what you learned?
- What are the challenges faced in implementing SDG in your institution?

All data collection sessions were audio-recorded and transcribed for analysis. The data were analysed thematically, beginning with the coding process to identify individual ideas, which were then grouped into categories and finally organized into broader themes (Creswell, 2013). Table 2 summarizes the themes and

subthemes identified in this study. Additionally, ethical approval was obtained from the Ethics Committee of Universiti Putra Malaysia (JKEUPM) under project code JKEUPM-2024-443.

4.0 Results and discussions

From the data analysis, the study revealed one main theme which is student-centred learning by integrating through application-based learning and final year project as the best pedagogical approach for implementing ESD in the curriculum.

Table 2: Summarised themes and subthemes

Themes	Sub themes	Description	Extracts
Student-centred learning	Application-based learning	Involves hands-on experiences where students apply theoretical knowledge to real-world situations, enhancing their problem-solving skills and practical understanding.	"For example, real-world projects and discussions. By engaging in these kinds of activities, both educators and students can learn more, not just about introductory concepts, but they can also think deeply about what the solutions might be for future problems, problems that don't exist now but might arise in the future, right? So, they can start thinking about these issues from now. I think this is one of the important aspects of ESD, not only learning but also practicing how to develop ideas and apply them." (Transcript S4, page 7 line 296)
	Final Year Project	The final year project is a capstone experience that allows students to conduct independent research or practical work, demonstrating their cumulative knowledge and skills in their field of study.	"I think when it comes to the elements in final year project, the way we study topic we work on usually leads to the SDGs. So actually, our final year project ... at that time, we could see that it addressed the education aspect, integrating ESD, but it wasn't explicitly mentioned…So, when I learned about it, I realized that is SDGs, if I didn't know about the SDGs, I wouldn't have understood." (Transcript S2, page 8 line 365)

When participants were asked about effective pedagogies for ESD, most highlighted the

significance of student-centred learning (SCL). SCL plays a crucial role in ESD, fostering active engagement and critical competencies that support sustainability. Past studies have demonstrated how SCL helps students enhance their knowledge, attitudes, and behaviours (Ngo & Chase, 2020; Sierra & Collado, 2021; Karin et al., 2022; Trechsel et al, 2023; Xing & Ironsi, 2024).

Findings revealed that application-based learning emerged as a key approach, with participants emphasising the importance of engaging with real-world problems through project-based and collaborative learning environments. This method allows students to apply theoretical knowledge in practical contexts, cultivating critical thinking and problem-solving skills essential for addressing sustainability challenges (Singha & Singha, 2024). Application-based learning fundamentally enhances skills such as adaptability, teamwork, and collaboration (Singha & Singha, 2024; Nguyen et al., 2024). By working on real-world sustainability challenges, students learn to analyse complex issues, assess solutions, and collaborate, which are vital for sustainability (Hensley, 2024). Through project-based tasks, students gain hands-on experience in applying theoretical knowledge to practical problems, honing their ability to tackle similar challenges in their future careers (Singha & Singha, 2024). This experiential learning approach fosters both hard and soft skills directly applicable to real-world sustainability issues. As one participant expressed, "Students can deeply think about what solutions might be needed for future problems" (Transcript S4, page 7, line 296).

This active involvement not only helps students internalise ESD principles but also fosters innovative thinking, even in areas not typically associated with sustainability (Tilbury, 2011). Additionally, collaboration and critical thinking were highlighted as essential components of the learning experience (Rieckmann, 2018). Students frequently mentioned the value of group projects and discussions, which prompted them to approach sustainability issues collaboratively and creatively. This aligns with the core competencies advocated by ESD, emphasizing teamwork, effective communication, and the capacity to tackle complex interdisciplinary challenges (UNESCO, 2017).

Furthermore, final-year projects emerged as pivotal in fostering ESD. Participants explained how these projects often incorporate aspects of sustainable development, even if not explicitly framed as such. This immersive experience empowers students to conduct independent research, applying their accumulated knowledge and skills to sustainability-related challenges within their specific fields (Ohta et al., 2022; Sterling, 2010). Final-year projects reinforce the theoretical aspects of ESD while offering a platform for investigating and proposing solutions to real-world sustainability issues. By bridging theoretical knowledge with practical application, students gain valuable insights into sustainability's complexities, enhancing their critical thinking and problem-solving abilities (Ohta et al., 2022; Wals, 2010). The inclusion of real-world applications further increases student motivation and engagement. When learners connect their studies with pressing global challenges, the relevance of their academic work becomes clear, fostering a strong sense of purpose and intrinsic motivation as they see the societal impact of their efforts (Ohta et al., 2022; Tilbury, 2011). Participant reflections suggest that this engagement level promotes deeper learning and long-term knowledge retention, encouraging students to seek practical solutions to real-world problems—an experience that not only enriches their education but prepares them to actively contribute to sustainable development in their careers (Ohta et al., 2022; Barth et al., 2016).

In the realm of student-centred learning, educators play a crucial role, acting not just as instructors but as advisors and mentors who guide students' learning journeys. It's essential for students to have adequate support for academic and personal success. One participant poignantly noted, "Sometimes students themselves don't pay attention because they can't see in the end. It's more about how practical the SDGs are. For example, we see 'no poverty' here. All of that needs to be shown based on how it is prioritized" (Transcript S6, page 6, line 263). This statement underscores the importance of making learning relevant and tangible, particularly when discussing complex topics such as the Sustainable Development Goals (SDGs). Research by Lai and Peng (2020) underscores the role of effective teaching as a cornerstone of educational quality. For teaching to reach this high standard, educators must have a deep understanding of various pedagogical methods and strategies, enabling them to tailor their approaches to foster student engagement and enhance learning outcomes. This, in turn, supports high-quality education aligned with sustainable development principles. Hsu and Wu's (2023) study highlights the transformative potential of

project-based learning (PBL), particularly when integrated with business simulation games. This approach not only promotes active learning but enhances teamwork and encourages students to apply knowledge practically to solve real-world issues. PBL has also been shown to improve both cognitive and behavioural engagement among students, enriching their educational experiences. By embracing such innovative teaching methods, educators can better prepare students to address contemporary challenges and contribute meaningfully to a sustainable future.

Overall, the participants emphasised the need for application-based learning and final-year projects, which are pedagogical approaches fostering deeper cognitive and affective transformations central to transformative learning (Mezirow, 1991). This theory supports student-centred learning, where students take ownership of their education, making self-directed learning essential (Knowles, 1975). The research findings reinforce student-centred approaches, making transformative learning particularly relevant as it promotes critical thinking, problem-solving, and ethical reasoning—competencies crucial for sustainable development (Foster et al., 2019). By empowering students to engage in real-world projects and case studies, transformative learning helps them become active change agents, which is a core objective of both transformative learning theory and ESD (UNESCO, 2014). Thus, transformative learning provides a valuable framework for understanding how approaches such as final-year projects and practical applications can effectively develop sustainability competencies among students in higher education institutions (Sterling, 2001).

5.0 Conclusion

The early findings discover the best pedagogical approach for implementing Sustainable Development Goals (SDGs) from the perspectives of university students in higher education institutions (HEIs) curriculum. The findings reveal student-centred learning as a best pedagogical approach by integrating application-based learning and final year project.

To further improve this study, the researcher will interview more participants from diverse academic backgrounds at all types of public universities, to capture a wide range of perspectives. This approach will not only reflect the varied experiences and viewpoints of students from different disciplines and institutions but also contribute to the richness of data.

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Construction of Evaluation Index System for Effectiveness of New Medical Education Development in Higher Medical Institutions in China

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Abstract

In the era of Industry 4.0 and Life Sciences 3.0, the development of world's medical science brings forth new concept and new requirements that shift the focus from treatment alone to a comprehensive life health model throughout the entire life cycle. To meet new challenges, China has proposed to lead the innovation of medical education with new medical education program. Higher medical institutions are tasked with cultivating guardians of people's health and outstanding talents with high-level research and innovation capabilities. So, it is urgent to explore the commensurate new medical education evaluating index system to check the effectiveness of its development in higher medical institutions. This research adopts the meta-ethnography method to establish 10 first-level indicators, along with related 32 second-level indicators, aiming to help higher medical institutions better understand the needs and issues of new medical education, thereby promoting the cultivation of high-quality, innovative, and interdisciplinary medical talents and implementation of Health China Strategy.

Keywords: New Medical Education, Higher Medical Institutions, Evaluation Index System.

1.0 Introduction

Medical education usually spans three stages including undergraduate, postgraduate and continuing education and training for clinicians (Zhu et al.,2016; Swanwick, 2018). Medical university or college education is the foundation for medical talents cultivation. Whilst the educational responsibilities, requirements and tasks of medical schools keep changing and evolving under the influences of religious, social demand, economic, political, cultural, technologies and so forth. Since 20th century, medical education has experienced three rounds of reform and the fourth comes along with the advancement of technology, new demand of health and development of medical practice (Frenk et al., 2010; Wu and Wang, 2018). Under such circumstance, China has purported "new medical education" construction and to promote the implementation of this policy proposal, it is supposed to be considered firstly is the restructure of guideline and incentive mechanism of medical schooling because scientific and rational as well as practical evaluating index system will instruct and encourage the substantial development of medical education.

2.0 Research Methodology

Meta-ethnography is common and mature method when conducting qualitative research and widely used among medicine, education, psychology and healthcare fields. It is not a review of existed literature or studies, but a new study based on extracting the core concepts or factors of related research and then through comparing and analyzing similar or different elements to form new synthesized research findings (Zhou, 1992). This method comprises the procedures of analyzing, explaining, comparing and synthesizing from various research results of one subject and it was formally considered as a vital method of qualitative research in 1983 through an article named '*Meta-ethnography：Issues in the Synthesis and Replication of Qualitative Research*' written by G. W. Noblit and R. D. Hare (Noblit and Hare, 2020). They proposed that meta-ethnography consisted of the following operating procedures: (1) identifying the topic focus; (2) defining the connotation of synthesizing subject; (3) reading the primitive studies; (4) determining the relation between various research; (5) translating the studies into one another; (6) synthesizing translations; (7) expressing the synthesis. Afterwards, as this method was applied in several fields, it has been recognized that this method

is a powerful tool for synthesizing primitive studies and suitable to construct model and high-level theories (Atkins et al.,2008; Campbell et al.,2011). Therefore, this qualitative research adopts meta-ethnographic to explore the evaluation index system.

3.0 Research Process and Analysis

(1) Identify the topic focus

The first stage involves determining the research topic, which defines the scope and direction of the literature and data search. This study focuses on "New Medicine" as the topic, targets "higher medical institutions" as the subject, and uses "evaluation" as the outcome orientation. To enrich the original literature and prevent omissions, "New Medicine" is set as the topic focus, with the search scope being research related to “New Medicine”.

(2) Defining the connotation of synthesizing subject

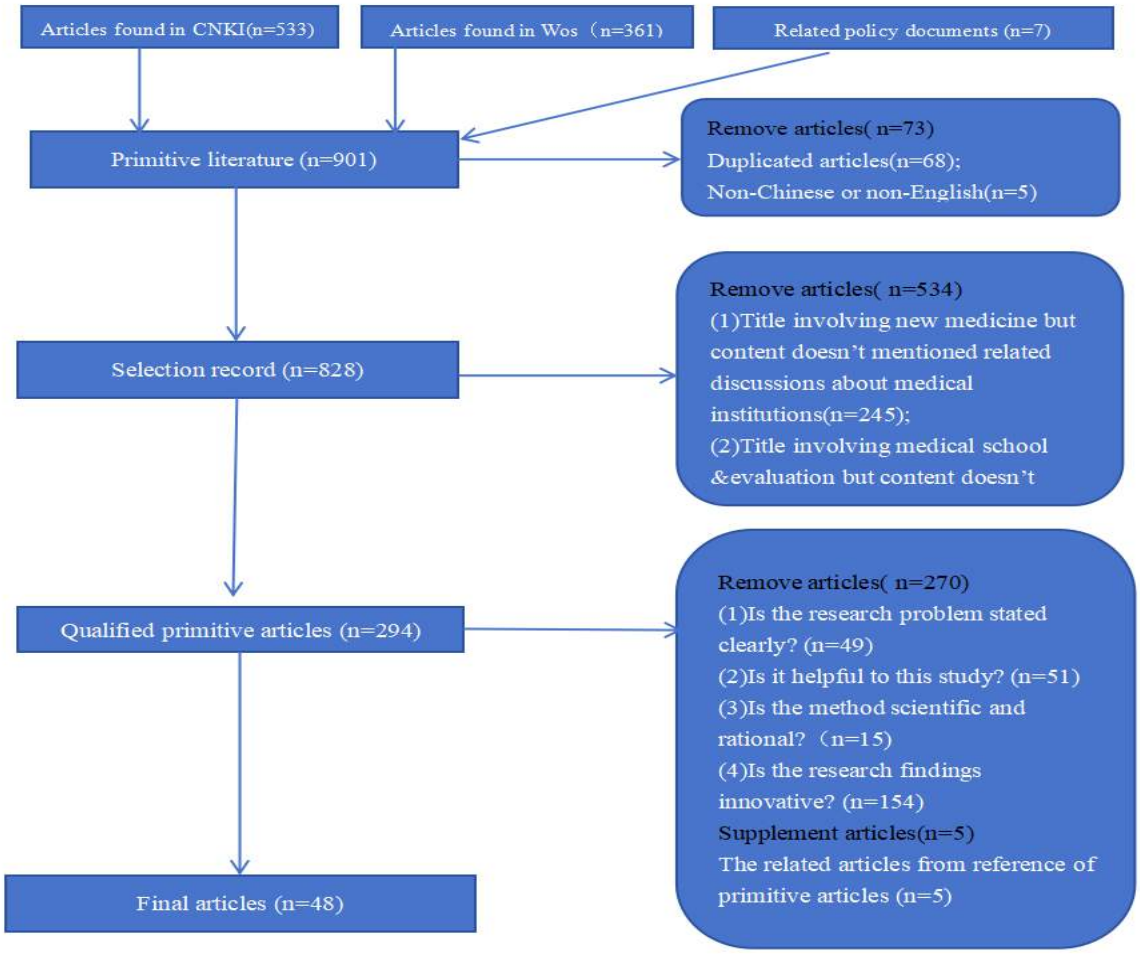

Figure 1. The process of search and selection of appropriate articles based on PRISMA standard

(3) Reading the primitive literature

There is total 30 articles and documents are selected to do careful reading and analysis. Moreover, research questions, contents, objects, methods and conclusions are extracted from them to obtain the core elements of each study.

(4) Determining the relation between various researches

By carefully comparing the research content, process, and conclusions of all original literature, ten dimensions for evaluating the construction of new medical education in higher medical institutions were determined. These dimensions include the understanding of the concept of new medical education; optimization and adjustment of professional structures; construction of disciplinary systems; reform of curriculum systems; education and training of medical students; teacher capabilities and development; construction of organizational systems; construction and operation of platforms; social health services; international communication and cooperation, as well as the sub-dimensions under each dimension to support the specific measurement and evaluation of the primary indicators.

(5) Translating the studies into one another

(6) Synthesizing translations

After the relevant translation process in the previous stage, many concepts and viewpoints reached a consensus and could be summarized into the same dimension or sub-dimension. However, a few original studies on the analysis of the medical education system were based on specific theories or different hierarchical standards, leading to inconsistent or even contradictory statements about key elements. Therefore, this stage involves a secondary interpretation and analysis of the core elements that still have contradictions or omissions after translation, based on the mutual translation between the studies in the previous stage.

(7) Expressing the synthesis

Evaluation dimensions	First-level indicators	Second-level indicators
Background	1. Understanding the concept of "new medical education" construction	(1) Understanding and grasping the essence of the "new medical education" (2) Understanding levels of innovation and adaptability based on the reality of ones' own school
Cultivation of medical talents	2.Optimization and adjustment of the professional structure	(3) The level of adjustment and quality improvement in the current profession (4) The establishment and development of high-demand medical majors (5) The establishment of new specialized emerging programs that align with the actual conditions of ones' own school (6) Establishment of an emerging medical professional certification system aligned with international standards
	3.Disciplinary system construction	(7) The development of emerging interdisciplinary fields (the level of integration between medicine-science, medicine-engineering, and medicine-humanities) (8) The integration of group medicine in the context of "holistic health" and "comprehensive wellness" (9) The ability and sustainability of continuous interdisciplinary integration

	4.Curriculum System Reform	(10) The establishment of various types of courses, including specialized courses, general education courses, and interdisciplinary courses. (11) The course content covers concepts such as health awareness, interdisciplinary integration, and the benevolence of a healer, as well as fostering students' divergent and innovative thinking (12) The level of diversification in course formats, integration of industry and education, and the application of innovative teaching methods such as virtual simulation experiments. (13) The establishment of a multi-dimensional evaluation model for courses
	5.Medical Student Education and Training	(14) The implementation of quality education for medical students (15) The professional competency development status of medical students (16) Hierarchical and classified training system for medical talents (17) Diverse evaluation mechanisms for medical students
Construction and development of the teaching staff	6.Teacher competence and development	(18) The teaching skill level of teachers (19) The construction of an innovative, interdisciplinary faculty team (20) The establishment of the classified evaluation system for teachers
Institution and platform construction	7.The construction of institutional systems	(21) The establishment of specialized interdisciplinary organizational structures and operational mechanisms (22) The interactivity, permeability, and openness between the existing various organizational departments
	8.The construction and operation of the platform (physical platform and virtual platform)	(23) The construction and operation of clinical skills training demonstration centers or simulation teaching centers (24) The construction and operation of innovative bases and experimental platforms for basic medical research (25) The construction and operation of interdisciplinary teaching and experimental platforms (26) The construction and operation of the Telemedicine Center and the Virtual Simulation Experimental Teaching Center
Social services	9.Social health services	(27) The number of trained medical personnel in various levels of healthcare institutions (especially in grassroots healthcare service institutions) (28) The status of scientific and technological application in the integration of basic medical science and clinical medical science (29) The ability to respond to public health challenges
Communication and Cooperation	10. International communication and cooperation	(30) Joint training programs for students from international organizations and local institutions (31) International medical aid and health cooperation services (32) Sharing of medical education resources and technology

4.0 Conclusion

This study outlines three dimensions, ten fist-level indicators and 32 second-level indicators for evaluating the effectiveness of "new medical education" construction in higher medical institutions by applying the meta-ethnography method, which not only can enrich the related theories but also hopefully can provide some clues and guidelines for the sustainable development of "new medical education" in China.

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A Systematic Review on the Self Efficacy and the use of Block Based Visual Learning for Gifted Students

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Abstract

This systematic review investigates the effect of block-based visual learning on the self-efficacy of gifted students, an area of increasing relevance in contemporary educational discourse. This review synthesizes findings from three databases (Proquest, EBSCOhost, Springer LINK) of empirical studies that explore how block-based programming environments, such as Scratch and Blockly, influence the self-efficacy beliefs of gifted learners. The methodology employed includes a comprehensive search of articles, conference papers, and educational reports published between 2020 and 2024, focusing on quantitative and qualitative outcomes related to self-efficacy. Results indicate that engagement with block-based programming not only enhances technical skills but also fosters a positive self-perception among gifted students, leading to increased motivation and persistence in problem-solving tasks. Furthermore, the review highlights the importance of instructional strategies that integrate block-based programming into curricula designed for gifted education. The findings underscore the potential of visual programming as a pedagogical tool that can empower gifted learners, suggesting implications for educators and policymakers in the development of curricula that support the unique needs of this population.

Keywords: Block-based Visual Learning, Self -efficacy, Gifted Student, Visual Programming, Systematic Review

1.0 Introduction

Self-efficacy is the belief in one's ability to perform tasks needed to achieve goals, and it is important for the learning of gifted individuals. Gifted students frequently encounter a range of challenges that can undermine their self-efficacy. One significant issue is the pressure to consistently perform at high levels, which can lead to anxiety and fear of failure. This pressure is often exacerbated by external expectations from parents, teachers, and peers, who may assume that gifted students will always excel (Schneider & Preckel, 2017). Such expectations can create a paradox where gifted students may avoid challenging tasks to protect their self-image, thereby limiting their opportunities for mastery experiences that are essential for building self-efficacy (Richardson et al., 2012).

Mastery experiences, which are critical for developing self-efficacy, are often less frequent for gifted students who may not encounter tasks that challenge them sufficiently (Richardson et al., 2012). The challenges faced by gifted students regarding self-efficacy are multifaceted and deeply intertwined with their unique cognitive and emotional profiles. Gifted students often exhibit high levels of ability and potential, yet they frequently encounter significant barriers that can undermine their self-efficacy.

Research indicates that self-efficacy can significantly influence achievement, particularly in high-stakes educational environments where gifted students often find themselves (Schneider & Preckel, 2017). This relationship is reciprocal; while high self-efficacy can lead to better performance, the outcomes of these performances can further reinforce or diminish self-efficacy beliefs (Schneider & Preckel, 2017).

The implications of these challenges are profound. Low self-efficacy can lead to decreased academic performance, increased anxiety, and a higher likelihood of dropping out of school (Schneider & Preckel, 2017). Therefore, addressing the self-efficacy of gifted students is not merely an academic concern but a critical aspect of their overall development and mental health. Interventions aimed at enhancing self-efficacy

must be multifaceted, incorporating educational strategies, psychological support, and community engagement to create a supportive environment for gifted learners (Schneider & Preckel, 2017).

1.1 What is Block Based Visual Learning?

Block-based visual learning or block based visual programming is a pedagogical approach that utilizes graphical interfaces to allow users, particularly beginners, to create programs by manipulating visual blocks that represent programming constructs. This method simplifies the programming process by removing the need for complex syntax, enabling learners to focus on the logic and structure of programming rather than the intricacies of text-based coding. The blocks are designed to fit together in a way that visually represents the flow of the program, making it easier for users to understand how different components interact with one another (Hu et al., 2020).

1.2 Block Based Visual Learning and Self efficacy

The integration of block-based visual programming environments, such as Scratch and Block, has been increasingly recognized as a powerful tool for enhancing self-efficacy among learners, particularly in the context of computer programming education. Self-efficacy plays a crucial role in determining motivation, persistence, and performance in learning environments. Research has shown that engaging with visual programming languages can significantly improve students' self-efficacy perceptions and attitudes towards programming, thereby fostering a more positive learning experience. Yükseltürk and Altıok (2016) conducted a study that highlighted the positive effects of programming with Scratch on preservice IT teachers' self-efficacy perceptions. Their findings indicated that the use of Scratch not only facilitated the development of programming skills but also enhanced the participants' confidence in their programming abilities. This is consistent with the work of Çoklar and Akçay (2018), who emphasized the importance of self-efficacy in the context of inquiry and problem-solving skills in teacher education. They found that students with higher self-efficacy were more likely to engage in programming tasks and demonstrate better problem-solving capabilities.

Moreover, the gender differences in self-efficacy perceptions towards programming have been explored by Günbatar and Karalar (2018). Their research revealed that middle school students exhibited varying levels of self-efficacy based on gender, with implications for how programming education is delivered. This suggests that block-based programming environments can be tailored to address these differences, thereby enhancing self-efficacy across diverse student populations. The findings align with the notion that self-efficacy can be influenced by contextual factors, including the type of programming environment utilized.

The relationship between self-efficacy and programming success has been further supported by Özmen and Altun (2014), who noted that students' beliefs in their programming capabilities directly correlated with their success in writing program codes. This reinforces the idea that enhancing self-efficacy through effective educational interventions, such as block-based programming, can lead to improved learning outcomes. Additionally, Li et al. (2022) found that visual programming languages could reduce the perceived difficulty of programming tasks, thereby increasing students' self-efficacy in programming.

In a practical application, Kahramanoğlu et al. (2019) investigated the impact of the EBA Coding module on secondary school students' self-efficacy beliefs regarding programming. Their results demonstrated that students who engaged with the EBA Coding module exhibited significantly higher self-efficacy compared to those who received traditional instruction. This suggests that the interactive and user-friendly nature of block-based programming environments can effectively enhance students' confidence in their programming abilities.

Furthermore, the concept of mastery experiences, which refers to the successful completion of tasks, is a critical component of self-efficacy theory. As articulated by Abdunabi et al. 2019, providing students with opportunities to engage in successful programming experiences through visual programming can lead

to increased self-efficacy. This aligns with Bandura's assertion that mastery experiences are one of the most influential sources of self-efficacy.

2.0 Systematic Review Process

Inclusion	Exclusion
The research subject and the scope of the study must be pertinent to the topic at hand.	The research subject and the scope of the study are not related to the topic at hand.
The relevance of concepts and definitions of terms is significant to the development of research questions.	The relevance of concepts and definitions of terms is not significant to the development of research questions.
Only empirical studies will be included, such as experimental, quasi-experimental, longitudinal, or case studies. The research must provide data-driven findings regarding the impact of BBVP on self-efficacy	Opinion pieces, editorials, literature reviews, and theoretical articles will be excluded as they do not provide empirical data on the effects of BBVP on self-efficacy
The target population only focus on students, particularly those identified as gifted or high-achieving.	Studies involving other populations will be excluded unless they provide comparative insights relevant to gifted students
Articles published till 2020	
Articles that include clear self-efficacy measurement	Studies that do not measure self-efficacy

This systematic review aims to synthesize findings from various studies to provide a comprehensive understanding of how BBVP effect self-efficacy among gifted learners. The steps taken were as follows: (1) identify inclusion and exclusion criteria for article selection, (2) identify the relevant work (search strategy), (3) data extraction and quality appraisal of the selected studies, and (3) summary, synthesis and interpretation of the findings

Table 1. Inclusion and Exclusion Criteria**.**

The inclusion and exclusion criteria outlined below will guide the systematic review process, ensuring that only relevant, high-quality studies are considered. This review will only focus on block-based visual learning studies and must explicitly investigate block-based visual programming environments, such as Scratch, Blockly, or similar platforms. Research that discusses the principles, methodologies, or outcomes associated with BBVP will be prioritized. Other than that, self-Efficacy Measurement must be included as a clear measurement of self-efficacy. This can be assessed through validated self-efficacy scales, surveys, or qualitative assessments that provide insights into participants' perceptions of their abilities. As for the target population, the research must focus on students, particularly those identified as gifted or high-achieving. Studies involving other populations will be excluded unless they provide comparative insights relevant to gifted students.

2.1 Search Strategy

To gather relevant citations, a variety of published articles were searched in several electronic databases, including ProQuest, EBSCOhost and SpringerLink. All articles published up to 2020 were considered, and the search was limited to those written in English. This process yielded 06 articles, from which relevant studies were chosen for the review. The potential relevance of these studies was assessed, leading to the exclusion of 381 articles deemed unrelated. The search will utilize a combination of keywords and phrases such as "self-efficacy "block-based visual programming,"," "gifted students," "Scratch". Boolean operators

(AND, OR) will be employed to refine the search results. The search was conducted on 222 articles on the ProQuest database.

2.2 Data Extraction

Once relevant studies are identified, the next step is to extract data systematically. This involves creating a data extraction form that captures essential information from each study, such as the authors, year of publication, sample size, methodology, and key findings related to self-efficacy. For example, Koray's study on the integration of Scratch activities into science lessons provides insights into how such activities can influence students' self-efficacy perceptions towards block-based programming (Koray, 2023). By systematically extracting this information, we can create a comprehensive database that facilitates comparison and synthesis across studies. The quality of the studies included in the review must also be assessed. This involves evaluating the methodological rigor of each study, including the design, sample size, and data analysis techniques employed. For instance, Tsai's research on the effects of a programming course using the GAME model demonstrates how incorporating structured instructional models can enhance students' self-efficacy in programming (Tsai, 2023). Assessing the quality of studies ensures that the findings of the systematic review are based on robust evidence, thereby increasing the credibility of the conclusions drawn.

3.0 Results

The review was done based on several aspects which is the year that the articles were published, countries to which the articles published, the sample size and the research design used in the study. Reviewed articles suggest that from the total of 25 articles, 13 of the articles, were published from USA, which has the highest number of articles published relating to self-efficacy and block-based programming. It was then followed by the Turkey which published 6 articles. The remaining articles where from Taiwan, China, Georgia and Malaysia. Looking at the year of publication, there was an increment in the number of articles published

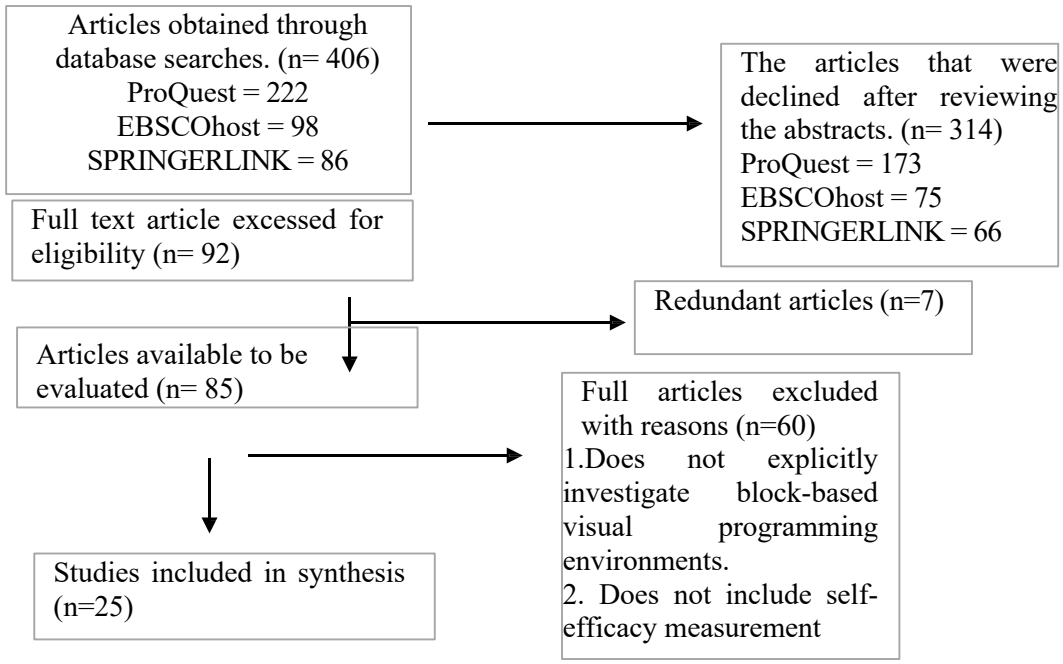

Figure 1. Flow chart of stages of literature search.

starting from the year 2020 until 2024. In 2022 however, less articles were published as compared to the previous years. The following years in 2021, shows the highest number of articles published within the period of 5 years the articles being reviewed. Fairly low numbers of articles published in 2024 maybe because at the time this review was made, it was still in the early October of year 2024. Through the review, it was

found that numerous studies used a large number of samples, which are more than 100 participants. This indicated that and was evidenced from reviewing these articles, researchers mostly opted with Quantitative methods. While there were few articles that used mixed methods, quantitative methods were used several self-efficacy measurement tests as instruments.

4.0 Research Gaps and Research Priorities

Research on self-efficacy in block-based visual programming among gifted students in Malaysia has seen little attention in recent literature. This can be proven right based on this research findings whereby only one research has been done in Malaysia in the field of self-efficacy and block based visual programming. Nonetheless, countries such as United States and Turkey have excelled in this field of study which can be proven right with the finding. Studies such as those by Öztuzcu et al. 2022 and Koray (2023) have explored students' self-efficacy perceptions related to block-based programming and computational thinking skills, showing significant improvements with the integration of Scratch-based activities.

5.0 Conclusion and Future Directions

The implications of these findings extend beyond individual programming skills; they suggest that fostering self-efficacy through block-based programming can have broader educational benefits. For instance, students with higher self-efficacy are more likely to pursue further studies in computer science and related fields, thereby contributing to a more skilled workforce in the technology sector. This is particularly relevant in light of the increasing demand for programming skills in various industries. In conclusion, the integration of block-based visual programming environments has the potential to significantly enhance self-efficacy among learners. The evidence from various studies indicates that these environments not only improve programming skills but also foster a positive attitude towards programming, which is essential for long-term engagement and success in the field. As educators continue to explore innovative teaching methods, the role of self-efficacy in learning outcomes will remain a critical area of focus. By pinpointing the factors that influence self-efficacy, educators can design instructional approaches that promote a growth mindset, resilience, and a positive attitude towards learning and problem-solving. This, in turn, can enhance gifted students' interest in programming, boost their confidence, and foster their long-term engagement in STEM fields. On the whole, Block-based visual programming can serve as an innovative tool for future-ready education by enhancing self-efficacy of gifted students, thereby equipping them with essential competencies for a technology-driven society.

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The Role of Celebrity Leadership as an Extension Educator for Youth

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Abstract

This concept paper explores the potential of celebrity leadership as a pivotal educator in enhancing educational access for youth, particularly within the realm of extension education. Celebrities, with their considerable charisma and influence, have traditionally shaped public opinion and influenced the social behaviour of youth. This paper argues that celebrities can serve as effective extension educators, leveraging their platform to foster youth involvement in various educational initiatives, especially those related to climate change, personal development, social awareness, and civic responsibility. This research investigates how celebrities might augment traditional educational systems by analysing the characteristics that make them successful leaders, such as communication skills, honesty, and their ability to connect with the youth. The study highlights the advantages, challenges and strategies of utilizing celebrity leadership in youth education, including the need for ethical accountability, sustained credibility, and enduring impact in higher education. This concept paper employs leadership theory to elucidate the transformative role celebrities can play in shaping the educational experiences and values of modern youth in the context of extension education.

Keywords: Celebrity Leadership, Educators, Extension Education, Youth.

1.0 Introduction

Celebrities significantly impact multiple sectors, including social, entertainment, religion, education, leadership, and science, exerting considerable influence across these domains. The role of celebrities as educators for youth has garnered considerable attention, as their visibility and credibility uniquely position them to influence youth. The influence is notably pronounced when celebrities participate in educational, philanthropic, and advocacy initiatives, which can enhance youth engagement and social awareness. Celebrities facilitate individuals' understanding of themselves and their environment by influencing their life habits, interests, careers, and skills (Zopiatis & Malathion, 2019). The role of celebrities as extension educators represents a novel development in Asia, especially in Malaysia, whereas in Western nations, it serves as a significant contribution to the academic sphere. Celebrities exert a considerable influence on the youth demographic, leveraging the dynamics of peer influence, as adolescents are especially receptive to social cues emanating from those they admire or regard as socially relevant. The impact of celebrities on youth culture is indisputable, as youth increasingly seek direction from prominent personalities about personal ideals, societal matters, and lifestyle decisions. This phenomenon has established celebrities as informal, or "extension," educators individuals outside conventional educational frameworks who yet play a substantial effect in youth learning and development (Brown & DeAngelo, 2020). Extension education can be understood broadly as a framework for educational outreach that provides learning opportunities to individuals who are not currently enrolled in formal schooling. This formality stems from the difficulties many children of celebrities encounter in obtaining a formal education, which are often attributed to the circumstances surrounding their family's status. Further education serves as a broad platform encompassing a diverse array of programs, including adult education, continuing education, professional development, and youth engagement.

2.0 Factors influencing the appeal of celebrities as an extension educator to youth

Celebrities exert significant influence over youth due to two primary factors. The initial factor is peer influence. A majority of the youth engage with peer influence. This category of youth comprises the followers and primary fans of celebrities. The influence of celebrity lifestyles and their role as additional

educators is apparent through the content shared and disseminated to this youth group. This phenomenon illustrates Bandura's social learning theory, which posits that individuals, particularly younger populations, are inclined to imitate the behaviours and values of prominent figures (Bandura, 2001). In the Western world, celebrities like Oprah Winfrey, a renowned host and actress, and LeBron James, a professional basketball player, frequently leverage their platforms and resources to advocate for both formal and informal education as direct agents of extension education. The creation of Oprah's Leadership Academy in South Africa and LeBron's "I Promise School" in Akron, Ohio, exemplifies how a prominent, influential celebrity may assist underprivileged youngsters by providing educational resources and leadership. These initiatives can motivate youth to pursue leadership and personal development (Rain Magazine, 2023). This initiative aims to broaden the scope of celebrity influence beyond entertainment, highlighting how celebrities also follow others globally, particularly in Asia and Malaysia. It seeks to collaborate with local universities to inspire youth and motivate them to pursue educational and career aspirations through the success of these celebrities. Celebrities possess considerable allure for youth due to several psychological, social, and cultural factors. As role models, they frequently exhibit attributes or lifestyles that youth deem aspirational, particularly as adolescents develop their identities and seek relevant figures that exemplify desirable traits such as confidence, creativity, or success (Stever, 2017).

Social media constitutes the second factor. Celebrities and youth are closely linked through social media, with platforms like Instagram, TikTok, and Twitter facilitating connections between public figures and younger audiences. Seeking connection and inspiration. Marwick and Boyd (2011) assert that social media enables a sense of "intimacy" with celebrities, as young individuals can engage in direct communication, comment on posts, and access "behind the scenes" content, thereby fostering personal connection and loyalty.

When we observe these youths, following celebrities on social media provides a highly personalized type of social comparison, prompting them to aspire to similar lifestyles, appearances, or achievements. According to research, social media frequently depicts an idealized version of reality, making celebrity lifestyles both realistic and desirable for younger viewers (Chou & Edge, 2012). In the western context, numerous celebrities actively engage with this application to enlighten the youth and disseminate information regarding additional educational opportunities. Furthermore, in Malaysia, it has been observed that these celebrities have garnered the interest of the higher education sector, leading to their appointment as adjunct professors. This initiative aims to stimulate youth participation in advanced programs offered by both public and private universities.

3.0 Celebrities as extension educators around the world and Malaysia

The significance of education within a nation cannot be overstated, as the advancement of its youth is intricately linked to the evolution of the higher education sector. Stronger education can facilitate access and provide opportunities for young people to realize the nation's ambitions through optimal energy utilization. Despite the current administration's efforts to enhance the educational landscape, numerous young individuals remain hindered by a lack of financial means and insufficient awareness, which impedes their ability to pursue advanced education effectively. Philanthropic celebrities actively promote and prioritize higher education, striving to change the paths of young people's lives. This document presents a compilation of notable individuals who serve as extension educators, contributing significantly to global welfare, with a particular focus on Malaysia. The compilation of notable celebrities who serve as extension educators globally is presented below.

Table 1: World celebrities as an Extension educator

Celebrities	**Role /Foundation/Organization/Campaign/**
Shakira	Dies Descales Foundation
Pink	UNICEF
Dolly Parton	The Imagination Library
Angelina Jolie	UNESCO Global Education
John Legend	The Show me campaign
Matthew McConaughey	Adjunct Professor, Texas University
Oprah Winfrey	Adjunct Professor, Northwestern University
Jesse Ventura	Adjunct Professor, Harvard's Kennedy
Alec Baldwin	Teacher, Southampton University

*Compile by author

According to the aforementioned evidence, the majority of Western celebrities can persist in their roles as extension educators, contingent on their capacity and financial resources to establish their own educational centres for youngsters. This is a compilation of Malaysian celebrities engaged as extension educators.

Table 2: Malaysian celebrities as an extension educator

Malaysian Celebrities	**Role and Institutions**
Dato Aznil Haji Nawawi	Adjunct Professor, Malaya University
Dato Chef Wan	Adjunct Professor, UUM
Dato Afdlin Shauki	Adjunct Professor, UUM
Dato Fazley Yaakob	Adjunct Professor, private college
Dato'Rizalman	Adjunct Professor, Malaya University

*Compile by author

The involvement of Malaysian celebrities in higher education remains a nascent endeavour, and a thorough assessment of its efficacy is still pending. However, it is crucial to recognize that these celebrities play a significant role in the agenda of local universities, facilitating the provision of extension education, and advocating for education as a lifestyle. This initiative aims to cultivate a passion for knowledge among the youth and refine their talents, ultimately preparing them for leadership in the future. This methodology is regarded as the most effective means to connect academic institutions with the younger generation. Moreover, social media enables celebrities to convey their interests, convictions, and personal narratives, which frequently align with the concerns of youth, including mental health, social justice, and body positivity. Contemporary youth, being acutely cognisant of social issues, are attracted to celebrities who honestly engage with these topics and resonate with their ideals (Giles, 2018). Through engagement with celebrities who embody these principles, young individuals discover inspiration and a feeling of community.

4.0 Celebrity Leadership

Effective celebrity leadership requires the utilisation of several leadership styles in its role as an extension educator for kids. The celebrity strategy has distinct attributes and impacts educational results. Celebrities can proficiently embody the responsibilities of advocacy, experience, and transformative leadership. Celebrities can influence the values, beliefs, daily choices, and long-term goals of young individuals through various means. Celebrities use advocacy platforms to champion particular causes that promote social justice, elevate awareness of the importance of knowledge, and encourage community acceptance of the celebrity as a burgeoning educator in Malaysia's education and entertainment sector, often termed "edutainment." Advocacy leadership seeks to improve youth education by fostering awareness and promoting action. These celebrities participate in advocacy to spread knowledge and tools that enhance youth awareness and active citizenship (Doyle, 2018). Advocacy leadership leverages the prominence of celebrities to illuminate intricate issues, often partnering with non-profit organizations or social campaigns to enhance outreach and credibility (Marwick & Boyd, 2011). Subsequently, prominent figures can offer experiential guidance to the

younger generation. This form of leadership resonates deeply with the youth, as education derived from shared experiences imparts essential life lessons. This level of transparency aids in addressing subjects such as mental health and cultivates empathy, prompting young individuals to confront and navigate their own difficulties with greater honesty (Stever & Lawson, 2013). The ultimate form of leadership that celebrities can exemplify is transformational leadership. Transformational leadership encompasses individuals of notable influence who possess the ability to inspire youth, reshaping their viewpoints and fostering a more structured and intentional approach to self-development. This form of leadership exemplifies a vibrant character, wherein individuals engage in the exchange of knowledge, fostering an environment of continuous learning that culminates in a unified initiative aimed at empowering the younger generation. This method often involves exemplifying proactive transformation and inspiring followers to cultivate qualities like empathy, resilience, and accountability (Giles, 2018). Transformational leadership empowers young individuals to analyse the potential implications of personal and collective attitudes and actions, facilitating the advancement of education, and enabling the nation to reap the rewards of prominent figures in educational leadership for the benefit of the community.

5.0 Challenges and Strategies

Celebrities face significant challenges in fulfilling their roles as extension educators, primarily due to time constraints and professional scepticism. The primary concern is the time commitment, as each celebrity encounters a rigorous schedule, which complicates the ability to allocate the necessary time and effort to succeed as an educator. Higher education necessitates consistency, ongoing commitment, and regular assessment, influencing the leadership capabilities of both public figures and youth. The second challenge indicates that professional doubt implies its inevitability. Professionals exhibit hesitation stemming from apprehensions regarding celebrities' involvement in specialized fields. Their perceived lack of qualifications and tendency toward a populist approach raise concerns that celebrities, if inadequately qualified, may disseminate disinformation or oversimplify complex issues, potentially harming young audiences. Celebrities should adopt a comprehensive strategy to disseminate knowledge and skills that aid the community in tackling issues or improving quality of life, primarily through two methods: building credibility through expertise and leveraging their platforms effectively. Celebrities should pursue specialized professional courses to enhance their identities, and they should prepare early for roles as extension educators. Collaboration with specialists and collective engagement in policy and curriculum development can facilitate this achievement. Their leadership potential is defined as “a form of teacher leadership aimed at enhancing teaching and learning” (Carpenter et al., 2023). The second strategy entails utilizing social media for information dissemination, knowledge sharing, and organizing expert conferences involving academics, educators, and specialists through these platforms. Education influencers are educators with a unique leadership capacity to motivate the actions and behaviours of others who share a common interest (Carpenter, Shelton, & Schroeder, 2023). This may lead mainstream media to continue supporting celebrity initiatives and offer current insights to mainstream youth to improve their education and obtain information. Leadership initiatives promote knowledge development and acquisition among educators involved in these social networks (Daly and Finnigan, 2010; Fischer, Fishman, and Schoenebeck, 2019).

6.0 Conclusion

Celebrity leadership significantly influences youth education, positioning celebrities as vital educators who leverage their platforms to transform the attitudes and ambitions of the youth. Ultimately, celebrity participation in extension education may address advocacy deficiencies, and celebrity leadership has demonstrated its capacity to inspire and educate youth students on both local and global scales. Previously, it was implausible for celebrities to function as impactful extension educators, but the rise in youth engagement and developments in artificial intelligence have created a more attainable avenue for them to become genuine and effective extension educators. Historically, role models mostly consisted of politicians and historical figures; however, the educational influence of celebrity role models in leadership is becoming increasingly evident through the substantial contributions of celebrities outside the entertainment sector in fostering future leaders.

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Wakefulness of Innovation of Organic Farming among Students of Vocational Agricultural Education for Nutritional Security in Kogi State, Nigeria

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Abstract

In this post Covid-19 pandemic era, peoples' perception towards organically produced foods have deepened as they prefer nutritious foods to build a stronger immune system. Instead of reemphasizing the conventional agriculture, organic foods witnessed an uptake since the inception of pandemic because they contain greater amounts of antioxidants and definite micronutrients with no hurtful chemicals. However, the Students of Vocational Agricultural Education who should be at the forefront of this innovation are not aware of it for easy knowledge transfer to their future students. The study aimed at unveiling the awareness of organic farming (OFM) among students to ensure that essential knowledge, abilities, and values about it are transferred from one generation to the next. Secondary data were only used through thorough paper skimming. The outcome of the searches showed that the theory of Diffusion of Innovations for information dissemination is appropriate in creating public awareness of OFM among students. This gave a good focus of raising more manpower to protect and promote natural resources development in mitigating the effects of climate change. It was concluded that drumming the awareness of practice of OFM is critical to boost students' interest in learning its precision to support natural processes that sustains and improves healthy nurture and harvests of foods. The first-hand experience is helpful to students in making compost, raising green manures, and making plant manure tea under local conditions to increase their income level and avert the danger of the harmful food for healthy and wealthy nations.

Keywords: Awareness, Organic Farming, Nutritional Security, Students, Marketing.

1.0 Introduction

The introduction of Green Revolution (GR) in 1980 automatically changed the whole face of agriculture in Nigeria as farmers were only acquainted with high producing seeds and enrichers (fertilizers) to increase production of food and other raw materials for food security and self-sufficiency (Oyatoye, 2020). The initiative was based on increasing productivity for profit maximization but leaving the entire farmland unfertile due to excessive use of inorganic fertilizers and pesticides, making the produce and products dangerous to consume (Gagnesh, 2022). GR provides abundance of food only with little or no antioxidants and micronutrients that make foods distasteful and harmful to human health and environment (Gagnesh, 2022). Although, the pressure of feeding the teeming population necessitated its implementation to sustainably provide foods. Apart from the nutritional deficiencies (NDs) inherent in GR adoption, farmers and prospective farmers face high input cost on chemicals and synthetic inputs, which currently weakens surpluses or returns and therefore the need for organic farming (OFM) (Gagnesh, 2022; Singh et al., 2021).

OFM involves the use of organic sources for crop nutrition, biological sources for pest and disease management, and recycling of farm and animal wastes to raise crops and animals. Thus, cycling of the resources to conserve biodiversity and encourage ecological stability to produce Fibers, grains, vegetables, flowers, fruits, foods, and livestock products such as milk, eggs, and meat in their best natural ways is the main objective of OFM. This is done by applying green manure, cover crops, animal manure, and land rotation to manage pests and diseases, soil fertility, and maximize soil's biological activities (Swagata, 2020). The system of agriculture benefits greatly as it encourages biodiversity, provides healthier foods, betters the condition of soil by combating erosion, promotes water and animal health, and fights against the effects of

global warming. Economically, it reduces cost of production and increases farmers' income through higher bargaining power, and stabilizes income generation through diversification for poverty eradication. Evidently, there is 42% increase in global export in organic foods valued at USD 948 million as well as giving rise to domestic markets globally as it will continue to grow in an arithmetic progression (Singh et al., 2021).

In expanding sustainable OFM among students of Vocational Agricultural Education (SVAE), considerable knowledge on the management of natural processes is required to ease knowledge transfer upon graduation. This would gear their interest in learning the precision and a great deal of experience of opportunities to support natural processes that sustain and improve harvests. Hence, they will be excellent in making compost, raising green manures, and making plant or manure tea as the paper provides them first-hand experience under local conditions for implementing OFM. To this effect, technique and principles of OFM, soil nutrient management, seed or planting material treatment, temperature management, organic pest control formulations, markets, and marketing strategies for organic produce are theorized. This is to portray the need to re-introduce OFM through awareness creation among the students throughout the study areas. This is appropriate because they are turning out to be teachers to teach OFM to the next generation of students that can raise more manpower for the industry.

2.0 Methodology

This research is based on secondary data to find relevant literature as to why the innovation of OFM is to be transferred to the next generation to solve the current NDs people face. Thorough searches in scholarly domains such as Google scholar, Sage, and Google were carried out to select related articles published in English Language. Skimming of the full articles were done to verify the materials' validity and quality. The papers for the study were rehearsed severally before they were finally included. While focusing on the topic, irrelevant papers were excluded by the researchers. In the end, main ideas, discoveries, and conclusion were achieved from the necessary materials in view of the purpose of the study (Awang, 2012).

3.0 Theoretical framework and literature review

The underpinning theory for this concept paper is the Diffusion of Innovations Theory (DIT) developed by Everett Rogers in 1962. As being part of the communication theory for disseminating critical matters or ideas, it is intended to make a set of people understand how new ideas or innovations are adopted in a given scenario (Willis & Painter, 2020). This provides a background for discerning how messages can be organized and conveyed for maximum practice adoption. The adoption categories as identified by Rogers include Innovators, Early Adopters, Early Majority, Late Majority, and Late Rejecters and each have precise characteristics in accepting innovations. Four elements such as the characteristics of the innovation, people' adoption resolutions, communication networks, and social system influence the speed of innovation adoption (Suarez-Lledo & Mejova, 2022; Rone, 2023). In the context of OFM for nutritional security, DIT helps the advocates, teachers, and extension agents identify and target prospective farmers like students with appropriate information to increase the acceptance of the farming system and motivate behavior change (Vieira & Li, 2024; Zhang & Lu, 2024). To raise innovators, which is primary, produce from OFM and its health benefits need to be synthesized.

Organic produce/products are highly nutritious, have better taste, improves human health, promotes and sustains environment, and guards against food and nutrients shortages. They are highly nutritious because they do not contain modified ingredients and are given enough time to develop under best natural condition of growth compared to the conventional agricultural food products. The better taste is because of the natural mineral and the sugar structures as the crops are given enough time to develop and mature under natural and environmentally friendly agricultural production techniques. Results show that the better taste quality of organic vegetables and fruits exist compared to those conventionally grown (Singh et al., 2021). On the assurance of improved health, organic produce/products from organic farms are the safest products for human consumption because they contain lower levels of chemicals and with no modified ingredients, making them more nutritious for humans. In maintaining environmental harmony for all living things, OFM

provides impressive mechanisms for advancing ecological sustainability through biodiversity, and biological recycling. This justifies OFM as soil manager and conserver, nutrient cycle promoter, ecological harmonizer and bio-diversity saver (Singh et al., 2021).

The technique of OFM according to Singh et al. (2021) include soil management, weed management, crop diversity, and controlling other organisms. In soil management technique, only the bacteria present in animal wastes are used to improve soil nutrients loss due to continuous cultivation of crops. Weed management focuses on lowering weeds and not completely removing them through mulching and mowing or cutting. Crop diversity technique is the adoption of polyculture to cultivate and harvest different types of crops to meet the teeming population and at the same time produce the required soil microorganisms for excellent soil microbial activities capable of producing best soil nutrients for plants uptake. Finally, controlling other organisms (un-useful organisms) technique is the process of using natural herbicides and pesticides to protect the soil and crops from pests. The principle of health, ecological balance, fairness, and care are identified for sustainable OFM (Swagata, 2020; Gagnesh, 2022). The health principle is the avoidance of the use of fertilizers, pesticides, animal drugs and food additives that may have adverse health effects on the health and wellbeing of soil, plants, animals, and human. The consciousness of those who produce, process, trade, or consume organic products with the mind to protect and benefit the common environment that includes landscapes, climate, habitats, biodiversity, air and water is the principle of ecological balance. The principle of fairness denotes such coordination of production, delivery and trade that are open, equitable, and accountable for real environmental and social costs. While the principle of care is a careful and responsible practice of organic agriculture to reflect the values and needs of all both in the present and future generation and environment through transparent and participatory processes.

In attempt to produce nutritionally secured based food, farmers depend on only natural breakdown of available organic matter in form of either green manure, vermin-compost, animal manures, urine, farmyard manure or composts to replace the lost nutrients from soil by earlier cropping. Other methods to improve soil fertility in OFM is the practice of zero tillage operation, crop rotation, cover cropping, and application of compost. By applying zero tillage, less carbon is lost to the atmosphere and carbon sequestration is improved that reduces greenhouse gases and help reverse climate change (Gagnesh, 2022). Adoption of the use of bio-fertilizers such as Azolla, Azospirillium, Azotobacter, and Rhizobium culture are highly recommended in maintaining soil nutrients in organic farms. Incorporating blood meal, bone meal and human excrement are adequate if applied with the approval from Certification Agency (CA). While the frequent use of sawdust from untreated wood, calcified seaweed, limestone, gypsum, chalk, magnesium rock, and rock phosphate are appropriate in boosting soil fertility. Farmers spraying vermin wash and liquid manures in this regard help to nourish the soil and plants directly. Overall, avoidance of chemicals is in full force and the integration of animals to provide sufficient dung and urine for use is essential under a well-managed organic soil. Managing soil temperature is the process of keeping soil covered with biological mulch during hot season to preserve soil moisture and increase effective use of water (Rupela et al 2005). Planting diverse trees like neem, amla, tamarind, gular, zizipus bushes, gliricidia on bund can also control and improve soil temperature (Singh et al., 2021).

Despite the use of disease free seed stock and resistant varieties, options of using organically formulated substances are available to treat seed/planting materials. Such creative seed treatment formulations are using boiling water treatment at 53^{0C} for 20 to 30 minutes, cow urine, cow urine-termite mound soil paste, beejamrut, asphoetida 250gm in 1 litre of water for 10 kg seed, turmeric rhizome powder mixed with cow urine. Others include panchgavya extract, dashparni extract, richoderma viride (4gm per kg of seed) or pseudomonas fluoresces (10gm per kg of seed), and bio-fertilizers (Rhizobium/Azotobacter +PSB). While the organic pests control formulations are detailed below:

- **Cow urine**: This is by mixing a ratio of 1:20 of **c**ow urine and water and then sprayed on the crop leaves to control pathogens and insects and as well as promoting effective growth of crops.
- **Fermented curd water**: It is otherwise called buttermilk or Chaach effective for the management of white flies, jassids aphids and others.

- **Neem and Cow urine extract**: is by crushing and fermenting 5kg neem leaves in water, adding 5litres of cow urine, and 2kg of cow dung for 24 hours with recurrent stirring, gives better control of pests (sucking pests and mealy bugs) after filter squeezing the extract and diluting it with 100 litres of water. The application is through foliar spray and can cover one acre.
- **Mixed leaves extract:** This is useful against sucking pests and pod/fruit borers. It is processed by crushing 3kg of neem leaves in 10 litres of cow urine. Also, add 2kg crushed of custard apple leaf, 2kg of papaya leaf, 2kg of pomegranate leaves, and 2kg of guava leaves in water. The combinations are together boiled at some intervals until it becomes half. Keep for 24 hours and then filter squeeze the extract. Dilute 2 to 2.5 litre of this extract to 100 litre of water for one acre.
- **Chilli-garlic extract:** To control leaf roller and stem/fruit/pod borers, crush 1kg of Ipomea (besharam) leaves, add 500gm of hot chilli, 500gm of garlic and 5kg of neem leaves in 10 litres of cow urine. Boil the suspension up to 5times until it becomes half. Filter-squeeze the extract and store in plastic containers. 2-3 litres of the extract diluted in 100 litres can cover one acre.

The sales of organic food and drink have been valued at $126 billion annually as United States is the largest organic market that worth $50.1 billion, followed by Germany ($13.44 billion), and France ($13 billion) (Singh et al., 2021). The European Union and China, according to the authors, have market value of organic food and drink at $46.4 billion and $9.5 billion respectively. For example, only Demark consumed organic food worth $385.2 billion in 2019 (Singh et al., 2021).
The best marketing strategy for organic produce is direct marketing by ways of using single or multiple channels to sell produce. Produce could be sold through a farmers' market or a roadside stand, parking lots, streets, or parks. This provides opportunities to build a customer base consistently. Direct channels such as grocery and restaurant sales are vital in marketing organic foods. The most trending way of selling organic produce is online marketing. This is the internet aided marketing to advertise the farm business, sell products, and communicate with customers (Singh et al., 2021).

4.0 Implication of the study

- Sensitizing SVAE to embark on OFM would help them improve their income level and reduce their external dependence for survival.
- Alerting SVAE on the practice of OFM prepares more hands in protecting and promoting natural resources development for mitigating effects of climate change.
- SVAE participating in providing sustainable nutritional security for the growing population boosts food production in a feasible and sustainable manner to get many out of poverty.
- Extending the knowledge of OFM to SVAE guarantees and broadens environmental sustainability through clean and green environment.
- Empowering SVAE in OFM strikes balance between the environment and the livelihood and reduces the risks caused by conventional agriculture practices.

5.0 Further Work

- Further research could be carried out on competence adjustment needs in barns construction for livestock to meet organic requirements.
- Research in training skills for tillage and mechanical weed control using appropriate equipment to produce high quality of organic foods is required to boost students' empowerment.
- Research is required in developing skills for humus build-up through good crop rotation planning for efficient conversion of nutrients into yields
- Research on promoting soil nutrient cycles among farmers through undisturbed decomposition and transformation of plant and animal residues is required.

6.0 Conclusion

Conclusively, the paper adds to the body of knowledge, as it is capable of gearing the interest of students in

learning the precision and a great deal of experience to support natural processes that sustain and improve healthy harvests of foods. The first-hand experience in making compost, raising green manures, and making plant manure under local conditions are offered for sustainable high nutritional foods. This would significantly avert the people's unfriendly health changes due to unhealthy foods from conventional farming.

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Trends and Frontiers in International Ethnic Education Research (2014–2023): A Bibliometric Study Based on SSCI

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Abstract

Using 1285 articles of ethnic education research literature in SSCI during 2014-2023 as data source, the knowledge mapping of international ethnic education research was drawn with the help of BibExcel. It is found that the number of publications on international ethnic education research has been on an upward trend in the past ten years. The research power is mainly concentrated in China, the United States and other countries; Teng Xing, Yang Shengmin and others are prolific authors in the field of ethnic education; Central University for Nationalities and others are the main research institutions, and there are journals focusing on the research of ethnic education; Research on Ethnic Education, Northwest Ethnic Studies, Ethnic Education Policy and Ethnic Education Theory are the hot trends of ethnic education research in the past ten years; The literature such as Multicultural Society and Multi-integration Education forms the knowledge base of ethnic education research.

Keywords: Ethnic Education, International Frontiers, Research Hotspots, Knowledge Map.

1.0 Introduction

Ethnic education has always been an important and sensitive topic in multi-ethnic countries, and it has a bearing on the stability and development of the country. Ethnic education is an important part of ethnic work and an important part of education (Zhang & Shi, 2019).

The concept of education can be divided into broad and narrow concepts. The narrow concept refers to ethnic education, which is the composite ethnic education, i.e., multicultural education, implemented for members of ethnic groups whose populations reside in a minority in a multi-ethnic country (Teng, 1998). The purpose of multicultural education is, on the one hand, to help members of ethnic minorities to improve their ability to adapt to the modern mainstream society in order to maximize their personal development; On the other hand, to inherit and carry forward the outstanding traditional cultural heritage of ethnic minorities and to enrich the cultural treasures of mankind, and ethnic minority education is an important part of the implementation of national education in a multi-ethnic country.

The current dilemma faced by China's ethnic education, whether the international situation has been more mature precedents and research. Therefore, exploring and learning from international advanced research results on ethnic education is of great significance for precise poverty alleviation in education and building a learning society.

2.0 Methods

2.1 Data Sources

In the Web of Science Core Collection database, select the Social Sciences Citation Index (SSCI). Time span is 2014-2023. TS = ((ethn* NEAR/1 educat*) OR "ethnic education" OR "multicultural education" OR "indigenous education" OR "minority education" OR "diversity education" OR "cross-cultural education" OR "bilingual education") NOT ("educat* ethn*" OR "ethnic educational community" OR "educational ethnic "), AND WC= education& educational research. This search was conducted on November 2, 2024. The search yielded 1358 records, and by excluding non-scholarly literature such as book reviews, editorial

materials, and errata, 1,285 documents were ultimately used for the study for knowledge graph analysis.

2.2 Methods of analysis

This study mainly adopts bibliometric method to statistically analyze the literature information. First, analyzed the basic information of the sample data, including the evolution of the number of publications, authoritative authors, research institutions, key journals, and major countries of publication; Secondly, analyzed the hotspots of the international research on the topic of ethnic education, and then analyzed the keyword co-occurrence analysis of the high-frequency keywords of the 1,285 sample data with the help of BibExcel; Thirdly, analyzed the knowledge base of the research on the topic of ethnic education, and visualized the references of the 1,285 sample data to draw the co-cited knowledge map. At the same time, the visualization analysis software Pajek is used to draw intuitive maps to mine the trends and hot topics of education research.

3.0 Implication

3.1 Evolution of the number of published articles

SSCI comprehensively includes the most authoritative journals in the field of humanities and social sciences, and the articles on national education published in SSCI represent the highest level of the research to a certain extent. The evolution of the number of articles published in SSCI each year can reflect the development of research in the field of community education. Overall, ethnic education research is getting more and more attention, showing a booming trend, and the research fever is increasing year by year.

3.2 Analysis of core authors and research institutions

The number of publications, H index and average number of citations to a certain extent can reflect the research ability of researchers in a certain field, and the core group of authors, i.e., research institutions, also represents the research frontiers in this discipline. Price, the father of scientometrics in the United States, deduced based on Lotka's law that “about 10% of outstanding scientists publish half of all papers” (Zhong, 2004). Overall, Teng Xing, Yang Shengmin and others are the most prolific authors in the field of national education; Central University for Nationalities is the main research institution.

3.3 Analysis of Key Journals and Countries

Most of the papers in a certain field tend to be centrally published in a portion of core journals. Therefore, to explore the journals with high international attention to ethnic education research, this study counted the core journals in which 1285 sample papers were published. From the data in the table, it is learned that therefore, the journals focusing on the field of ethnic education are dispersed among the educational journals in various fields. The research power is mainly concentrated in China, the United States, and other countries/regions.

3.4 Analysis of Research Topics and Frontiers

After the cleaning work of merging synonyms, replacing conjunctions, ignoring singular and plural, the top thirty keywords in the field of community education were listed according to the frequency of keyword co-occurrence, and Pajek software was used to form a visualized co-occurrence map and conduct keyword co-occurrence analysis to obtain the degree centrality of each keyword.Research on Ethnic Education, Northwest Ethnic Studies, Ethnic Education Policy and Ethnic Education Theory are the hot trends of ethnic education research in the past ten years.

4.0 Future Work

(1) Conducting multi-country comparative studies. By comparing the ethnic education policies and implementation effects in different countries and regions, researchers can learn from the experiences of countries with better national cultural inheritance effects and provide references for the education policies of other countries.

(2) Online learning research on ethnic education. With the rapid development of information technology, online learning has become an important part of education. Especially in the context of the widespread popularization of online education after the epidemic, ways to improve the quality and coverage of online ethnic education should be further explored.

(3) Strengthening theoretical and practical research on ethnic education: Ethnic education in many countries is still in the exploratory stage, so theoretical construction should be strengthened in the future and experience should be summarized in practice. Advanced experiences should be introduced and the policy and implementation framework of ethnic education should be gradually established and improved by taking into account the social and cultural characteristics of each country.

(4) Educational equity and resource allocation: Future research can focus on the issues of resource allocation and audience equity in ethnic education, especially on how to enable more members of ethnic minorities to benefit from ethnic education and promote cultural inheritance through rational allocation of resources.

5.0 Conclusion

This study used 1285 articles of ethnic education research in the SSCI during 2014-2023 as data source, and analyzed the research trend, power distribution, hot topics and knowledge base of this field through the combination of bibliometrics and information visualization and obtained the findings.

Overall, international research on ethnic education has a wide range of scope and themes, and the comprehensive and mature research in many countries is very worthwhile. To promote the healthy development of ethnic education in the world, we should focus on the systematization of policy formulation and the effectiveness of implementation in the future, to better achieve educational equity, improve the quality of members of ethnic minorities, and build a colorful global home.

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Reading Literacy in the Digital Era: Exploring the potential of Generation Alpha

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Abstract

Reading literacy today is not just about the ability to read; it is also related to the ability to find, evaluate, and use information effectively. In the digital era, where information is easily accessible, the ability to sift through and assess relevant information is crucial to avoid misinformation or bias. Generation Alpha is the generation that is growing up in a technology-saturated environment. The presence of digital technology has changed the way they learn, interact, and consume information. This presents both challenges and opportunities for reading literacy. The vast amount of information they encounter, if not balanced with the ability to evaluate and filter accurate information, can create its own set of problems. Therefore, it is essential to develop reading literacy skills in the digital era. Through a literature review, researchers examine Generation Alpha, how they interact with digital devices, and how reading literacy in the digital age serves as a navigator for them amidst rapid technological advancements. The literature review indicates that, given the potential of Generation Alpha, who are familiar with technology, it is necessary to develop reading literacy in various forms that are more adaptive to the digital era, such as digital literacy, media literacy, visual literacy, and emotional literacy. Generation Alpha has great potential to become a generation of intelligent and critical readers. With the right strategies, their reading interest can be enhanced, shaping them into independent and critical learners.

Keywords: Reading Literacy, Digital Era, Generation Alpha.

1. Introduction

The rapid development of digital technology has brought significant changes in various aspects of life, including the way students interact with information and texts. In this digital era, access to information has become very easy and fast, with various digital platforms offering a wide range of content instantly. However, this ease of access also presents challenges, particularly in the ability to filter, understand, and critically evaluate information. Reading literacy is a fundamental skill needed to study various subjects, from mathematics to social sciences. Students who are proficient in reading literacy have a strong foundation for further learning and accessing more complex information. Without good reading skills, the ability to master knowledge in various fields becomes limited. Reading literacy is also related to the ability to find, evaluate, and use information effectively. In the digital age, where information is easily accessible, the ability to sift through and assess relevant information is crucial to avoid misinformation or bias.

Generation Alpha refers to those born from 2010 to 2024. Students currently in elementary school belong to Generation Alpha. This generation was born amid the development of technology, leading to their label as digital natives. Technology has been a part of their lives since birth, making their technological skills tend to be more natural compared to previous generations. McCrindle and Ashley Fell, in their book Understanding Generation Alpha, reveal those Generation Alpha exhibits more digital, social, global, mobile, and visual characteristics than previous generations. They are part of an unintentional global experiment where screens have been placed in front of them from an early age as soothing tools, entertainment, and educational aids. They grow up in a technology-filled environment where access to information and digital content can be obtained instantly.

The entry of Generation Alpha into the flow of technology certainly brings about various positive and negative aspects. The positive aspects include their superior mastery of technology compared to previous generations, as Generation Alpha was born amid technological advancements. Additionally, they are

considered more critical, curious, and fond of challenges due to the ease of information access and global interactions available to them. Despite the many benefits of easy access to information and connections with others, they also face challenges from the technological wave, including issues related to social development, instant gratification, technology addiction, and potential online bullying. Information that is highly open and easily accessible, if not balanced with reading literacy skills, may lead them to struggle in discerning which information is true, and which is false. Basic literacy skills remain a top priority in education today, especially in light of the changes brought about by the COVID-19 pandemic, which has led to greater reliance on technology in education. Given the potential of Generation Alpha in terms of their more mature technology mastery, reading literacy in this digital era needs to be developed in more adaptive forms. The hope is that Generation Alpha will acquire reading literacy skills to provide a foundation for them amidst the waves of technological advancement they face and to foster them into independent and critical learners.

2. Methodology

This research employs a literature review method, which is a research approach focused on the collection and analysis of existing written works, including previous research findings. In a literature review, data is obtained from various sources, such as books, articles, scholarly papers, and writings from different authors relevant to the topic being studied. This method allows researchers to understand the broader context of the issue at hand and to identify patterns, themes, and gaps within the existing literature. Thus, a literature review becomes an important tool for establishing a solid theoretical foundation and providing an in-depth perspective on the topic to be discussed. The data analysis in this research utilizes content analysis, which involves an in-depth examination of several journals and books related to the scope of the study. Content analysis enables researchers to extract relevant and significant information, as well as to analyze how that information is presented and interpreted by other authors. By conducting this analysis, researchers can uncover relationships between various findings, identify trends in the field being studied, and formulate more focused arguments. Additionally, this approach assists researchers in formulating hypotheses and recommendations that can serve as a reference for future research.

3. Results and Discussion Reading Literacy in the Digital Era

The understanding of reading literacy has evolved significantly. Reading literacy has expanded its scope from merely the ability to read and write to the ability to comprehend information presented (Colin Lankshear & Michele Knobel, 2016). Reading helps individuals develop critical thinking skills. By engaging with various texts, a person learns to analyze information and form opinions supported by facts. With strong reading skills, individuals can access the information necessary to make better decisions in their daily lives. This is especially important in today's technological landscape, where information is readily and instantly available. Reading, particularly fiction, can also enhance one's emotional intelligence. Through fiction, individuals learn to understand the characters they read about and empathize with the feelings and perspectives of others. This understanding is crucial in today’s technology-driven era, particularly concerning mental health, which remains a significant issue for the current generation.

In his writing titled "Digital Literacies for Engagement in Emerging Online Cultures," Steve Wheeler notes that there are nine components of digital literacy (Mustofa & B. Heni Budiwati, 2019), including:

1. Social Networking: Refers to the use of social media platforms as tools for interacting, sharing information, and building relationships with others. This includes aspects of communication and collaboration in the online world.
2. Transliteracy: This is necessary for adapting information written in various languages. Transliteracy is essential for accessing cross-cultural information.
3. Maintaining Privacy: This relates to the security of personal data. In digital literacy, individuals need to have the ability to protect their personal information.
4. Managing Digital Identity: This involves monitoring and controlling various representations of oneself online. Individuals must be aware of the information they share online, including personal data that can be accessed by others. This is particularly important as people frequently interact

online. Managing digital identity is not just about protecting information but also about how to build and maintain a positive online presence.
5. Creating Content: Producing content is crucial in the realm of digital literacy because it allows for the dissemination of educational information. Additionally, it encourages innovation and creativity, providing opportunities to convey new ideas.
6. Organizing and Sharing Content: This involves managing and structuring content so that it is easily accessible and shareable.
7. Reusing or Repurposing Content: The ability to use existing content to achieve new goals.
8. Filtering and Selecting Content: This refers to the ability to sift through and choose content that meets specific needs and preferences.
9. Self-Broadcasting: This represents an individual's participation in the online world.

The nine components outlined are interconnected and form the foundation necessary for Generation Alpha to communicate and collaborate effectively and safely in the online world. This framework also contributes to the development of 21st-century skills.

4. Generation Alpha

Generation Alpha refers to children born starting in 2010. They are the children of Millennials and the younger siblings of Generation Z. Currently, they are the youngest generation. They actively participate in creating content on social media and serve as role models in popular culture. They represent the future in many aspects, such as consumer behavior, technology trends, and social change. There are 10 facts about Generation Alpha (Mark McCrindle & Ashley Fell, 2020), including:

2.8 Million: The number of weekly births.
2.2 Billion: Expected globally by 2025.

Changing Global Order: This refers to shifts in societal structures and dynamics.

Context: They are the children of Millennials and will become the parents of Generation Gamma. This reflects a continuous generational cycle, where each generation influences the values that shape the next.

Other Labels: Generation Glass, Upagers, The Alphas, Global Gen, Multi-modals. This generation is deeply connected to technology. Devices are a crucial part of their lives. Growing up in a highly advanced technological environment, they are influenced by technology, which affects how they learn and interact. This generation uses various media formats to communicate and access information.

Why They Are Named Alpha: This generation is born in the 21st century. The term "Alpha" is derived from the Greek alphabet, reflecting the uniqueness and characteristics that Generation Alpha brings.

The Top Names: Popular names include Noah, Oliver, Olivia, etc., although this varies in different countries. This illustrates modern naming trends, influenced by technology, diversity, and a tendency toward unique and creative names.

Tech In – Tech Out: This describes how technology shapes the experiences and development of Generation Alpha. They are influenced by technologies like artificial intelligence, smartwatches, 5G, and more.

Began in 2010: Generation Alpha started in 2010, coinciding with the launch of increasingly advanced digital devices and a growing variety of social media platforms. This marks the dominance of technology in their daily lives.

Millennials and Alpha: This focuses on the differences between Millennials (the parents of Generation Alpha) and Generation Alpha. Millennials witnessed the transition from analog to digital technology, while Generation Alpha is born and raised in a fully digital environment. Millennials tend to focus more on social

and environmental issues, while Generation Alpha, influenced by their Millennial parents' values, has a more innovative and adaptive outlook on technological changes.

The interaction of Generation Alpha with technology from an early age fosters greater independence in obtaining information, suggesting that this generation has the potential to become autonomous learners. This early exposure allows them to navigate digital environments more confidently and effectively, enabling them to seek out knowledge and resources that align with their interests and needs. However, to fully harness this potential, it is essential to equip them with specific skills that can safeguard against the negative effects of technology. For instance, critical thinking skills are crucial for evaluating the credibility of information found online. With the prevalence of misinformation, teaching Generation Alpha to discern reliable sources from questionable ones is vital (Meyer, 2020). Additionally, digital literacy skills, including understanding data privacy and responsible online behavior, will empower them to navigate the digital landscape safely (Sullivan, 2021). Moreover, fostering emotional intelligence and self-regulation can help Generation Alpha manage their technology use, allowing them to establish a healthy balance between online and offline activities. Encouraging practices such as mindful consumption of digital content and promoting face-to-face interactions can further support their overall well-being (Thompson & Johnson, 2022). By focusing on these essential skills, we can help Generation Alpha leverage their technological advantages while mitigating the risks associated with excessive or uncritical engagement with digital media.

Overall, these facts depict Generation Alpha as a highly connected, adaptive group influenced by technological advancements and the values of previous generations. From this explanation, it is clear that Generation Alpha possesses potential skills in technology use, adaptability to change, and the capacity to become independent learners due to easy access to information. They also have significant opportunities for global or cross-country collaboration. However, there are challenges they must face. Amid the technological and global communication developments they experience, mental health issues remain a concern for Generation Alpha. Additionally, there is a need for skills in evaluating and filtering information, which falls under reading literacy. Students who are accustomed to reading can identify arguments, distinguish facts from opinions, and assess the strengths and weaknesses of information or arguments.

5. Reading Literacy in the Digital Era for Generation Alpha

Given the potential of Generation Alpha and their immersion in an ever-evolving technological landscape, it is deemed necessary to provide them with knowledge about reading literacy. Reading literacy in the digital age must be adaptive, meaning it should be able to adjust to changes in technology and the ways people consume information. The results of adapting reading literacy in the digital era include media literacy, visual literacy, interactive literacy, and emotional literacy. These forms of reading literacy need to be imparted to Generation Alpha. The development of these skills can occur through both formal and non- formal educational institutions, as well as through practices implemented by parents at home. In schools, teachers can facilitate discussions on current news and ask students to source articles from various outlets. They can then analyze the credibility of those sources by distinguishing between facts and opinions (David Buckingham, 2003). By involving various parties in the learning process, children can develop the skills needed to become more critical and creative individuals. By fostering these different forms of literacy, they can become more equipped to face future challenges. The following will provide a more detailed explanation of the forms of reading literacy in the digital age.

6. Digital Literacy

Digital literacy refers to an individual's ability to effectively use digital technology. This includes the transformation of reading materials from physical formats to digital forms, such as e-books, digital encyclopedias, various types of flipbooks, and different forms of reading available on social media. Digital literacy is also referred to as an "umbrella definition," serving as a protective analogy for individuals when they are bombarded with information in the digital world. It involves technological, cognitive, and social competencies in navigating the changes brought by digital technology. The goal of acquiring digital literacy skills is to enable individuals to have greater control in interpreting messages from digital media (Anisa Rizki

S., 2019).

7. Media Literacy

Media literacy refers to an individual's ability to access and evaluate various types of information obtained from digital media. This skill is especially important to teach to Generation Alpha, as they are constantly exposed to instant and abundant digital information. Media literacy involves learning how to distinguish between facts and opinions, as well as teaching the importance of verifying information before sharing it. Key elements of media literacy include: 1) mastering technology, 2) understanding the language of media, which encompasses symbols, codes, and conventions used in media, and 3) critical thinking, where an individual can analyze information in depth, seek evidence, and then evaluate whether the information is factual or not (Buckingham & David, 2003).

8. Visual Literacy

Visual literacy is based on the sense of sight. In the process of viewing, humans think, learn, and strive to interpret what they see in order to construct meaning from it. Visual literacy is also described as an individual's ability to "read" an image. Through visual literacy, individuals are trained to think critically about what they observe (Annisa R., Vismaia S., et al., 2020). In today's digital era, much information is presented not only in text form but also visually. A lack of understanding of visual information can lead to various issues. The widespread dissemination of hoaxes can also result from a deficiency in understanding visual information. Therefore, teaching visual literacy is considered relevant for the current generation.

9. Emotional Literacy

Emotional literacy is the process related to developing an individual's skills in recognizing, understanding, expressing, and managing their own emotions and those of others. It is considered important for mental health (Barker, Hannah, 2017). Emotional literacy can be cultivated through activities such as reading fiction. By reading fiction, individuals learn to understand the characters they read about, as well as the feelings and perspectives of others. It can also be developed through daily journaling activities implemented by parents at home. Parents can assist their children in writing about their feelings regarding various experiences they encounter. With emotional literacy, individuals can comprehend texts more deeply, enhance empathy, understand different perspectives, and foster emotional intelligence. This emotional literacy is essential for Generation Alpha, as the rapid development and accessibility of technology present unique challenges, particularly concerning mental and social health. By understanding and managing emotions, individuals can maintain good mental health. Emotional literacy can help prevent mental health issues such as anxiety and others.

10. Conclusion and Suggestion

Generation Alpha, as digital natives, exhibits characteristics that are more social, global, and visual. While they are adept at technology, their reliance on instant information often hinders deep reading abilities. Therefore, it is essential to develop reading literacy in adaptive forms, including digital literacy, so individuals can have greater control in interpreting messages from digital media. Media literacy involves analyzing information deeply and seeking evidence, followed by evaluating that information. Visual literacy refers to a person's ability to "read" an image. Emotional literacy can be developed through reading fiction to cultivate emotional intelligence and prevent mental health issues. With these digital reading literacy skills, Generation Alpha can become independent and critical learners, effectively facing the challenges of technological advancement. In the process of writing this article, the author recognizes an important aspect that can be further developed and explored by future researchers: emotional literacy. This skill is deemed essential for the current generations, such as Generation Z and Alpha, considering the growing global attention to mental health issues. Further research in the field of emotional literacy could provide valuable insights into addressing mental health challenges among the youth.

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The Digital Competence of pre-service teachers in Early Childhood Education: A Systematic Literature Review

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Abstract

As technology rapidly advances, we find ourselves deeply immersed in a digital era that is reshaping every aspect of life, including education. Pre-service teachers (PST) play a crucial role in integrating technology into educational settings. To deepen our understanding the digital competence of PSTs in early childhood, this systematic literature review draws on studies published between 2015 and 2024. The main objectives of this review are to (1) identify how digital competence is defined for PSTs in early childhood education (ECE), (2) understand how PSTs' digital competence in ECE is measured, (3) determine the current level of digital competence among PSTs in ECE, and (4) investigate strategies for improving the digital competence of PSTs in ECE. 11 articles were selected 317 studies. The findings reveal that most research in this area has been conducted in Europe. Notably, there is no universally accepted definition of digital competence; instead, it is conceptualized in terms of knowledge, skills, and attitudes. Various frameworks are used to measure digital competence, reflecting a diversity of approaches across studies. On average, PSTs in ECE possess a medium level of digital competence, with variations observed across gender, geographical regions, and academic disciplines. Certain strategies and technological tools are shown to positively influence digital competence levels. However, more research is needed in non-European contexts to address this gap in the literature. Additionally, the effectiveness of strategies and tools should be examined in larger and more diverse populations. Moreover, comprehensive strategies to improve digital competence among teachers remain underdeveloped.

Keywords: Digital Competence, PSTs, Technological Tools.

1.0 Introduction

Technology is developing rapidly and impacts every aspect of our daily life. Education is involved in this transformation. Teachers is an essential role in technology integrate into education. They need to acquire adequate skills to help with students' outcomes. Digital competence has become indispensable for educators in the 21st century as they encounter increasingly digitized learning environments. Digital competence, defined as the ability to use digital tools effectively for educational and professional purposes, is increasingly recognized as a core competency for teachers. This shift is driven by a broader societal digital transformation and the corresponding need for teachers to both use and teach digital literacy effectively (Ferrari, 2013). Recent highlight significant variability in digital competence among PSTs globally. Supporting and developing young children's foundational digital competence has become a global priority in curricula and teacher education (Papavlasopoulou et al., 2024). The digital competence of early childhood teachers needs to improve to embrace the transformation. However, research on pre-service teachers' digital competence remains limited. This article aims to summarize previous research on digital competence among PSTs in early childhood and identify areas for future investigation.

Research Questions

(1) How is digital competence defined for PSTs in ECE?
(2) How is PSTs' digital competence in ECE measured?
(3) How is the current level of digital competence among PSTs in ECE?
(4) What strategies were utilized for improving the digital competence of PSTs in ECE?

2.0 Materials and Methods

The search string was employed as below: Web of science: TS=((“digital competence*" OR “digital capabilit*" OR “digital skill*"OR"digital abilit*") AND (“pre-service teacher*" OR "Teacher candidate* "OR"prospective teacher*")). Scopus: TITLE-ABS-KEY (("digital competence*" OR "digital capabilit*" OR "digital skill*" OR "digital abilit*") AND ("pre-service teacher*" OR "Teacher candidate* " OR "prospective teacher*")

This study uses a systematic literature review (SLR) methodology to examine the current state of digital competence among PSTs in ECE. Using the PRISMA 2020 procedure to select the initial articles. By following a structured process for identifying, screening, and including relevant studies. 11 articles were selected from 317 articles.

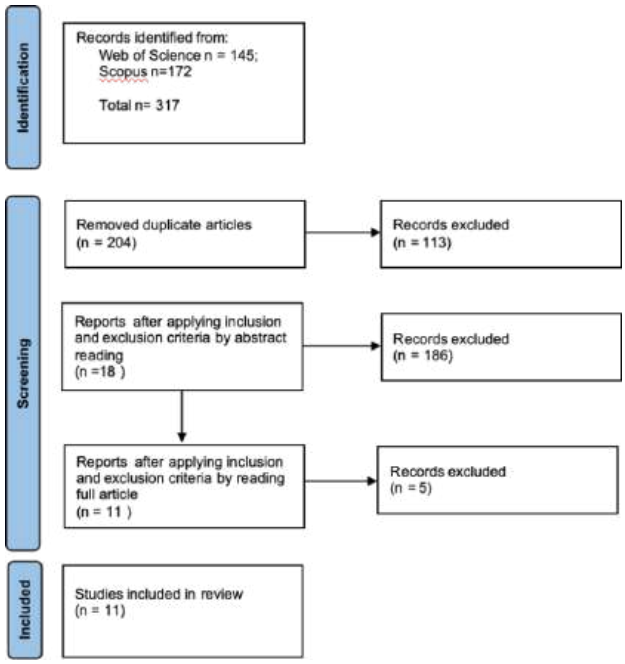

Figure 1: PRISMA 2020 flow diagram showing the data extraction procedure.

Inclusion and exclusion criteria: 317 articles were initially identified from two databases: Web of Science and scopus. Moreover, screened using the PRISMA procedure. After applying rigorous inclusion and exclusion criteria, only 11 articles were selected for the final systematic review. During the screening process, titles and abstracts were reviewed to remove studies that did not align with the scope of this review. Specifically, the following exclusion criteria were applied:

- Articles that did not address digital competence, digital literacy, digital skills, or digital capabilities within an educational context were excluded.
- Studies that did not involve PSTs, teacher candidates, or prospective teachers as participants in the context of ECE were excluded to ensure the relevance to teacher education.
- Publications classified as book chapters, books, review articles or conference reviews were excluded, as only empirical studies published with proper and full result will be employed.
- Articles not published in English

This careful application of the exclusion criteria resulted in a final selection of 11 high-quality studies that met all inclusion standards for this systematic review.

3.0 Results

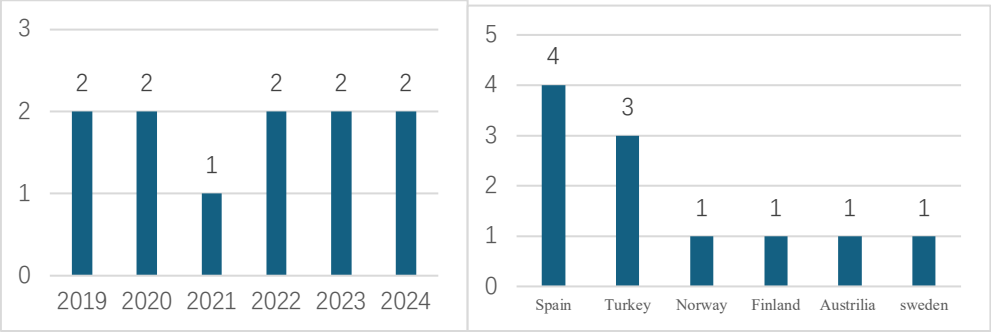

Figure 2. The number of articles published by per year (left) and per country(right)

Figure 2 illustrates the distribution of the 11 selected articles by publication year and country from 2019 to 2024. This steady publication trend indicates a consistent interest and research output related to digital competence in teacher education over recent years. The consistent yearly output reflects ongoing research in digital competence for PSTs and related fields. Figure 2 shows the geographical distribution of the 11 selected articles based on the country of study. Spain had the highest representation, with four articles, followed by Turkey with three articles. Norway, Finland, Australia, and Sweden each contributed one article to the review. This distribution highlights that majority of research on digital competence in pre-service teacher education, within this selection, is concentrated in Spain and Turkey, showing a stronger research emphasis or interest in these countries on this topic. The presence of studies from Northern Europe and Australia indicates that this area of research is of interest across diverse educational systems, though with varying levels of research output.

Most of the studies` data were collected through self-reports (Hijón-Neira et al., 2023; Madsen et al., 2023). The study's findings suggest that PSTs feel inadequately prepared to integrate ICT into their future preschool teaching practices. Most PSTs demonstrate medium-level competence in areas such as content creation, safety, and problem-solving skills (Masoumi, 2021; McLeod & Carabott, 2019; Usart et al., 2024) Additionally, they feel that they are not adequately prepared to integrate ICT into their future teaching roles(Çebi & Reisoglu, 2020). However, other findings indicate that PSTs have a high level of digital competence overall. Their digital competence varies by gender, academic field, and perceived competence level (Karakuş & Kılıç, 2022). More qualitative research is needed to explore the depth of the investigating the varies differences ((Madsen et al., 2023)).

4.0 Conclusion

The findings indicate that the majority of research on digital competence in pre-service teacher education has been conducted in Europe, highlighting a need for more studies in diverse global contexts. This geographic concentration suggests that European countries may have more established policies or frameworks for digital competence within teacher education, but it also underscores a significant gap in the literature regarding non-European perspectives. Expanding research to include regions such as Asia, Africa, and Latin America would enrich the understanding of digital competence by incorporating diverse cultural and institutional contexts.

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Mediating Role of Physical Education Teachers Self-efficacy on the Relationship between Job Environment and Teaching Performance among Chinese University

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Abstract

This study investigates the mediating role of self-efficacy among physical education (PE) teachers in the relationship between job environment and teaching performance in Chinese universities, specifically within the Chengdu region. Drawing on Social Cognitive Theory and the Job Demands-Resources (JD-R) model, we hypothesize that self-efficacy functions as a critical mediator that enhances PE teachers' ability to navigate job demands and leverage job resources, thereby positively influencing their teaching performance. Data were collected through a structured survey administered to 327 PE teachers from five major universities in Chengdu, yielding a response rate of 83%. Using structural equation modeling (SEM), the analysis reveals that job environment factors ($\beta = .56$, $p < .001$) significantly predict teaching performance, with self-efficacy accounting for 32% of the variance in this relationship. Furthermore, self-efficacy demonstrated a significant indirect effect on teaching performance ($\beta = .41$, $p < .01$), indicating its substantial role in mitigating the negative impact of high job demands while optimizing the use of available resources. These findings underscore the importance of fostering self-efficacy as a key competency for PE teachers, suggesting that initiatives aimed at enhancing self-efficacy could lead to notable improvements in educational outcomes. The study provides actionable insights for educational policymakers and university administrators, advocating for targeted support programs that strengthen PE instructors' self-efficacy as a means to optimize job performance in higher education contexts.

Keywords: Self-efficacy; Job Demands; Job Resources; Teaching Performance; Physical Education.

1.0 Introduction

Education's evolving demands in the digital age have placed increasing pressure on teachers to adapt their instructional strategies to ensure quality outcomes. For physical education (PE) teachers, the challenges are further compounded by the dual demands of physical exertion and pedagogical responsibility. In university settings, teaching performance depends not only on external resources but also on psychological traits such as self-efficacy—a belief in one's ability to accomplish specific tasks. Self-efficacy plays a central role in overcoming job challenges and maximizing available resources.

This study explores the mediating role of self-efficacy in the relationship between job environment factors (job demands and job resources) and teaching performance among PE teachers in Chinese universities, with a focus on the Chengdu region. By integrating Social Cognitive Theory (SCT) and the Job Demands-Resources (JD-R) model, this research hypothesizes that self-efficacy functions as a key buffer against job demands and a facilitator of resource optimization, thereby enhancing teaching outcomes.

2.0 Theoretical Overview and Literature Synthesis

Social Cognitive Theory, Bandura's SCT (1997) highlights the importance of self-efficacy as a determinant of individual motivation, resilience, and performance. High self-efficacy has been shown to influence teachers' abilities to regulate stress and effectively manage classroom challenges. For example, teachers with strong self-efficacy can maintain classroom discipline in dynamic and unpredictable settings. In this context, self-efficacy is particularly relevant to PE teachers, who often face physically and emotionally demanding environments.

Job Demands-Resources Model, The JD-R model categorizes workrelated factors into two key

dimensions: job demands and job resources (Bakker & Demerouti, 2007). Job demands are stressors such as workload and emotional strain that require effort and energy, often leading to burnout when unmanaged. Job resources, such as institutional support and professional development opportunities, act as facilitators, enabling teachers to meet their objectives effectively and maintain wellbeing.

For PE teachers, job demands might include physical strain, managing large groups, and meeting institutional requirements, while resources include access to training, supportive management, and autonomy in curriculum design. The interplay between these factors significantly impacts teaching performance, with self-efficacy serving as a mediator that helps mitigate negative impacts and amplify positive effects.

3.0 Methodology

This study utilized a structured survey distributed to 327 PE teachers from five universities in Chengdu. With an 83% response rate, the dataset provided robust representation. The questionnaire included:

Job Demands: Workload, emotional demands, and physical exertion.

Job Resources: Institutional support, access to teaching materials, and autonomy in teaching practices.

Self-efficacy: Assessed using Bandura's Teacher Efficacy Scale, adapted for PE contexts.

Teaching Performance: Evaluated through selassessments and supervisor feedback.

The survey employed validated scales, achieving high reliability (Cronbach's $\alpha > 0.8$). Data analysis used Structural Equation Modeling (SEM) to test the hypothesized relationships and assess mediation effects.

4.0 Findings

4.1 Direct Effects

Job Demands: Negatively correlated with teaching performance ($\beta = 0.34$, $p < 0.01$). High demands reduced teachers' ability to deliver effective instruction.

Job Resources: Positively correlated with teaching performance ($\beta = 0.56$, $p < 0.001$). Resources such as institutional support were critical in enhancing performance.

4.2 Mediating Role of Self-efficacy

Self-efficacy accounted for 32% of the variance in teaching performance, demonstrating its significance as a mediating factor. The SEM analysis revealed:

Indirect Effect: Self-efficacy partially mediated the negative impact of job demands on teaching performance ($\beta = 0.41$, $p < 0.01$).

Resource Utilization: Teachers with higher self-efficacy were more effective in leveraging available resources, leading to improved outcomes.

5.0 Implications

5.1 Policy Recommendations

1. Professional Development: Institutions should offer targeted training programs to enhance PE teachers' self-efficacy through workshops on stress management, classroom control, and adaptive teaching techniques.

2. Mentorship Programs: Pairing novice teachers with experienced mentors fosters confidence and provides practical strategies for overcoming challenges.
3. Regular Feedback: Constructive performance evaluations should focus on strengths and areas for improvement, reinforcing teachers' belief in their capabilities.
4. Resource Allocation: Increasing access to teaching aids and professional development opportunities can alleviate the strain of job demands.
5. Supportive Work Environment: Creating an organizational culture that values teacher wellbeing and recognizes achievements fosters a positive work climate.

6.0 Future Work

This study's cross-sectional design limits causal inference. Future longitudinal research should explore how self-efficacy evolves over time in response to changing job demands and resources. Expanding the sample to include diverse geographic and cultural contexts would enhance the generalizability of findings. Additionally, examining other psychological constructs, such as job satisfaction and resilience, could provide a more comprehensive understanding of factors influencing teaching performance.

7.0 Conclusion

This study demonstrates that self-efficacy is a vital mediator in the relationship between job environment factors and teaching performance. By fostering self-efficacy, educational institutions can empower PE teachers to meet job demands effectively and utilize resources optimally, leading to enhanced teaching quality and positive student outcomes. These findings underscore the need for targeted interventions to support teachers' psychological wellbeing and professional development.

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Performance of Female Leaders in Higher Education Organizations: A Literature Review

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Abstract

The lack of women in leadership positions has received considerable academic attention. Much of the literature has made an exhaustive study of the barriers women face in obtaining and advancing to leadership positions. While the gendered barriers women face are influential in the increased representation of women in leadership, the performance of women in higher education organizations is equally important. Understanding the advantages associated with increased female leadership can be beneficial in reducing the gendered dilemmas women encounter when advancing to leadership positions, achieving gender diversity in the organization and utilizing women's latent abilities to advance education. Field research studies in colleges and universities have also shown that female leadership has a significant and positive impact on team performance. Can the performance of female leaders have a wider impact within education? Do female leaders bring a range of advantages associated with their leadership in higher education? How female leadership in universities affects education and organizations is still not adequately sorted out internally. This paper addresses these questions through an extensive literature review of the substantive impact of female leaders' performance within higher education organizations on the inside of education.

Keywords: Gender imbalance; Female leader; Higher educational leadership; Educational Management

1.0 Introduction

Gender imbalance as a social problem appears in many areas of social research. In the field of education, the representation of women in leadership positions in higher education organizations has attracted widespread attention. In 2015, China announced a national rate of 3.7 percent of female education leaders(Zhang & Suo, 2016). This situation in China is not an exception. Times Higher Education shows that the percentage of female leaders at top universities globally has increased to 19%, the first increase since 2017 (Bothwell, 2020). The percentage of female leaders in universities worldwide is similarly low.

Existing literature answers the question of why female leaders are underrepresented. Research on gender-related leadership reveals that pervasive gender stereotypes associate men more closely with leadership, thus perpetuating the gender gap in leadership. In addition to stereotypes, the glass ceiling (Taparia & Lenka, 2022), the “labyrinth” (Eagly & Carli, 2018), or the “bed of thorns” (Vial et al., 2016), metaphors that vividly depict the difficulties and challenges women face in obtaining leadership positions. For instance, Redmond et al. (2017) identify several key barriers preventing women from pursuing academic careers, including limited opportunities for career advancement, challenges in achieving worklife balance, a lack of female role models in leadership, and inadequate support for women to progress in their careers.

Despite these challenges, the literature indicates that female leaders may offer a distinct set of leadership traits and behaviors that can benefit higher education organizations. Acknowledging the positive aspects of female leadership is both essential and beneficial for addressing the various changes in today’s university educational environment. However, existing research related to gender and leadership is dominated by management literature, while literature geared towards leaders in HEIs mainly explores the barriers faced by female leaders and fails to fully understand the impact of female leadership within education. Regarding women's leadership, most of the literature is oriented towards the field of management

has made many studies on women directors, but the impact of women leaders in higher education organizations has received limited attention until recently (Abdullah et al., 2016; Guy & Meier, 2016; Leone, 2019).

Is female leadership affecting within colleges and universities? Does the increase in the percentage of women in educational leadership positions affect the quality of the organization? Can an increase in the number of female leaders have a broader impact on female empowerment in colleges and universities? How female leadership in colleges and universities affects education internally remains poorly sorted.The purpose of this study is through an extensive literature review to explore the impact of women as educational leaders on students within education and on their performance in the organization.

2.0 Theoretical overview and literature synthesis

Most of the articles on female leadership have mostly focused on the business sector or focused on the barriers women face in advancing to leadership positions, the existing literature on this topic is very limited, however similar literature could be remedied. Overall, the research in this paper tends to explore this topic in terms of two sub-themes: the performance of female leaders within education and the performance of female leaders within educational organizations. For the purposes of this paper, performance within education refers to teaching ability/outcomes, while performance within educational organizations refers to leadership. We use the term “educational female Leaders” to refer to both female professors who conduct teaching and academic research, as well as female academics who hold formal leadership positions in universities, such as university presidents and deans.

The first thematic study analyzes the performance of female leaders within education and proposes advantages for them in instructional leadership. Research shows that female principals often receive higher ratings for instructional leadership compared to male principals (Hallinger et al., 2016). There is a direct link between educational female leaders and positive learning outcomes (D'sa et al., 2023). The second thematic study affirms the performance of female leaders within educational organizations through empirical research. A study in Saudi Arabia proved that women led the university to several scientific awards when they were leaders in the recently established university (Gorondutse, 2019). Educational female leaders have been proven to improve the quality of organizations. Evidence of women's leadership is also provided in another article, where a woman's program of study while serving as dean of faculty received the highest certification at the national level (Isnaini et al., 2023). This achievement under the leadership of a woman demonstrates the capabilities of leaders and highlights the potential for female leaders to achieve significant success in organizations. Additionally, a field study in a university proved that teams randomly selected to have female leaders were significantly better than teams led by male leaders, controlling for leader and member competencies. This survey found that female leadership has a significant and positive impact on team performance (De Paola et al., 2022). Female leaders' empathy and compassionate communication may help improve relationships not only with stakeholders but also with teachers. Female leaders are open to feedback, listen to their colleagues, provide learning opportunities, and encourage teachers to express their own Expertise. Female leadership not only enhances organizational effectiveness but also fosters a more diverse work environment, which leads to improved outcomes for both students and society (Offermann & Foley, 2020).

3.0 Implication

Although previous studies have focused on the inequalities encountered by women in advancing to leadership positions, our results suggest that women have the potential to assume leadership positions in academia, and that their leadership may lead to advances in the fields of education and management. For the potential of female leaders HEIs should reasonably consider the positive aspects of women’s leadership, reduce the gender gap in leadership, and further enhance the quality of the organization by empowering women.

4.0 Future Work

This paper emphasizes the need to support female educational leadership by advocating for equal opportunities for men and women in leadership positions. The performance of female leaders in education and organizations is critical to weakening gender bias. Nonetheless, this paper has its limitations. Although this study focused on the performance of female educational leaders in a university setting, with the current shift in the gender structure of education and the imbalance in the gender ratio of students within colleges and universities, future research could expand the scope of the study to include female leadership strengths in conjunction with student leadership.

5.0 Conclusion

The main purpose of this paper is to explore the impact of educational female leaders on students within education and their performance within organizations. We found that female educational leaders have a positive impact on students within education and the same benefits within organizations such as increasing organizational effectiveness and creating a diverse environment. However, scholars have pointed out that overemphasizing the advantages of female leaders is instead a disguised way of hindering women's advancement (Offermann & Foley, 2020). In fact, it is even more important to realize that effective leadership is not entirely related to the gender of the leader. While the need to support female leaders in leadership roles has been emphasized, effective educational leadership takes into account individual abilities and achievements in addition to gender. Similarly, the emphasis on female leadership is not intended to suppress male leadership, but rather to recognize the strengths of female leadership and to advocate for equal opportunities in order to develop more quality higher education organizations.

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The Impact of Parents' Perception of the Double Reduction Policy on Their Educational Anxiety: The Mediating Role of Parental Involvement and the Moderating Effect of Gender

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Abstract

Chinese students face employment pressure due to the competitive educational environment, which compels them to pursue better education. This has led to widespread parents' educational anxiety. Profit-oriented tutoring institutions exacerbate their economic and psychological anxiety. To address these issues, the Chinese government introduced the double reduction policy in 2021, while also encouraging parents' participation in the educational process. Previous studies have focused on the pros and cons of this policy, few have examined its effects three years after implementation. This research explores the relationship between parents' perception of this policy and parents' education anxiety, as well as the mediating role of parents' participation and the moderating effect of gender. Findings indicate that the higher the parents' educational anxiety, the stronger their perception of the policy. Parents' participation can alleviate parents' education anxiety, and serve as a mediator, while gender have a moderating effect. These provide important insights for continuously improving and implementing the double reduction policy, helping to further optimize China's education policy, and foster the healthy development of the education sector.

Keywords: Alternative Education Resource, Double Reduction Policy, Educational Anxiety, Educational Equity.

1.0 Introduction

As a highly populous country, China faces immense employment pressure (Ma et al., 2021). A large student population is compelled to pursue better educational credentials to enhance their competitiveness in the intense job market. This highly competitive educational environment has caused many Chinese parents to feel anxious and concerned about their children's academic performance (Chen et al., 2020). They worry that if their children's academic performance fall short, they will be unable to secure ideal scores, ultimately failing to gain admission to their desired university and find satisfactory jobs. To help their children achieve outstanding academic performance and stand out, these parents demand their children complete excessive homework assignments and actively enroll them in various after-school tutoring and coaching programs (Tseng et al., 2020). Through intensive practice and repetition, they hope their children can achieve excellent scores and emerge victorious in the fierce competition for higher education.

Concurrently, some profit-driven after-school tutoring institutions have begun to capitalize on and amplify these parental educational anxiety. These institutions recognize the business opportunities presented by parental educational anxieties, and thus constantly propagate a narrative of anxiety, guiding parents to enroll their children in high-priced tutoring courses (Zhang, 2020). This not only further increases the financial burden on parents, but also exacerbates their psychological stress, making them even more anxious. Excessive educational anxiety not only torments parents, but also hinders the healthy development of these profit-driven tutoring institutions.

In light of this, the Chinese government introduced the double reduction policy in 2021. While not the first education reform measure aimed at alleviating student burden in China's history, this policy represents a new trend in the development of China's socialist education (Jiang & Saito, 2022). The core objective of the double reduction policy is to reduce the student homework burden, effectively alleviate parental educational anxiety, promote social equity and justice, mitigate the phenomenon of educational involution, and ultimately achieve the healthy and stable development of China's education system (Dai,

2023; Yang et al., 2023). The government's introduction of this policy demonstrates their strong emphasis on the issue of parental educational anxiety, and their hope to address the deep-seated conflicts within China's education system through systematic policy interventions.

Parents' participation play a crucial role in the implementation of the double reduction policy. As the direct target audience of the policy, their attitudes and levels of participation directly impact the policy's effects. However, existing research has paid little attention to the intrinsic connections between parents' perception of the double reduction policy, parents' educational anxiety, and parents' participation. This study aims to fill this research gap, exploring the mediating role of parents' participation between perception of the double reduction policy and parents' educational anxiety, while also examining the moderating effect of gender differences on this process. This will help us gain a more comprehensive understanding of the complex dynamics within China's education system under the backdrop of the double reduction policy implementation. Through this research, we hope to provide valuable practical insights for policymakers and education practitioners. Based on these, this research will be carried out around the key questions depicted in Figure 1, which examines:

1. The relationship between parents' perceptions of the double reduction policy and parents' educational anxiety.
2. The relationship between parents' perceptions of the double reduction policy and parents' participation.
3. The relationship between parents' participation and parents' educational anxiety.
4. The potential mediating role of parents' participation between perceptions of the double reduction policy and parents' educational anxiety.
5. The possible moderating effect of gender on the aforementioned relationships.

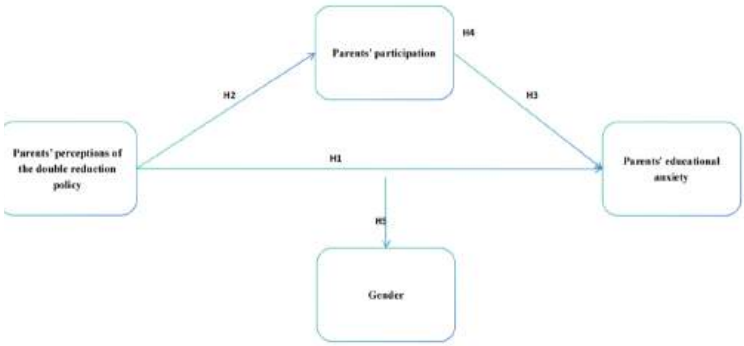

Figure 1. The overall framework.

2.0 Methods

This research focuses on parents' perception of the double reduction policy as the independent variable, using a Likert five-point scale where higher scores indicate a more positive perception of the policy. The parental involvement in homework scale developed by Hoover-Dempsey et al. (1995) was utilized. Additionally, the Parent Education Anxiety Questionnaire (PEAQ), developed by Chen et al. (2022), was employed to measure parental anxiety. The PEAQ consists of 12 questions with a five-point scale ranging from "never" to "always", where higher scores indicate higher levels of parental anxiety.

Besides, this research selected Hangzhou City, Zhejiang Province as the research site. Hangzhou is located in the Yangtze River Delta region, with advantageous geographical location and a high degree of openness to the outside world. It also has relatively well-developed educational resources. To ensure the representativeness of the sample, we adopted a systematic sampling method, and purposefully selected 5

primary schools with typical characteristics from the urban center, suburban, and exurban areas of Hangzhou.These 5 schools differ in terms of school history, school size, teacher resources, and other aspects. For example, there is 1 renowned school, 2 newly established schools, and 2 key primary schools located in the city center. By selecting this representative sample of schools, we are able to more comprehensively reflect the actual situation of typical primary schools in Hangzhou.In the end, the researchers collected 296 valid questionnaires, with a recovery rate of 98.5%, laying a solid foundation for subsequent data analysis.

3.0 Implication

Firstly, this research found that the higher parents' perception of the double reduction policy, the higher their level of educational anxiety, and they also demonstrate increased participation. Additionally, parents' participation also somewhat influence their educational anxiety. Based on this finding, researchers propose the following suggestions: Parents should enhance communication and collaboration with schools, closely communicate with teachers about their children's learning status, stay updated on the latest developments in educational policies, and jointly steer the best direction for their children's growth. Moreover, parents should actively express their opinions and suggestions to policy-making departments, articulate their educational anxieties, and ensure that policies better meet parents' needs.

Secondly, from the perspective of the goals and current situation of the double reduction policy, the study found that while this policy initially alleviated parents' educational anxiety to some extent, it exacerbated their anxiety as the policy deepened. This may imply a one-size-fits-all phenomenon in policy implementation or that the policy no longer suits the new educational circumstances in certain areas, necessitating timely adjustments. Therefore, researchers suggest that education policy-makers closely monitor the dynamics of parental and public opinion, avoid simplistic applications, and continuously optimize policies based on actual needs to better serve parents and students.

Through the analysis and recommendations above, this study provides more scientific evidence for optimizing education policies.

4.0 Future Work

A specialized measurement tool will be utilized to assess a single variable. The classification of family assets could be based on two different criteria: one referencing household income and social class divisions in China, and the other adhering to relevant standards established by the United Nations.

5.0 Conclusion

The double reduction policy plays a key role in reducing parental anxiety and social competition. However, policy efforts should go beyond this, with ongoing monitoring and feedback mechanisms that prioritize parents' opinions. Educational policies should focus on serving the public rather than simply managing society, and policymakers must consider the dynamic nature of society, avoiding one-size-fits-all approaches. Policies should account for social diversity, income disparities, and unequal access to educational resources, with flexible adjustments to better meet societal needs. This is not a critique of the double reduction policy, but a call for policies to better reflect real-world conditions and address the needs of all social groups.

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The Influences of Employee Engagement in Financial Institutions in Malaysia

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Abstract

This study aims to conceptualize the relationship between the transformational leadership, motivational factors and organisational culture on employee engagement among Takaful employees in Kuala Lumpur, Malaysia. Past studies have highlighted the significant impact of leadership in guiding an organisation, particularly transformational leadership, in fostering employee engagement. This study employs transformational leadership to establish its theoretical framework. A quantitative approach was used to analyse responses from financial institution. The sample size is determine through G-power statistics and the purposive sampling technique. As a result, 153 respondents are targeted for this study. The findings of this conceptual study offer a valuable theoretical framework, encouraging researchers to deepen their understanding of employee engagement in digital era.

Keywords: Employee Engagement; Kahn's Engagement Theory; Motivation; Culture; Financial Service.

1.0 Introduction

KPMG predicted that by 2030, employee engagement in financial institutions will be focus on talent diversity, an innovative culture, digitalisation and multitasking abilities (KPGM, 2022). Currently, financial institutions are leading several sub-sectors, fintech, blockchain, technology driven hubs and artificial intelligence (AI), which have transformed employee commitment, engagement and performance. The Global Talent Trend 2024 reports highlights emerging trends in employees' engagement such as Gen AI and reshaping of employee workforce, which are influencing employee's mindset (Mercer, 2024). Additionally, past studies by Aon Hewitt reported employee commitment and engagement in the Asia Pacific region, including Malaysia, were below 65% (Aon Hewitt, 2017). The report emphasizes on strategies to improve employee engagement through three main attributes, namely Say, Stay and Strive (Ayob & Nor, 2019) which foster a positive workplace environment.

Employee engagement is increasingly recognized as a critical factor for organizational success, particularly in the context of financial institutions where high engagement levels can lead to improved performance, innovation, and employee retention. Numerous studies have been shown to positively impact organizational performance (Bailey, Madden, Alfes & Fletcher, 2017; Crawford et al., 2014), higher levels of engagement lead to increased productivity, profitability, and adaptability (Bijaya at el., 2011). Motivation and leadership are two important drivers in employee engagement (Bergstrom & Martinez, 2016) further employee engagement in financial institution. By identifying the key drivers within these areas, organization can craft strategies that enhance engagement, ultimately fostering a more motivated, productive, and committed workforce.

This study seeks to explore and conceptualize the relationship between transformational leadership, motivational factors, and organizational culture, focusing on their impact on employee engagement among Takaful employees in Kuala Lumpur, Malaysia. The insurance sector, and specifically the Takaful industry, faces unique challenges, including high turnover rates, rapidly changing customer expectations, and the need to maintain compliance with Islamic finance principles. By examining how transformational leadership and

other key factors contribute to employee engagement, this study aims to provide a framework that can be applied within this context to foster a more motivated, aligned, and committed workforce.

2.0 Literature Review

We used combination theories, Transformational Leadership Theory (Bass & Riggio, 2006) and Kahn's Engagement Theory (Kahn, 1990) which emphasis on three dimensions such as physical, cognitive and emotional. The correlational between the three dimensions psychological states (feeling safe, comfortable, energy and resources) and the engagement dimensions (physical, cognitive and emotional). Transformational leadership is one of the oldest theory which use to mould a quality leaders. Therefore, the combination of those theories able to justify in employee engagement.

Employee engagement is started from the organisational environment supports and rewards that connects leaders to work consistently to achieve goals. Many studies have worked on employee engagement from competitive advantage (Macey et al., 2009), then it links to leadership development (Carasco et al., 2021) and financial Islamic institute (Ahmad & Othman, 2021). In another word, engagement reflects participation, dedication, passion, enthusiasm, immersion, concentration, effort and energy. Past studies have highlighted that transformational leadership, as opposed to other leadership styles, has a particularly strong impact on employee engagement, as it emphasizes the importance of aligning employees with organizational goals and enhancing their intrinsic motivation. This study also examines motivational factors and organizational culture, given their significant roles in creating an environment where employees feel valued, supported, and engaged. Engidaw (2021) revealed that extrinsic motivation was considered more significant than intrinsic and there was a positive significant relationship between intrinsic and extrinsic motivations with employee engagement. Organisational culture and hierarchical cultures can limit engagement by restricting employees' autonomy and sense of contribution (Zhang et al., 2023).

3.0 Methodology

A quantitative approach is adopted to analyze the data, drawing responses from employees (Creswell & Creswell, 2023) within the Takaful operator. Data collection involves a structured questionnaire designed to capture information on the identified variables: transformational leadership, motivational factors, organizational culture, and employee engagement. The sample size for this study is determined using G*Power statistical analysis to ensure adequate power for hypothesis testing. A purposive sampling technique is applied to focus on individuals who are most relevant to the study's context, with a target sample of 153 respondents. The questionnaire for employee engagement is a replication of the Gallup Q12 workplace audit. The Gallup Q12 workplace audit has proven to be a valid measurement instrument of employee engagement (Harter et al, 2009).

4.0 Findings

The findings of this conceptual study contribute to the literature on employee engagement in the financial sector by proposing a comprehensive theoretical framework. This framework highlights the importance of transformational leadership in motivating employees, fostering a positive organizational culture, and promoting engagement. Additionally, it offers insights into how specific motivational factors interact with leadership styles to influence employee commitment and performance. The results emphasize the need for Takaful organizations to prioritize transformational leadership development as a strategic initiative for enhancing employee engagement (Bhatti et al., 2021).

5.0 Discussion and Implications

The study aimed to analyse the relationship between transformational leadership, motivational factors, and organizational culture on employee engagement among Takaful employees in Kuala Lumpur, Malaysia. The dependent variable, employee engagement, was examined alongside the independent variables;

transformational leadership, motivational factors, and organizational culture. The study will contribute significantly for both theory and practical. For researchers, the theoretical framework provides a basis for future studies that examine employee engagement in various contexts, particularly within digital and rapidly evolving industries. Practitioners in the Takaful industry and broader financial sector can utilize these findings to implement leadership training, foster an engaging organizational culture, and adopt motivational practices aligned with transformational principles. In the digital era, where employees increasingly seek meaningful work and alignment with organizational values, this study's framework serves as a guide for fostering a sustainable, engaged workforce poised for long-term success.

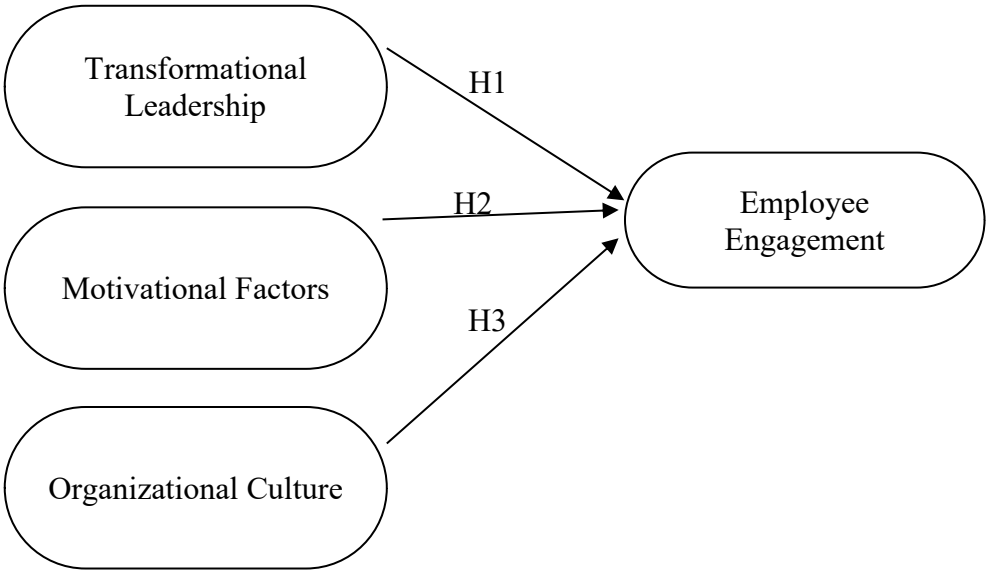

Figure1. Theoretical Framework of the study

In summary, this research makes a valuable contribution by illustrating how transformational leadership, motivational factors, and organizational culture can collectively enhance employee engagement. The findings encourage organizations to rethink their leadership practices and cultural norms, especially within the context of the digital economy, where adaptability, innovation, and employee engagement are paramount.

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Evaluating Student Interest in Renewable Energy through an AI-Generated Educational Video

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Abstract

This study examines the potential of AI-generated educational videos to foster student interest in renewable energy, a field critical to addressing global environmental challenges. Focusing on electrical diploma students enrolled in a Power System course, the study investigates the effects of The Magical Journey into the World of Renewable Energy*, an AI-generated video that uses visual storytelling, multilingual subtitles, and animations to present renewable energy concepts in an accessible format. A mixed-methods approach was employed, with pre- and post-test surveys capturing quantitative data on interest levels and qualitative feedback on engagement. Findings revealed a significant increase in student interest, with mean scores rising from 3.1 to 4.2 ($p < 0.01$). Students reported that the animations and multilingual accessibility enhanced comprehension and engagement, particularly with complex concepts. These results support the integration of AI-driven educational tools into curricula to improve learning outcomes and inspire sustainable practices. This study contributes to the growing body of research advocating for AI-enhanced learning experiences to bridge engagement gaps in technical education.*

Keywords: AI-generated Educational Video; Renewable Energy; Student Engagement; Visual Storytelling.

1.0 Introduction

As the world grapples with climate change and environmental degradation, the shift towards renewable energy has become essential. Educational institutions play a critical role in shaping future professionals who can champion sustainable practices. However, renewable energy concepts, despite their importance, are often perceived as complex and technical, which can deter student engagement, especially when taught through traditional methods (Twidell & Weir, 2020). Research indicates that a lack of student engagement in technical subjects can reduce retention rates and ultimately impact the effectiveness of educational initiatives aimed at fostering sustainability awareness (Boyle, 2017).

In response, AI-generated educational tools offer a potential solution to this challenge. Recent studies have suggested that multimedia and interactive learning, particularly when infused with AI-driven elements, can enhance student engagement by making content more accessible and relatable (Luckin et al., 2016). This study evaluates the effectiveness of an AI-generated video, titled "The Magical Journey into the World of Renewable Energy", in increasing interest among diploma students enrolled in the Power System course at Sultan Azlan Shah Polytechnic. Through AI-enhanced storytelling, multilingual subtitles, and interactive elements, the video aims to simplify renewable energy concepts and make them appealing to a diverse student population.

2.0 Literature Review

The integration of AI in educational content has garnered attention for its potential to transform passive learning into active engagement (Mayer, 2021). In renewable energy education, which involves complex topics like solar, wind, and hydroelectric energy systems, the ability of AI to visualize and animate concepts is particularly beneficial. Studies by Luckin et al. (2016) highlight how AI can cater to diverse learning styles, improving both comprehension and student motivation. Further, Boyle (2017) posits that interactive learning tools increase the retention of technical knowledge, which is often challenging to achieve through

conventional lectures.

The role of AI-generated educational videos, specifically, has been documented in various academic settings where they have been shown to support more dynamic learning environments. For instance, animations and AI-enhanced visuals help students better grasp abstract concepts by providing concrete visual representations (Adobe Systems Incorporated, 2024). This study builds upon these findings by exploring how AI-generated content can influence student interest in renewable energy—a field that has traditionally struggled to maintain high levels of engagement among technical students.

3.0 Methodology

3.1 Research Design

This research employed a pre-test and post-test model to measure the impact of the AI-generated video on student interest in renewable energy. The study's design aimed to capture both quantitative data (through Likert-scale surveys) and qualitative insights (through open-ended questions) to provide a holistic understanding of the video's effect on student engagement. By combining statistical analysis with thematic examination, the study sought to determine not only if student interest increased but also which aspects of the AI-generated video were most effective in driving this change.

3.2 Participants

Sixty-five electrical diploma students enrolled in the Power System course (DET30053) at Sultan Azlan Shah Polytechnic participated in the study. This cohort was chosen because the course content aligns closely with renewable energy concepts covered in the video, ensuring that students had a foundational understanding that could be built upon. Participation in the study was voluntary, and all students provided informed consent before taking part in the pre-test, watching the video, and completing the post-test survey.

3.3 Instruments

To measure changes in student interest, pre-test and post-test surveys were used as the primary instruments. The surveys included both quantitative items (on a 5-point Likert scale) to assess the degree of interest in renewable energy before and after the intervention, and open-ended questions to gather qualitative feedback on specific elements of the video. The video itself was crafted using various AI tools—ChatGPT for storyboarding, Canva AI for visuals, Runway AI for animation, and Veed.io for narration. These tools combined to create a visually engaging, multilingual video that presented renewable energy concepts through interactive storytelling, thereby enhancing the accessibility and appeal of the material.

3.4 Data Collection

Data were collected in three stages. First, students completed a pre-test survey to assess their initial interest in renewable energy. Following this, they watched *The Magical Journey into the World of Renewable Energy*, an AI-generated video designed to introduce renewable energy concepts through engaging visuals and storytelling. After the video, students completed a post-test survey to evaluate any changes in interest and provide feedback on the features they found most engaging (e.g., animations, storytelling, and multilingual subtitles).

3.5 Data Analysis

Quantitative data were analyzed using paired t-tests to compare the mean interest scores before and after the video intervention. Qualitative data from open-ended responses were coded thematically, focusing on identifying recurring elements that students highlighted as engaging or informative. This mixed-methods approach enabled a comprehensive analysis of both numerical shifts in interest levels and subjective experiences that provided deeper insights into how the AI-generated content impacted student perceptions.

4.0 Results

4.1 Change in Student Interest

The pre-test and post-test analyses revealed a notable increase in students' interest in renewable energy following the video intervention. Mean interest scores rose from 3.1 before the video to 4.2 after, representing a statistically significant shift ($p < 0.01$). This increase in interest suggests that the video successfully captured students' attention and made renewable energy concepts more engaging and accessible. The use of paired t-tests allowed for precise measurement of this change, supporting the hypothesis that AI-generated educational content can positively influence student engagement in technical subjects. These findings are summarised in Table 1.

Table 1. Descriptive Statistics and Paired t-Test Analysis of Pre- and Post-Test Interest Levels

Interest Measure	Mean Score (Pre-Video)	Mean Score (Post-Video)	Change	Statistical Significance
Student Interest in Renewable Energy	3.1	4.2	+1.1	$p < 0.01$

4.2 Video Features Impacting Interest

Thematic analysis of qualitative responses highlighted specific features that students found particularly engaging. Visual storytelling and interactive animations were frequently cited as effective in helping students grasp complex topics. For example, animations of renewable energy systems, such as solar panels and wind turbines, provided concrete visual representations that bridged the gap between theoretical concepts and practical understanding. Additionally, multilingual subtitles were identified as a valuable tool for making the content accessible to students with varying levels of English proficiency, aligning with findings by Mayer (2021) on the benefits of multimedia learning.

4.3 Student Feedback on Learning

Student feedback reinforced the quantitative results, with many expressing that the AI-generated video simplified renewable energy concepts and made them easier to understand. The clear narration and structured storyline were especially appreciated, as they contributed to a cohesive learning experience that kept students engaged. This feedback underscores the potential for AI-driven educational videos to support traditional learning methods by enhancing comprehension and retention in subjects that are often perceived as challenging or technical.

5.0 Discussion

5.1 Impact on Student Interest

The findings of this study underscore the potential of AI-generated content to increase student interest in renewable energy education. By combining AI-driven storytelling, interactive visuals, and accessible narration, the video provided a more immersive and relatable learning experience than conventional lectures. These results support Mayer's (2021) theory on multimedia learning, which posits that interactive and visual content can significantly improve student engagement and retention in complex subject areas.

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5.3 Implications for Renewable Energy Education

The observed increase in student interest carries important implications for renewable energy education and curriculum development. Engaging students early in their academic journey with innovative tools can foster a lasting interest in sustainability and renewable energy topics, potentially influencing career paths and professional development. Furthermore, by integrating AI and augmented reality (AR) technologies into educational materials, educators can better prepare students for a workforce increasingly reliant on technological innovation (Luckin et al., 2016).

6.0 Limitations and Future Research

While the study's results are promising, it is limited by its focus on a single cohort of electrical diploma students, which may limit the generalizability of the findings. Future research should explore the effectiveness of AI-generated educational tools across diverse student populations and disciplines. Additionally, while this study measured immediate changes in interest, longitudinal research could assess the impact of AI-generated content on long-term knowledge retention and motivation to pursue further studies in renewable energy.

7.0 Conclusion

This study provides evidence that AI-generated educational videos, such as *The Magical Journey into the World of Renewable Energy*, can significantly increase student interest in renewable energy. By making complex topics more visually accessible and engaging, AI-enhanced tools have the potential to transform traditional teaching methods in technical subjects. The positive changes observed in student interest suggest that incorporating AI-generated content into the curriculum could have a lasting impact on learning outcomes and inspire future professionals to contribute to the field of renewable energy.

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Impact of CIDOS on Self-Directed Learning and Engagement in Interactive Multimedia Application Courses: A Comparative Analysis of Two Polytechnics

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Abstract

This study examines the impact of the Curriculum Information Document Online System (CIDOS) on student engagement and self-directed learning (SDL) within Interactive Multimedia Application courses in Malaysian polytechnics, focusing on Sultan Azlan Shah Polytechnic and Sultan Idris Polytechnic. Through a quantitative survey of 83 students, it investigates the correlation between CIDOS usage frequency and SDL, alongside variations in engagement across institutions. Findings reveal that CIDOS enhances SDL by promoting engagement, with students at Sultan Azlan Shah reporting comparatively higher engagement levels. These insights suggest CIDOS's potential in fostering independent learning and underscore the value of engaging content in learning management systems.

Keywords: CIDOS Platform; Learning Management System (LMS); Interactive Multimedia Education; Self-Directed Learning (SDL); Student Engagement.

1.0 Introduction

The rapid adoption of digital learning platforms has brought about transformative changes in education, notably in higher education where Learning Management Systems (LMS) serve as central tools for facilitating both academic and self-directed learning. Among Malaysian polytechnics, the Curriculum Information Document Online System (CIDOS) has become a pivotal resource, providing students and lecturers with access to structured learning materials, online assessments, and interactive multimedia resources designed to enhance the learning experience. This study investigates the impact of CIDOS on self-directed learning (SDL) and student engagement in Interactive Multimedia Application courses, focusing on two institutions—Sultan Azlan Shah Polytechnic and Sultan Idris Polytechnic. By analyzing CIDOS usage patterns, engagement levels, and SDL behaviors, the study aims to shed light on the effectiveness of LMS resources in fostering autonomy and active learning.

2.0 Literature Review

The role of LMS platforms in higher education is well-documented, with numerous studies highlighting their ability to support both SDL and student engagement. Self-directed learning is an educational approach where learners take control over their learning processes, setting their own goals, selecting resources, and evaluating progress independently (Loyens, Magda, & Rikers, 2008). LMS platforms like CIDOS offer features that align with SDL principles, allowing students to access learning resources at their convenience, review multimedia content, and engage in self-assessment exercises, all of which foster a self-guided learning experience. Furthermore, student engagement—defined as the degree of attention, interest, and active participation in learning activities—is integral to academic success and is often enhanced through LMS features such as video tutorials, quizzes, and forums (Fredricks, Blumenfeld, & Paris, 2004). By promoting interaction with learning materials, CIDOS aims to increase both engagement and SDL among polytechnic students.

The integration of LMS in education supports SDL by providing a structured environment where students can manage their learning independently. Research by Alotaibi (2016) found that LMS platforms not only facilitate SDL but also enhance engagement by allowing students to interact with content through multimedia elements, interactive quizzes, and online discussions. These tools not only accommodate different learning styles but also encourage deeper engagement with course material, which is essential in hands-on, project-based disciplines like interactive multimedia applications. Furthermore, studies have shown that LMS platforms like CIDOS help students develop essential skills for managing their learning autonomously, which is particularly beneficial in fields that require creative and independent problem-solving (Garrison, 1997).

3.0 Methodology

A quantitative survey design was utilized to evaluate CIDOS's impact on SDL and engagement among polytechnic students in Interactive Multimedia Application courses. A sample of 83 students from two Malaysian polytechnics participated in this study, including 42 students from Sultan Azlan Shah Polytechnic and 41 students from Sultan Idris Polytechnic. The survey, administered via Google Forms, included sections on demographics, CIDOS usage frequency, and levels of engagement and SDL. To capture the multidimensional nature of engagement, questions were adapted from the Student Engagement Scale (Fredricks, Blumenfeld, & Paris, 2004), measuring behavioral, emotional, and cognitive aspects of engagement on a 5-point Likert scale. SDL behaviors were assessed using items from the Self-Directed Learning Readiness Scale (Loyens, Magda, & Rikers, 2008), focusing on time management, goal-setting, and self-assessment. Data analysis involved descriptive statistics to summarize CIDOS usage patterns, as well as independent t-tests and Pearson correlation analyses to examine differences between institutions and relationships among variables.

4.0 Results and Analysis

Descriptive statistics indicated high engagement with CIDOS, with 67% of students accessing the LMS 2-4 times per week. Among the various resources available, video tutorials were the most frequently accessed, with 78% of respondents reporting regular use. Quizzes and lecture notes were also popular resources, with 65% and 72% of students, respectively, utilizing them frequently. Engagement scores revealed differences between institutions, with students from Sultan Azlan Shah Polytechnic reporting significantly higher engagement levels than those from Sultan Idris Polytechnic. Video tutorials and quizzes contributed most significantly to engagement, as students rated these resources as highly motivating and informative. However, the discussion forums showed lower engagement, indicating a possible area for improvement.

Comparative analysis using independent t-tests revealed that Sultan Azlan Shah Polytechnic students reported significantly higher engagement levels compared to their counterparts at Sultan Idris Polytechnic, with a mean engagement score of 4.02 ($SD = 0.56$) versus 3.63 ($SD = 0.72$), respectively, ($t(81) = 2.79$, $p < 0.01$). However, no significant differences were found in SDL scores between institutions, suggesting that while CIDOS effectively supports SDL, engagement levels may vary based on institutional practices or instructional strategies. Correlation analyses demonstrated a strong positive relationship between CIDOS usage frequency and engagement ($r = 0.52$, $p < 0.01$), as well as between engagement and SDL ($r = 0.67$, $p < 0.01$), underscoring the importance of engagement as a mediator for SDL. These findings align with previous research on LMS effectiveness, suggesting that student interaction with LMS content, particularly multimedia resources, contributes to both engagement and autonomous learning behaviors. These findings are summarised in Table 1.

Table 1. Descriptive Statistics and Comparative Analysis of CIDOS Usage, Student Engagement, and Self-Directed Learning (SDL)

Variable	Mean (M)	Standard Deviation (SD)	t-test (Sultan Azlan vs. Sultan Idris)	p-value
CIDOS Usage Frequency	3.82	0.63	0.57	> 0.05
Student Engagement	3.82	0.67	2.79	< 0.01
- Video Tutorials	4.15	0.54	-	-
- Quizzes	3.92	0.68	-	-
- Discussion Forums	2.65	0.82	-	-
Self-Directed Learning	3.75	0.73	1.05	> 0.05
- Time Management	3.85	0.71	-	-
- Goal Setting	3.68	0.64	-	-
Correlation	**Engagement and SDL**	r = 0.67 **(p < 0.01)**	**CIDOS and Engagement**	r = 0.52 **(p < 0.01)**

5.0 Discussion

The findings underscore CIDOS's potential as an effective tool for promoting SDL and engagement in polytechnic education, particularly in courses like interactive multimedia applications that require active participation and creative problem-solving. Frequent usage of CIDOS, especially multimedia tutorials and quizzes, appears to support SDL by allowing students to manage their learning autonomously. The higher engagement levels reported by Sultan Azlan Shah Polytechnic students may be attributed to a more interactive or engaging instructional approach to CIDOS, suggesting that how LMS resources are utilized can impact engagement outcomes. The strong correlations between CIDOS usage, engagement, and SDL support the view that engagement is essential for developing SDL skills, as engaged students are more likely to take control over their learning processes.

These results echo the findings of prior studies, such as Alotaibi (2016) and Bradley et al. (2008), which emphasize the role of LMS in supporting student engagement and SDL. In addition, the study's findings suggest that while CIDOS can effectively foster SDL, enhancements to interactive features, particularly discussion forums, could further support student engagement. Encouraging instructor participation in forums or integrating peer discussions into CIDOS could increase engagement and facilitate deeper learning.

6.0 Conclusion

This study demonstrates the value of CIDOS as a tool for enhancing student engagement and self-directed learning in Interactive Multimedia Application courses. By providing structured, interactive resources, CIDOS supports students in managing their own learning and motivates them to engage with course materials actively. The higher engagement levels observed among Sultan Azlan Shah Polytechnic students suggest that CIDOS's effectiveness may depend on the instructional approach, emphasizing the need for educators to integrate interactive and multimedia resources to foster deeper engagement. The study concludes that LMS platforms like CIDOS hold significant potential for promoting SDL and engagement, particularly in subjects that require hands-on learning and creativity. Future research could explore the long-term effects of CIDOS usage on SDL and academic performance across different fields of study or employ qualitative methods, such as interviews, to gain further insights into student perceptions of CIDOS.

7.0 Implications for Practice and Future Research

For educators and institutions, this study highlights the importance of curating engaging content on CIDOS to enhance SDL and student participation. Practical recommendations include utilizing interactive elements such as quizzes and video tutorials to foster engagement and supporting SDL by offering tools that allow students to set goals, manage time, and track progress independently. While this study focused on a specific course, the findings suggest that similar LMS tools could benefit a range of subjects by promoting autonomy and engagement. Future research could expand on these findings by investigating CIDOS's impact on other courses or by examining students' long-term engagement with LMS platforms through longitudinal studies. Additionally, qualitative research methods, such as interviews or focus groups, could provide deeper insights into how students perceive LMS platforms, identifying potential barriers to engagement or SDL that may require further intervention.

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The Implementation of Academic Quality Assurance System in State College for Islamic Studies

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Abstract

This article aims to explain the implementation of academic quality assurance, with the details of the socialitation, the setting up, the fulfillment, and the monitoring process of academic quality assurance system in IAIN Kediri, and IAIN Ponorogo. This research employes qualitative approach with multi-case design. The data collection methods were observation, in-depth interview, and documentation study. The data analysis technique was conducted by data reduction, data disply, and drawing conclusions. The result of the study shows that the implementation of quality assurance system in IAINs comprises socialization activities, process of setting up quality standart, process of fulfilling quality standard, and process of monitoring and evaluating standard achievement. Furthemore, the followings are the elaboration of the sub-focus of the result: (1) the socialization process is intended to improve the understanding and perception uniformity about the application of quality assurance; (2) the setting up process of academic quality is carried out by formulating the institutional vision, mission, and goal, establishing the quality documents, benchmarking, organizing workshop and traning on quality assurance; (3) the fulfillment process of academic quality standard is conducted though applying pois in quality, carriying out practicum, establishing faculty scientific cluster, and developing faculty human resource; (4) evaluation and monitoring process is conducted by external monitoring, and internal monitoring, External monitoring by BAN-PT, internal monitoring by LPM.

Key words: Quality Assurance System; Academic Quality; Quality Standard,

1.0 Introduction

Society expectation on the quality of higher education is high; to provide quality assurance, which is consistent and suIAINable (continuous improvement), IAINS have implemented quality assurance system. Quality assurance is processes of establishing quality standard and the achievement method, which is followed up by control mechanism process. Quality assurance is one of quality management techniques which is process oriented. It has a strategic position in the improvement of academic quality especially to increasing the accountability of good governance and to upgrading the organization wellbeing in higher education. The quality assurance system in higher education is distinguished into two, i.e., internal quality assurance and external quality assurance (Alip, 2023). Internal quality assurance is carried out by the university, whereas the external is performed by an independent body which is credible, professional, and authoritative to execute accreditation; such as BAN-PT (National Accreditation Agency for Higher Education) or any other international accreditation institution. Johnson (2019) write the caracteristif of quality education: making meaningful connections, doing significant work, self-regulated learning, collaborating, critical and creative thinking, nurturing the individual, reaching high standards, using authentic assessment.

The setting up process of academic quality standard in IAIN is carried out by (a) formulating the institutional vision, mission, and goal, (b) establishing the quality documents in the form of academic policies, quality procedure manual, and curriculum book, (c) benchmarking, i.e., revising quality standard by investigating the quality standard developed in other universities which was conducted by undertaking comparative study to other universities, (d) organizing workshop and training on quality assurance, which is aimed to the improvement of faculty service and performance as well as technical application of quality assurance; (3) the fulfillment process of academic quality standard is conducted through (a) applying points in quality, i.e., curriculum, learning process, and human resources development, (b) carrying out practicum to enriching the curriculum and at the same time giving a real experience to the students, (c) establishing

faculty scientific clusters, which consists of educational science, philosophy, research methodology, psychology, tafsir, hadith, fiqih, and social science, (d) developing faculty human resource through workshop, training, pursuing doctorate degree both domestic or abroad, short course, ARFI, and sandwich (Soetopo 2021: 3)

The focus of this research is the implementation of academic quality assurance system in IAINS which is further elaborated into sub-focuses as follows: (1) the sociali- zation process of academic quality assurance, (2) the setting up process of academic quality standard, (3) the fulfillment process of academic quality standard, and (4) the monitoring process of academic quality in IAIN Kediri, IAIN Ponorogo, and IAIN Tulungagung. Whilst the objective is to describe and explain the implementation of academic quality, with the details of the objective are as follows: (1) the socialization process of academic quality assurance, (2) the setting up process of academic quality standard, (3) the fulfillment process of academic quality standard, and (4) the monitoring process of academic quality in IAIN Kediri, IAIN Ponorogo, and Tulungagung.

This research employed qualitative approach with multi-case studies design. The data collection methods were observation, in-depth interview, and documentation study. The data validation was done deploying triangulation techniques, member checking, and peer discussion. The data analysis technique was conducted by data reduction, data display, and drawing conclusions.

2.0 The socialization process of academic standard

The result of the study shows that the implementation of quality assurance system in IAINS comprises socialization activities, process of setting up quality standard, process of fulfilling quality standard, and process of monitoring and evaluating standard achievement. Furthermore, the followings are the elaboration of the sub-focus of the research result: (1) the socialization process is intended to improve the understanding and perception uniformity about the application of quality assurance in the circle of IAIN academic by (a) transferring the efforts on quality improvement by the head of IAINS to the academics, (b) providing experts on quality assurance from other university as initial consultant, (c) establishing the internal quality assurance body (d) distributing documents about quality, IAIN strategic planning, reference book, and curriculum book to the academics to make them understand the vision, mission, programs in the institution quality application, This result relevance by Dikti (2018) PDCA (*Plan, Do, Check, Action*).

3.0 The setting up process of academic standard

The setting up process of academic quality standard in IAIN is carried out by (a) formulating the institutional vision, mission, and goal, (b) establishing the quality documents in the form of academic policies, quality procedure manual, and curriculum book, (c) benchmarking, i.e., revising quality standard by investigating the quality standard developed in other universities which was conducted by undertaking comparative study to other universities, (d) organizing workshop and training on quality assurance, which is aimed to the improvement of faculty service and performance as well as technical application of quality assurance (Tovey, 2016:75); (3) the fulfillment process of academic quality standard is conducted through (a) applying points in quality, i.e., curriculum, learning process, and human resources development, (b) carrying out practicum to enriching the curriculum and at the same time giving a real experience to the students, (c) establishing faculty scientific clusters, which consists of educational science, philosophy, research methodology, psychology, tafsir, hadith, fiqih, and social science, (d) developing faculty human resource through workshop, training, pursuing doctorate degree both domestic or abroad, short course, ARFI, and sandwich. This result relevance by Kotler (2017: 40) planning, implementing, controlling.

4.0 The fulfillment process of academic quality standard

The fulfillment process of academic quality standard is conducted through (a) applying points in quality, i.e., curriculum, learning process, and human resources development, (b) carrying out practicum to enriching the curriculum and at the same time giving a real experience to the students, (c) establishing faculty scientific clusters, which consists of educational science, philosophy, research methodology, psychology, tafsir,

hadith, fiqih, and social science, (d) developing faculty human resource through workshop, training, pursuing doctorate degree both domestic or abroad, short course, ARFI, and sandwich. This result relevance by Ariani (2018:156, Conley, B. L. 2014) quality documents include the quality manual, departmental procedure and responsibility, work instruction.

5.0 Evaluation and monitoring process

Evaluation and monitoring process is conducted by (a) external monitoring which was carried out by BAN-PT, while the internal was undertaken by the quality assurance center, (b) reviewing quality points four-yearly which involves lecturers, stakeholders, practitioners and alumni, (c) evaluating quality point on learning process to evaluate the process and the achievement. The implementation of quality assurance are quality firs, stakeholders-in, stakeholders satisfaction, the nex process in our stakeholders, speak with data, and upstream management (Dikti, 2013, Craf, A. (Ed). 2012)

6.0 Conclusion

The conclusion the study shows that the implementation of quality assurance system in IAINs comprises socialization activities, process of setting up quality standart, process of fulfilling quality standard, and process of monitoring and evaluating standard achievement. Furthemore, the followings are the elaboration of the sub-focus of the result: (1) the socialization process is intended to improve the understanding and perception uniformity about the application of quality assurance; (2) the setting up process of academic quality is carried out by formulating the institutional vision, mission, and goal, establishing the quality documents, benchmarking, organizing workshop and traning on quality assurance; (3) the fulfillment process of academic quality standard is conducted though applying pois in quality, carriying out practicum, establishing faculty scientific cluster, and developing faculty human resource; (4) evaluation and monitoring process is conducted by external monitoring, and internal monitoring, External monitoring by BAN-PT, internal monitoring by LPM.

The evaluation on the process is carried out by faculties and departments, whereas the evaluation on the achievement is performed by each subject convener, (d) faculty performance evaluation, which comprises report on the execution of the faculty workload performance, and survey on the student satisfaction on the faculty academic service.

Suggestions addressed to the head of IAIN and the chairman of the quality assurance center are to complete the organizational structure of the internal quality assurance and to state distinct job descriptions, to increase quality commitment, to improve understanding on the application of quality assurance, and to complete the quality documents. Suggestion for the directorate general of Islamic higher education, ministry of religious affairs RI and the directorate general of higher education, ministry of education and culture RI are for them to continuously encourage the implementation of quality assurance in higher education and to accomplish the policy on the model of the quality assurance. For further researcher, wider as well as deeper research needs to be carried out especially on quality assurance from any other angle.

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Exploring the Experiences of the New Moral Education Policy in Facilitating the Moral Development of Undergraduate Students in a Public University in Shandong, China

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Abstract

This study is originate from the recent moral education policies revolved in a new reform since 2017 in China. It is facing several significant challenges in implement, including not meeting the diverse students' needs, inadequate training and resources for educators and so on. Therefore, this study will try to explore the experiences and perceptions of undergraduate students regarding the new moral education policy implemented in public universities in Shandong, China. We try to understand how the policy facilitates the moral development of these students, talk about the education outcome, challenges, and impact of the policy on their ethical and moral growth. Specially, it will focus on 2 interaction: A.how moral education policies are implemented by institution; B. try to find out experiences, challenges, and impact on students' ethical and moral growth. I will choose a single case study in a public university in Shandong, China. It will cover one academic year, concentrating on specific events and processes related to moral education, such as curricular activities, student participation in moral education programs, and faculty involvement in the policy's implementation. Informants will contain students, faculty members and a few alumni.

Keywords: Experiences; New Moral Education Policy; Moral Development; Undergraduate Students; Public University

1. Introduction

This study investigates the experiences of students and educators with China's new moral education policy in a public university in Shandong.

In order to meet the rapid economic and social development, Chinese government responded with new education reform since the year of 2017, especially in moral education area, proceeding a series of new policies. But both educators and students are facing challenges during implementation. For example, educators are often confused due to unclear and inadequate instrumental resources; students usually face different ethical difficulties as they have different background and belief. This research aims to deal with these problem, try to explore how the policy facilitate in fostering moral development and to identify challenges faced during implementation. We will try to understand both the students and educators' experiences and perspectives, which can illuminate how policies are internalized or resisted, as well as the dynamic of moral development.

2. RO and RQ

In this study, I will try to explore the experiences and perceptions of undergraduate students regarding the new moral education policy implemented in public universities in Shandong, China. The research purpose is to understand how the policy facilitates the moral development of these students, talk about the education outcome, challenges, and impact of the policy on their ethical and moral growth.

In order to achieve the research objection, I propose questions as follows:

(1) How do undergraduate students in public universities in Shandong, China perceive the implementation of the new moral education policy?

(2) What are the experiences of undergraduate students in facilitating their moral development?
(3) What challenges do undergraduate students face in engaging with the new moral education policy, and how do these challenges facilitate their moral growth?

3. Methodology

A qualitative research approach is employed, using a single case study from a public university in Shandong. The case is chosen due to its diverse student population, comprehensive moral education programs, and accessibility for the researcher. The fieldwork location Shandong Province is the center of Confucian culture, which influence the values and educational practices in the province. It is one of the country's most populous and economically developed provinces, and has served as a testing ground for this new reform.

The study will cover one academic year, concentrating on specific events and processes related to moral education, such as curricular activities, student participation in moral education programs, and faculty involvement in the policy's implementation. Informants are mainly selected in the sophomore enrolling in a full-time undergraduate program at this university, as well as faculty members and several alumni.

Data is gathered through semi-structured in-depth interviews, participant observation, document analysis and focus group, using non-probabilistic purposive sampling until gaining theoretical saturation. This study will take several measures to enhance the validity and reliability--triangulation of theory, data sources and analysis; prolonging engagement and persistent observation; member checking; expert checking.

This study will apply for ethic approval for the Ethics Committee for Research Involving Human Subjects at Universiti Putra Malaysia (Short for JKEUPM).

4. Key Areas of Focus

The key areas of focus for this study include:

Exploring how the new policy has been integrated into the educational system by institution and its influence on moral education, identifying differences between the new policy and previous policies, particularly in the new context of collectivism, legal integration, and traditional cultural values.

Investigating the experiences, challenges, and perceptions of both students and educators with the policy, involving perceived successes and challenges, in order to understanding how the policy contributes to the moral growth and development of students.

Exploring how the policy aligns with the broader goals of comprehensive student development and the evolving moral framework in Chinese higher education.

5. Expected Outcomes

The research is expected to provide a detailed understanding of how the new moral education policy impacts the moral development of undergraduate students in China, specifically at a public university in Shandong, as well as insights into the facilitating of the new policy in achieving its moral education goals, based on student and educator experiences. This work can help us identify the potential areas for policy improvement to better support comprehensive moral development in higher education.

This study also apply to contributing to the academic finding on moral education, with new insights on the interplay between policy, practice, and moral development in the Chinese context, focusing on insights into potential improvements for moral education strategies, as well as practical suggestions for policymakers and educators to enhance the moral education curriculum and non-curriculum.

6. Conclusion

This study will offer valuable perspectives on the new moral education policy, helping to bridge the gap between policy objectives and actual outcomes in moral development. It aims to foster a more effective educational environment that supports comprehensive moral growth in students while addressing the challenges faced by educators.

7. Acknowledgements

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Beyond Indoctrination: A Critical Examination of Integrating the Moral Domain in Moral Education

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Abstract

This article discusses a critical approach to moral education that goes beyond traditional indoctrination methods. This approach, which focuses on passively transferring values, often neglects students' ability to think critically and reflectively. Moral education that relies solely on indoctrination tends to produce students who mechanically adhere to values without understanding the moral context behind their decisions. This study proposes a holistic integration of the moral domain by emphasizing critical thinking, empathy, and moral autonomy. By implementing methods such as service learning, personal narrative, and emotional reflection, students can connect moral values to the real world. This study calls for collaboration from educators, policymakers, and society to ensure that moral education becomes more inclusive and prepared to meet the ethical challenges of the modern world.

Keywords: Indoctrination; Moral education; Critical thinking; Empathy; service learning

1.0 Introduction

Moral education is often associated with an indoctrination approach, where values are conveyed to students without allowing for critical reflection. This approach emphasizes passive acceptance of established norms, which leaves students ill-prepared to face the complex moral dilemmas of modern life. Indoctrination limits students to mechanically complying with values, without understanding the rationale behind their decisions or respecting diverse moral perspectives. On the other hand, an increasingly complex world requires a more reflective and holistic approach. Effective moral education must go beyond indoctrination, integrating cognitive, emotional, and social aspects to form critical and ethical learners. This approach involves the use of personal narratives, service learning, and open discussions that allow students to actively explore moral values. This article aims to examine the challenges and opportunities in overcoming the effects of indoctrination, while proposing alternative methods to foster a generation of responsible and reflective learners.

2.0 Literature Review

Holistic approaches to moral education focus on the holistic development of students, involving cognitive, emotional, and social aspects. Studies have shown that these approaches, such as Socratic questioning and service learning, are effective in fostering critical thinking and empathy (Messy et al., 2023; Surikova & Sidorova, 2023). However, there are significant challenges in shaping teachers as ethical facilitators who understand the value of diverse cultures and moral contexts in a global society (Akram et al., 2021). Technology also plays an important role, but its use needs to be planned to avoid the influence of the digital echo chamber that limits students' moral perspectives (Badjanova & Iliško, 2015).

3.0 Implications

Moral education plays a critical role in shaping students' personalities holistically. The main implication is the need to revamp moral education curricula to be more inclusive and interactive. Curricula should emphasize the integration of cognitive, emotional, and social elements to ensure that students can understand moral values in a deeper and more practical context (Khashimova et al., 2021). Teachers, on the other hand,

need continuous training to be effective facilitators, especially in creating classroom environments that enable critical and reflective discussions about complex moral issues (Nucci & Ilten-Gee, 2018). Technology should also be leveraged to expand access to diverse and contextual moral learning resources. However, its use needs to be carefully planned to avoid the influence of the digital echo chamber that may limit students' perspectives (Cam, 2016). Supporting educational policies that respect cultural and value differences within student communities is essential to ensure that moral education can meet global needs while maintaining local identities (Sandibaeva, 2023).

4.0 Suggestions

Service-learning projects are an effective tool for helping students understand moral values through direct experience. Studies have shown that such activities not only increase empathy and a sense of social responsibility, but also help students connect moral theories with real-world realities (Surikova & Sidorova, 2023). In addition, creative narratives such as literature, art, and film can be used to trigger deeper moral reflection among students, especially when they face ethical dilemmas (Er-Razine, 2023). Closer collaboration between educational institutions, policymakers, and communities is needed to develop sustainable moral education policies. This holistic approach will not only benefit students but also create an education system that is more responsive to the social and cultural challenges faced by modern society (Chen, 2021). Finally, higher education institutions should consider introducing moral assessment mechanisms that can measure the effectiveness of moral education interventions in shaping students' personalities (Cai, 2022).

5.0 Conclusion

Moral education is not just a static process of transferring values but is a dynamic journey that requires a reflective and holistic approach. In a modern world full of complex moral challenges, moral education needs to go beyond indoctrination by providing space for critical thinking, empathy, and moral autonomy. This approach not only helps students understand fundamental values but also enables them to apply those values in diverse and challenging real-life situations. The effectiveness of moral education also depends on the collective efforts of various parties. Educators need to be continuously trained to be competent and ethical facilitators, while policymakers must provide structural support to ensure the effectiveness of a holistic and inclusive approach. In addition, the community plays an important role in building a learning environment that values diversity and culture. In conclusion, effective moral education requires a shared commitment to nurturing students into individuals who are not only knowledgeable but also ethical, responsible, and prepared to face global moral challenges. With close collaboration between educators, policymakers, and society, moral education can be the foundation for the formation of a more just, ethical, and inclusive society.

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Navigating Career Identity Formation among Human Resource Development Undergraduates in Malaysia: Perspectives from the Literature

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Abstract

Career identity is defined as the complex process of integrating multiple facets of one's identity with evolving career roles, shaped by a combination of internal motivations and external influences. This study investigates the formation of career identity among undergraduate students pursuing Human Resource Development (HRD) careers at public universities in Malaysia, offering insights into how these students navigate career-related aspirations within the HRD field. Career identity formation is critical in professional development, especially in HRD, where a clear sense of self and purpose is essential to address dynamic organizational demands. The transition from secondary to tertiary education in Malaysia introduces unique challenges and opportunities, impacting how students conceptualize and solidify their career identities. This conceptual paper examines the breadth of existing literature, focusing on definitions, key theoretical frameworks, and diverse perspectives on career identity formation. By synthesizing relevant theories, this study aims to provide a comprehensive understanding of the forces shaping career identity in the Malaysian higher education context, underscoring the importance of targeted support to strengthen HRD students' professional self-concept and readiness for future roles.

Keywords: human resource development, career identity, career development, young adults

1.0 Introduction

The field of human resource development (HRD) expects individuals to possess a strong sense of self and a clear understanding of their career goals and aspirations. The process of establishing a career identity in this field requires more than just academic knowledge. It also involves enhancing interpersonal skills, self-awareness, and professional values. Studies have indicated that students with a clear sense of their career path tend to be more determined, involved, and accomplished in their studies and future professional works (Savickas, 2005). The intention of this paper is to discuss about the concept of career identify formation among human resource development (HRD) undergraduate students. The purpose of this paper is to provide the theoretical base for understanding how young adults develop their sense of identity as future human resource practitioners.

2.0 Conceptualizing Career Identity

Career identity denotes how a person sees themselves concerning their career aspirations, values, and roles. It encompasses their self-perception within their chosen career path, including motivations, goals, and their sense of belonging within that profession (Savickas, 2011). It is a structure of meaning that allows individuals to position themselves within roles that shape their self-esteem and personal growth (Byers & Meadows, 2021). The formation of career identity is considered a primary component of career development and a major developmental task during adolescence and young adulthood. This process is lifelong and central to major career development theories, shaping not only vocational behavior but also wider outcomes such as psychosocial functioning (Gruber, Crispeels, & D'Este, 2023). This concept is particularly significant during university years, marked by critical transitions and the exploration of career options (Arnett, 2000; Stringer & Kerpelman, 2010).

The process of developing the career identity is referred to as the career identity formation process. As stated by Savickas (2005), career identity is a continual process of building and improving one's understanding of their occupational self-image. This process incorporates personal characteristics, career aspirations, and values, influencing individuals' decisions and paths in their careers and is influenced by various factors, including personal experiences, learning opportunities, and the quality of career choices and planning. Most of the existing research on career identity formation has been conducted in Western countries, such as the United States, Europe, and Australia (Fouad & Bynner, 2008; Hirschi, 2012). These studies have identified various factors influencing career identity, including self-efficacy, social support, and the educational environment. For instance, Hirschi (2012) found that students' confidence in their abilities and the support they receive from peers and mentors are critical in shaping their career choices and identity.

However, there is a lack of research focusing on career identity formation among students in non-Western contexts, particularly in Malaysia. The socio-cultural, economic, and educational environments in Malaysia differ significantly from those in Western countries, suggesting that the factors influencing career identity formation may also differ. This cultural context can affect how students perceive their career options, the support they receive, and their overall career development process. For students pursuing careers in Human Resources Development (HRD), forming a coherent career identity that aligns with the demands and opportunities of the HRD field is even more crucial. Because HRD involves complex roles such as talent management, organizational development, and strategic planning, a well-developed professional identity ensures readiness of the students to embark on this dynamic career pathway (Trede et al., 2012). This study wishes to expand the understanding of how HRD students develop their career identiy process during their undergraduate years at the university, as part of their career development as HR.

3.0 Theoretical Overview

As part of this research paper, a literature review has been conducted in order seek relevant theories that may serve as underpinning theoretical framework for investigating career identify formation process. Four theories have been identified for this purpose, with overview discussion for each theory described below.

i. Chickering’s Theory of Psychosocial Development (Seven Vectors)

Chickering’s Theory of Psychosocial Development includes its seven vectors which are developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. Chickering specifically focused on college because students during this time explore different aspects of themselves (e.g., interests, autonomy, career decisions) while deciding the type of person they will eventually become. Chickering preferred the term “vectors” over “stages” because he argued that no definitively specified timeline existed for students to develop certain areas of their character and personality (Thomas & Chickering, 1984). Chickering (1969) suggested that movement along the vectors may vary in quantity and quality; thus, progression does not necessarily occur in a linear stage-like fashion. Instead, students’ development across the seven vectors may appear sporadic as they can work on more than one area of their identity at any given time (Schuh, 1989). The sequence in which the vectors are typically presented suggests that some tasks are likely to be experienced in the earlier stages of higher education and are better served as building blocks for students’ identity development (Chickering & Reisser, 1993).

ii. Astin’s Theory of Student Involvement

Astin’s Theory of Student’s Involvement is a developmental theory that highlights the role of student’s engagement in higher education. The theory can be used to investigate how student’s engagement in academic and extracurricular activities impacting their development. Furthermore, this theory focuses on emphasizing the role of the surroundings of the students in higher education as well as the quantity and quality of student involvement. The theory asserts that students in higher education learn and grow

much more when they are actively joining in various forms of college experience, which includes academic and extracurricular activities such as joining associations, become a member committee of a program, directing a program and much more. Astin's Theory of Student's Involvement comprise of three key components which are (1) Inputs, (2) Environment, and (3) Outcomes. Inputs refers to the demographics, background and previous experiences of individuals. Environment comprises of the experiences during college or university life and outcomes refers to the characteristics, knowledge, attitudes, beliefs, and values that exist after the student has graduated. Astin (1999) discovered that stronger career identity and higher levels of satisfaction are associated to involvement in student organizations.

iii. Pascarella's Model for Assessing Student Change

Ernest T. Pascarella's General Model for Assessing Change highlights how various factors shape student learning and development in higher education. The model underscores the interplay between students' backgrounds, institutional characteristics, social interactions, and personal effort. Students' precollege traits—such as personal qualities, family history, and prior educational experiences—affect how they engage with the college environment. Institutional factors, including size, resources, and organizational practices, further shape the quality of their experiences. Regular, positive interactions with peers, instructors, and mentors foster learning and personal growth, while active effort in academic and extracurricular activities amplifies these outcomes. Together, these experiences influence cognitive development, including critical thinking, information literacy, and intellectual skills. This process connects directly to career identity formation, as students' interactions, efforts, and developmental gains shape their professional aspirations and sense of purpose.

iv. Super's Theory of Career Development Theory

Super's model of vocational development was first published in 1953. Super's main argument is that when people make important life decisions, like career choices, the choice is part of a process rather than just an event. Super's theory of career development is a well-known framework that describes career development as a dynamic process involving five stages: growth, exploration, establishment, maintenance, and decline. Super's theory has been widely recognized and applied in various fields, including career counselling and vocational psychology. It has influenced research on career stages and has been instrumental in guiding individuals through their career development processes (Burns, 2008). Super's emphasis on the dynamic and longitudinal nature of career development, focusing on self-concept implementation, has been a cornerstone in understanding how individuals navigate their career paths (House, 2004). This perspective is especially relevant in guiding individuals through transitions, helping them align their self-perceptions with professional goals, as part of career identity formation process.

4.0 Conclusion

Career identity is not a static construct but a continuous process of self-discovery and adaptation, influenced by internal motivations and external demands. For HRD students, this process is particularly significant as it underpins their ability to address complex organizational challenges and align with the dynamic nature of the HRD profession in the near future of their career. The four theories discussed collectively emphasize the importance of holistic student development, active participation in academic and extracurricular activities, and the alignment of personal values with professional goals in fostering a robust career identity. This paper provide some basis for exploring the nuances of the career identity formation process through empirical study.

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The Role of Parents' Self-Reflection in the Process of Raising Preschool Children in the Hui Community

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Abstract

With the continuous development of industrialization and urbanization in China, millions of migrant workers have migrated from the rural areas to the cities in order to improve the living conditions of their families and children. Some researchers have shown that changes in early childhood family structure, poor family communication, and reduced maternal positive attention are statistically associated with higher rates of internalizing behavior problems (IBPs) in children (Womack et al., 2019). In a family system, parents act as natural caregivers who play a key role and assume a natural mission in improving the health and good operation of the family system. Self-reflection is a natural ability among parents and plays an important role in raising children.This study aims to explore how self-reflection functions among Muslim parents in the context of preschool education. Using a qualitative research design and a multi-case, single-place case study method with purposive sampling, nine kindergarten children's parents were selected for semi-structured in-depth interviews. Additional methods included document analysis, observation, and data source triangulation, with the collected data analyzed in relation to the research questions. To ensure reliability and validity, member checking and peer examination were employed. The study adheres to the academic norms and ethics of the relevant research field, safeguarding participants' private information and providing informed consent for their involvement. The analysis revealed three key themes: a positive and receptive attitude; awareness of problems and cognitive breakthroughs; and emotional regulation and self-renewal. The results indicate that mothers can effectively identify and adjust their emotional states through self-reflection, thus offering positive emotional support to their children. Furthermore, parents' self-reflection not only enhances interactions within the parent-child and family relationships but also broadens self-awareness and fosters personal growth. This study can inform the development of family education strategies and serve as a reference for parent training programs.

Keywords: Children development; Family Education; Hui Community; Parent Training; Preschool; Self-reflection.

1.0 Introduction

In this study, parental self-reflection is the ability of parents to imagine that their children are motivated by internal mental states such as emotions, desires, and to reflect on their own internal psychological experiences and how these experiences are formed and changed through interactions with their children. Parental self-reflection also includes understanding their own actual situation through self-awareness, including the inner part of the concept and awareness, while having a basic understanding and judgment of the external environment related to themselves and family members, and then taking positive coping measures. In this study, self-reflection is mainly concerned with the self-awareness and thinking of the individual as a parent in the process of parent-child interaction and the re-thinking of their own educational concepts. It also includes parents' awareness and thinking of their own emotional and behavioral responses in the process of parent-child interaction. So, this study aims to explore how parental self-reflection plays a role in process of child-rearing.

2.0 Literature Review

Reflective ability, as a mental function of the brain, allows us to realize that all human actions have their own meaning due to the internal mental state of each person. This ability allows parents to learn more about themselves and to truly "read" their children, thus establishing a stronger parent-child relationship with their children (Regina Pally, 2018). Parental reflective functioning refers to the parents' ability to reflect on their children's mental states, and is increasingly considered to be a key feature of competent parenting. However, to date, no study has empirically investigated this assumption (Gordo, et al. 2020). According to a quantitative study by Yaakov et al. (2022), parents' reflective skills moderated the association between avoidant attachment orientation and parental stress. According to Tchiki Davis (2019), self-reflection is defined as a mental process you can use to grow your understanding of who you are, what your values are, and why you think, feel, and act the way you do.

3.0 Implications

This study is based on the actual situation of local culture and community. In the context of Hui cultural community, parents reflect on their children's educational concepts and understand their identity, which have some characteristics of Hui group. This study provides narrative details for understanding the challenges of parental reflection, as well as a systematic and in-depth perspective for understanding the struggles and responses of Hui Muslim parents in reality, and also provides qualitative research data to support the development of family guidance strategies and parent training programs.

4.0 Suggestions

Since only one sample of Hui community was selected in this study, it is suggested that other Hui communities should be selected for further research to obtain more abundant data to enrich the research on Hui community. Based on the findings of this study, at the practical level, the researcher suggest setting up parent support group in the community, integrating resources from different disciplines and reliable information channels to provide knowledge information and psychological support for parent support group.

5.0 Conclusion

The effective path of parental self-reflection begins with positive attitude and acceptance mentality as a state of preparation, which is also the basis for the construction of a good parent-child relationship. Role-based self-reflection needs to re-examine preconceptions to build a breakthrough in habitual thinking, and this process may be accompanied by some "signals" and sometimes even crises or trauma. Re-examination is to further identify the real problem, and awareness of the real problem makes it possible to respond effectively. In the process of raising children, emotion is one of the important objects and contents of parents' self-reflection, especially for mothers, through parents' self-emotion regulation can not only effectively promote the healthy development of family relations, but also an effective way for parents to self-innovation and self-growth.

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Kaedah Fuzzy Delphi: Reka Bentuk Pembangunan Modul dengan Realiti Terimbuh Terhadap Pencapaian, Daya Visualisasi Ruang dan Motivasi bagi Topik Transformasi Isometri Tingkatan 2

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Abstrak

Tujuan kajian ini dijalankan termasuklah mencapai kesepakatan pakar tentang keperluan komponen utama dan komponen penting pada setiap struktur bagi reka bentuk dan pembangunan modul dengan realiti terimbuh terhadap pencapaian, daya visual ruang dan motivasi bagi topik Transformasi Isometri tingkatan 2 (MAR4TI). Kaedah Fuzzy Delphi (FDM) diguna pakai dalam kajian ini dalam usaha mengumpulkan seramai 16 orang pakar sebagai responden bagi pelbagai bidang, meliputi bidang pendidikan matematik, modul pembelajaran, realiti terimbuh dan visualisasi. Borang soal selidik kajian mempunyai 32 item yang merangkumi reka bentuk dan pembangunan modul MAR4TI yang dipecahkan kepada empat dimensi, yakni penetapan objektif, memilih isi kandungan, strategi pembelajaran, dan pemilihan logistik. Data telah dianalisis menggunakan penomboran segi tiga fuzzy. Hasil kajian menunjukkan bahawa pakar bersetuju tentang komponen utama modul MAR4TI dan pembangunannya adalah pada tahap yang baik. Selain itu, konsensus pakar menunjukkan bahawa keputusan keseluruhan kajian adalah melebihi 75%, nilai threshold (d) tidak melebihi 0.2, dan α-cut lebih daripada 0.5. Kesemua item bagi keempat-empat komponen penting menepati syarat Triangular Fuzzy Numbers dan diterima. Transformasi Isometri adalah topik yang terkandung dalam sillibus Matematik tingkatan 2 KSSM, justeru modul MAR4TI yang dibangunkan berdasarkan konsensus pakar berpotensi memperbaiki kualiti pengajaran topik ini. Penggunaan realiti terimbuh dapat meningkatkan daya tarikan dan keberkesanan penyampaian topik yang bersifat abstrak, seterusnya membantu guru menyampaikan konsep dengan lebih jelas dan interaktif. Dengan demikian, elemen dan komponen utama yang ada dalam MAR4TI diharapkan dapat membantu murid memahami topik ini dengan lebih baik, sekali gus menjadikan pembelajaran topik ini lebih menarik dan efektif.

Kata kunci: Fuzzy delphi; Reka bentuk pembangunan; Modul; Transformasi isometri; Visual ruang

1.0 Latar Belakang

Abad ke-21 telah menyaksikan kesan mendalam teknologi terhadap pengajaran dan pembelajaran (PdP) murid dan memperkenalkan cabaran dan peluang baru bagi para pendidik. Perkembangan pesat teknologi dalam sistem pendidikan memainkan peranan penting dalam meningkatkan PdP matematik (KPM, 2016). Pengintegrasian teknologi di sekolah menawarkan banyak kelebihan seperti peningkatan pemikiran kritis dan kreatif, pembangunan kemahiran abad ke-21 yang pelbagai dimensi, serta pencapaian akademik yang lebih baik (Yılmaz, 2021). Teknologi juga memungkinkan penciptaan pengalaman pembelajaran yang imersif melalui teknologi realiti lanjutan seperti realiti terimbuh (AR), realiti maya, dan realiti campuran (Meccawy, 2022).

Transformasi Isometri adalah salah satu topik penting dalam geometri di sekolah menengah. Tinjauan awal semasa fasa analisis keperluan bersama lima orang pakar bidang pendidikan matematik mendapati murid sering menghadapi cabaran dalam memahami konsep ini kerana ia memerlukan kemahiran visualisasi ruang yang tinggi. Integrasi AR dalam pendidikan menawarkan banyak kelebihan seperti meningkatkan daya visualisasi ruang murid (Danakorn Nincarean et al., 2019). AR menyediakan pengalaman realistik yang membantu murid memahami konsep yang kompleks (Kamphuis et al., 2014) dan

meningkatkan motivasi serta pencapaian dalam pelbagai bidang pendidikan. AR membolehkan eksplorasi dan interaksi dengan objek pembelajaran 3D, menjadikan pembelajaran lebih dinamik dan interaktif (Kamal & Junaini, 2019). AR mengintegrasikan model, proses, animasi, dan simulasi dalam pendidikan untuk memupuk interaksi yang lebih aktif dan intuitif dalam kalangan murid (Grodotzki et al., 2023). Selain itu, AR menyokong interaksi dan kreativiti murid, memberi impak positif kepada hasil pembelajaran (Kangmj et al., 2023).

Modul adalah program pembelajaran yang tersusun yang bertujuan mencapai objektif tertentu (Yusop, 2013). Menurut Noah dan Ahmad (2005), modul adalah sumber pengajaran yang disusun secara sistematik yang merangkumi topik tertentu untuk memudahkan pembelajaran murid. Modul bertujuan mengenal pasti objektif pengajaran dengan jelas dan menyusun aktiviti secara sistematik (Milano & Ullius, 1998; Noah & Ahmad, 2005). Modul pembelajaran meningkatkan prestasi dan motivasi murid (Rahman et al., 2021).

Kemajuan pesat teknologi telah membolehkan penyelidik mengintegrasikan teknologi dalam pengajaran matematik. Contohnya, Md Yunus et al. (2019) membangunkan modul Geometri menggunakan Geometer Sketchpad, dan Ramli et al. (2024) mencipta modul Kalkulus untuk murid matrikulasi menggunakan pendekatan kelas berbalik. Suryani et al. (2020) membangunkan modul dengan Geogebra untuk topik ruang. Penyelidikan oleh Bakar dan Ismail (2020) menguji modul berasaskan tutorial sebagai intervensi pembelajaran matematik, mendapati ia sangat berguna. Halimah et al. (2022) membangunkan model pembelajaran probing-prompting dibantu modul matematik untuk meningkatkan motivasi dan hasil pembelajaran murid, menunjukkan hasil yang positif. Suyanti et al. (2021) memberi tumpuan kepada pembangunan modul digital berasaskan Pendidikan Matematik Realistik, menunjukkan keberkesanannya dalam pembelajaran matematik peringkat rendah. Nadzri et al. (2022) membangunkan modul GEOMAR3 menggunakan AR untuk topik ruang.

Pengintegrasian AR dalam modul meningkatkan pembelajaran fleksibel yang selari dengan gaya pembelajaran murid (Nadzri et al., 2022). Selain itu, penggunaan modul pengajaran dengan teknologi pembelajaran yang sesuai dan melatih guru menggunakan teknologi ini dapat meningkatkan keberkesanan proses pembelajaran (Ismail & Daoh, 2021). Modul pembelajaran yang interaktif dan dinamik dapat membantu murid memahami konsep dengan lebih menyeronokkan, akhirnya meningkatkan motivasi dan pencapaian (Shamsudin & Surat, 2023). Kajian terdahulu juga menunjukkan bahawa modul mempunyai impak positif terhadap pembelajaran matematik. Oleh itu, penggunaan modul pembelajaran dalam matematik adalah signifikan kerana ia dapat meningkatkan pencapaian dan motivasi murid di dalam kelas.

Kaedah Delphi ialah pendekatan yang sering diterapkan untuk mengumpulkan data bagi sesebuah kajian mengikut konsensus sebuah pasukan pakar bagi isu yang sedang diteliti (Ahmad et al., 2014). Keistimewaan kaedah tersebut ialah kemampuannya untuk menjana pelbagai teknik bagi memperoleh data empirikal, termasuk kaedah Fuzzy Delphi (FDM). FDM ialah kaedah pengukuran yang telah dimodifikasi daripada kaedah Delphi yang asalnya pada tahun 1988 dipelopori oleh Kaufman dan Gupta . Seterusnya, kaedah ini menggabungkan kaedah Delphi dengan set penomboran fuzzy (Yusop, 2013). Ini menunjukkan bahawa FDM bukanlah satu pendekatan yang baharu kerana pengasasannya ialah kaedah Delphi klasik. Ini bermaksud responden yang dilibatkan perlu berkelayakan sebagai pakar dalam bidang yang berkaitan dengan kajian. Dengan itu, penambahbaikan demikian menjadikan FDM sebagai pendekatan pengukuran yang lebih berkesan dan berupaya menangani isu-isu yang mengandungi ketidakpastian dan ketidaktentuan. Kajian terdahulu mengemukakan bahawa FDM menggabungkan teori set fuzzy (kabur) dengan kaedah Delphi tradisional (klasik). Dalam pada itu, teori set fuzzy merupakan kesinambungan pengembangan teori set klasik, yakni setiap elemen dalam sesuatu set dinilai mengikut binary set (tidak atau ya) (Zadeh, 1965). Teori set fuzzy turut membolehkan penilaian secara bertahap bagi setiap elemen yang diteliti. Nilai bagi penomboran fuzzy berada antara 0 hingga 1 atau dalam julat unit (0, 1) (Asra et al., 2014). Tambahan lagi, kajian ini memanfaatkan FDM untuk mengenal pasti faktor penting dalam penilaian elemen serta komponen utama bagi modul MAR4TI, iaitu modul pembelajaran integrasi AR untuk tajuk Transformasi Isometri Tingkatan 2 di Malaysia. Tujuan penggunaan FDM adalah untuk mencapai persetujuan empat kategori pakar, yakni modul pembelajaran, visualisasi, pendidikan, AR dan matematik. Bagi menentukan kriteria terbaik, keempat-empat kategori pakar ini dipilih untuk pemilihan elemen selain mengenal pasti faktor utama yang tidak boleh diabaikan dalam pemilihan setiap komponen utama.

2.0 Metodologi

2.1 Reka Bentuk Kajian

Kajian ini mengadaptasi pendekatan kuantitatif dengan menerapkan FDM untuk mencapai konsensus pakar mengenai keperluan elemen MAR4TI berlandaskan konsensus mereka. Kaedah ini menerapkan penyepaduan teori set fuzzy dengan kaedah Delphi klasik. Skala fuzzy akan menggantikan Skala Likert yang dipilih oleh pakar mengguna pakai penomboran fuzzy yang merupakan istilah binary (0, 1). Integrasi penomboran fuzzy ini menjana tiga nilai: nilai maksimum yang dipilih oleh pakar, nilai termunasabah, dan nilai minimum.

2.2 Instrumen Kajian

Sebagai alat untuk mengumpul data kuantitatif berkaitan dengan elemen MAR4TI, kajian memanfaatkan soal selidik. Soal selidik ini telah dinilai dan dimurnikan oleh pakar serta disahkan dari segi kandungan dan bahasanya oleh pakar dalam bidang tersebut. Penggunaan soal selidik ini mematuhi syarat dan kriteria FDM, yang mengguna pakai rumus matematik bagi memperoleh konsensus pakar. Dalam pada itu, instrumen yang diguna pakai ini direka khusus mengikut keperluan kajian. Soalan-soalan soal selidik dibangunkan berdasarkan tinjauan literatur dan perbincangan dengan pakar dalam bidang pendidikan matematik. Soal selidik reka bentuk MAR4TI yang dicadangkan merangkumi lima konstruk utama yang terhasil daripada teori kognitif pembelajaran melalui multimedia Mayer, teori konstruktivisme dan model pembangunan modul Sidek seperti yang disenaraikan.

2.3 Proses Pengumpulan dan Analisis Data

Proses pengumpulan serta analisis data dijalankan dengan mengikuti setiap langkah dalam pelaksanaan FDM sepertimana yang telah digariskan:

Langkah 1: Memilih pakar.

Sebanyak 16 orang pakar telah dipilih menerusi kaedah pensampelan bertujuan, dengan mempertimbangkan kepakaran mereka dalam pelbagai bidang seperti modul pembelajaran, visualisasi, AR dan pendidikan matematik. Menurut Aziz (2017), individu yang memiliki pengalaman kerja dengan tempoh lebih dari 10 tahun serta tidak bertukar-tukar bidang layak dianggap sebagai pakar. Langkah ini amat mustahak untuk memastikan pandangan yang diperoleh adalah tepat dan sesuai dalam konteks kajian.

Para pakar yang dilibatkan dalam kajian ini merangkumi pensyarah universiti yang menyertai secara sukarela dan guru matematik yang bertugas di sekolah. Maklumat yang dikumpulkan tentang pakar termasuk bidang kepakaran, jawatan, pengalaman, jantina dan tahap pendidikan mereka. Sebahagian besar pakar dalam kajian ini memiliki pengalaman antara enam hingga 21 tahun, dengan penglibatan langsung dalam modul pembelajaran, AR, pendidikan matematik dan visualisasi. Creswell dan Creswell (2017) menyatakan, individu yang bertugas antara lima ke 10 tahun juga boleh diklasifikasikan sebagai pakar.

Bilangan pakar yang ditetapkan mematuhi saranan Jones dan Twiss (1978), yang mencadangkan jumlah pakar bagi kajian Delphi sekitar 10 - 50 orang. Perkara yang sama didukung oleh Adler dan Ziglo (1996), yakni bilangan terbaik adalah antara 10 - 15 orang apabila keseragaman dan konsensus pandangan pakar adalah tinggi. Jadual 1 memaparkan maklumat demografi serta bilangan pakar yang dilibatkan.

Jadual 1. Maklumat Demografi Responden

	Tahap Pendidikan			Jantina	
Bidang Kepakaran	Ijazah	Sarjana	PhD	Lelaki	Perempuan
Pendidikan Matematik	13			2	11
AR		1			1
Visualisasi			1	1	
Modul pembelajaran			1	1	
Jumlah	16			16	

Langkah 2: Membina soal selidik untuk pakar.

Pembinaan soal selidik dapat dijalankan dengan beberapa kaedah, termasuk tinjauan literatur serta temu bual. Menurut Powell (2003), kaedah Delphi sangat mudah disesuaikan untuk mendapatkan kesepakatan di kalangan pakar. Pada pusingan pertama kaedah Delphi, isu yang berkaitan dikenalpasti melalui temu bual dengan pakar. Selain itu, isu juga boleh dikenalpasti menggunakan soalan terbuka. Selain itu, terdapat kaedah lain yang dapat digunakan untuk mendapatkan isu-isu berkenaan, seperti melalui soal selidik yang diambil daripada tinjauan literatur (Dullfield, 1993).

Dalam fasa reka bentuk dan pembangunan MAR4TI, dasar kajian dibina berlandaskan gabungan temu bual dengan pakar dan analisis pemetaan kajian literatur yang dijalankan sewaktu fasa satu. Sejumlah 32 item telah dibina bagi enam komponen teras dalam soal selidik untuk reka bentuk dan pembangunan MAR4TI.

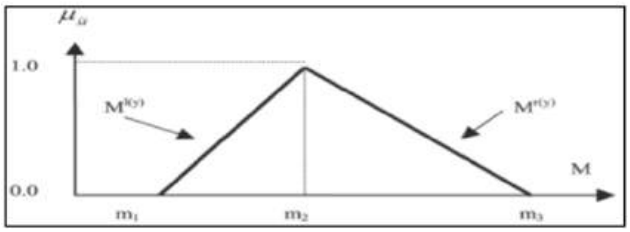
Langkah 3: Mengagihkan borang soal selidik.

Soal selidik diedarkan untuk mengumpul maklumat menggunakan Google Form, bersama dengan pautan Uniform Resource Locator (URL). Pautan ini telah dikongsi melalui aplikasi Telegram serta WhatsApp.

Langkah 4: Menukar pemboleh ubah linguistik.

Langkah ini menukarkan semua skala pemboleh ubah linguistik kepada nombor fuzzy segi tiga (Triangular Fuzzy Numbers, TFN). TFN diwakili oleh tiga nilai, iaitu m3, m2 dan m1. Nilai m3 merujuk kepada nilai maksimum, nilai m1 bermaksud nilai minimum, manakala m2 mewakili nilai paling munasabah.

Seterusnya, TFN diguna pakai untuk membentuk skala fuzzy yang mengaplikasikan skala Likert bagi menukarkan pemboleh ubah linguistik kepada nombor fuzzy. Jumlah tahap dalam skala fuzzy tidak mengguna pakai bilangan genap. Ini bermaksud semakin tinggi skala fuzzy, semakin tepat maklumat yang diterima. Rajah 1 memperlihatkan graf segi tiga min berbanding dengan nilai Triangular, yang meliputi ketiga-tiga nilai dalam TFN.



Rajah 1. Graf segi tiga min melawan triangular. Disesuaikan daripada Mohd. Ridhuan et al (2014).

Rajah 1 menerangkan graf segi tiga min berbanding dengan TFN, iaitu m2 mewakili nilai sederhana, m1 mewakili nilai minimum sementara m3 merujuk nilai maksimum. Data yang dikumpulkan melalui skala Likert dianalisis menggunakan perisian Microsoft Excel. Semua data ini ditukarkan kepada bentuk TFN. Skala fuzzy yang diguna pakai ialah skala tujuh mata.

Langkah 5: Menganalisis data.

Analisis data dilakukan menggunakan penomboran TFN untuk menentukan nilai Threshold (d). Thomaidis et al. (2006) menjelaskan, proses penentuan (d) adalah kritikal sebagai langkah mencapai konsensus dalam kalangan pakar. Syarat pertama yang perlu dipenuhi ialah (d) tidak boleh lebih daripada atau menyamai 0.2 untuk mencapai konsensus pakar bagi setiap item. Sekiranya syarat ini dipatuhi, konsensus pakar dianggap telah tercapai (Cheng & Lin, 2002).
Kaedah vertex diguna pakai bagi menghitung jarak antara purata rij. Jarak bagi setiap nombor Fuzzy m= (m1, m2, m3) dan n= (m1, m2, m3) dihitung mengikut formula di bawah:

$$d(\tilde{m},\tilde{n}) = \sqrt{\frac{1}{3}[(m_1 - n_1)^2 + (m_2 - n_2)^2 + (m_3 - n_3)^2]}$$

Langkah 6: Menetapkan nilai peratus konsensus pakar.

Syarat kedua untuk menetapkan peratus konsensus pakar ialah keseluruhan konsensus (group consensus) perlu lebih daripada 75.0 peratus bagi tiap-tiap item. Sekiranya syarat ini gagal dipenuhi, pengkaji perlu menjalankan pusingan kedua kembali (Chu & Hwang, 2008; Murry & Hammons, 1995).

Langkah 7: Menganalisis data menerusi average of Fuzzy numbers (Defuzzification process).

Langkah ini dijalankan untuk memperoleh nilai skor fuzzy (A). Oleh itu, syarat ketiga yang harus dipenuhi ialah (A) mesti menyamai nilai median (nilai α-cut), yakni 0.5 atau lebih (Tang & Wu, 2010; Bodjanova, 2006). Ini membuktikan penerimaan elemen terbabit konsensus pakar. Dalam pada itu, nilai α-cut ditentukan sebagai nilai median antara '0' dengan '1', iaitu α-cut=(0+1)/2=0.5. Sebaliknya berlaku jika (A) yang diperoleh kurang daripada nilai α-cut (0.5). Ini bermaksud item tersebut akan ditolak kerana gagal membuktikan konsensus pakar. Seperti yang dinyatakan oleh Bodjanova (2006) serta Tang dan Wu (2010), nilai α-cut sepatutnya lebih daripada 0.5 untuk dianggap sah.

3.0 Dapatan Kajian

Jadual 2 menunjukkan hasil kajian untuk elemen-elemen komponen utama MAR4TI. Data yang dipaparkan merangkumi nilai (d) untuk setiap item (d item), nilai (d) bagi konstruk (dkonstruk), serta kedudukan item mengikut konsensus pakar.

Jadual 2. Elemen Komponen Utama bagi MAR4TI Mengikut Analisis FDM serta Cadangan Panel Pakar

Konstruk/ Komponen Utama	Bil. Item	Syarat: TFN: a) bilangan item yang digugurkan [(d) > 0.2]	Syarat: TFN: b) bilangan item yang digugurkan (Konsensus pakar tidak mencapai 75%)	Syarat: Defuzzification Process: c) bilangan item yang digugurkan [(A) < nilai α–cut 0.5]	(A) ≥ nilai α–cut =0.5	Bil. Item Diterima
Konstruk 1 (Menetapkan Objektif)	4	-	-	-	0.849	4
Konstruk 2 (Memilih Isi Kandungan)	8	-	-	-	0.863	8
Konstruk 3 (Strategi Pembelajaran)	11	-	-	-	0.887	11
Konstruk 4 (Pemilihan Logistik)	4	-	-	-	0.908	4
Konstruk 5 (Pemilihan Media)	5	-	-	-	0.924	5
Jumlah	32	Tiada	Tiada	Tiada		32

Merujuk Jadual 2, semua elemen yang terdapat dalam lima komponen utama MAR4TI disetujui oleh kumpulan pakar, mematuhi syarat analisis FDM, yakni (d) konstruk (dkonstruk) ≤ 0.2 dan konsensus pakar ≥ 75 peratus. Nilai (d) ≤ 0.2 membuktikan bahawa terdapat konsensus yang tinggi dalam kalangan pakar mengenai kepentingan elemen terbabit dalam modul MAR4TI. Nilai skor fuzzy (A) ≥ 0.5 membuktikan elemen tersebut diterima sebagai signifikan oleh pakar, memastikan bahawa komponen utama yang dipilih adalah relevan dan dapat meningkatkan keberkesanan MAR4TI.

4.0 Perbincangan dan Implikasi Kajian

Kajian ini telah berjaya memperoleh persetujuan bersama pakar berkaitan dengan keperluan komponen utama dan elemen-elemen dalam modul MAR4TI. Analisis FDM yang diterapkan telah menunjukkan

keberkesanannya dalam mengumpulkan pandangan dan konsensus daripada pakar dalam bidang pendidikan matematik, AR, visualisasi, dan modul pembelajaran. Kajian ini menunjukkan bahawa penggunaan AR dalam pengajaran topik Transformasi Isometri berpotensi besar dalam meningkatkan pencapaian, visualisasi ruang, dan motivasi murid. Kesepakatan pakar yang dicapai dalam kajian ini menegaskan bahawa elemen-elemen dan komponen utama yang dimasukkan dalam modul MAR4TI adalah relevan dan sesuai untuk meningkatkan pencapaian, daya visualisasi ruang dan motivasi. Antara dapatan utama kajian ini adalah kesepakatan pakar terhadap elemen penting dalam modul MAR4TI yang merangkumi penetapan objektif, media, pemilihan isi kandungan, pemilihan logistik serta strategi pembelajaran. Semua elemen daripada lima konstruk utama yang terhasil daripada teori kognitif pembelajaran menerusi multimedia Mayer, teori konstruktivisme dan model pembangunan modul Sidek dipersetujui sebagai elemen yang perlu ada dalam rekabentuk MAR4TI. Elemen ini dianggap kritikal dalam memastikan keberkesanan modul pembelajaran yang dihasilkan. Keputusan kajian ini selaras dengan kajian-kajian terdahulu yang menunjukkan keberkesanan penggunaan AR dalam pendidikan. Sebagai contoh, kajian oleh Nor dan Mokhtar (2021) serta Poobalan dan Mahmud (2022) yang menunjukkan bahawa AR mampu meningkatkan pemahaman dan minat murid. Dapatan ini turut mengukuhkan kajian oleh Danakorn Nincarean et al. (2019) yang melaporkan kesan positif AR terhadap kemahiran visualisasi ruang.

Implikasi utama kajian ini adalah terhadap pembangunan modul pembelajaran yang lebih berkesan dan interaktif menggunakan teknologi AR. Modul MAR4TI berpotensi meningkatkan pencapaian murid dalam topik Transformasi Isometri dengan menyediakan kaedah pembelajaran yang lebih interaktif dan menarik. Tambahan pula, penggunaan AR dalam modul ini membantu murid meningkatkan kemahiran visualisasi ruang mereka, yang merupakan kemahiran penting dalam memahami konsep geometri. Modul yang diintegrasikan dengan AR juga dapat meningkatkan motivasi murid untuk belajar, kerana ia menyediakan pengalaman pembelajaran yang lebih menyeronokkan dan menarik. Kesepakatan pakar yang dicapai melalui FDM memberikan panduan yang jelas dalam usaha mereka bentuk dan membangunkan modul pembelajaran yang lebih efektif selain berfokuskan kepada keperluan murid. Tambahan lagi, modul ini berfungsi sebagai alat bantu pengajaran yang berkesan, justeru memudahkan guru untuk menerangkan konsep Transformasi Isometri dengan lebih jelas dan interaktif. Dengan adanya modul ini, diharapkan proses pembelajaran menjadi lebih dinamik dan mampu menarik minat murid terhadap topik Transformasi Isometri. Walaupun kajian ini menunjukkan hasil yang positif, terdapat batasan yang perlu diambil kira, iaitu saiz sampel pakar yang terlibat adalah terhad kepada 16 orang, dan majoritinya adalah dari bidang kepakaran pendidikan matematik yang mungkin tidak mencerminkan kepelbagaian pendapat yang lebih luas.

Secara keseluruhan, kajian ini menyumbang dengan penting kepada bidang pendidikan matematik dengan membawakan modul pembelajaran berasaskan AR yang mampu menambah baik kualiti proses PdP. Penerapan pendekatan FDM dalam kajian ini juga membuktikan keberkesanannya dalam mendapatkan pandangan dan kesepakatan pakar, yang boleh diaplikasikan dalam kajian-kajian masa depan.

5.0 Kesimpulan

Kajian ini mempunyai objektif untuk mereka bentuk seterusnya membina modul yang dapat digunakan semasa pembelajaran topik Transformasi Isometri Tingkatan 2. Sebelum modul dibina, terlebih dahulu satu analisis terhadap elemen dan komponen utama perlu dijalankan untuk menetapkan jenis aktiviti dan strategi yang sesuai dengan modul yang akan dibangunkan. Dengan demikian, data daripada kajian ini akan dijadikan input konkrit untuk mereka bentuk sebuah modul pembelajaran yang mengintegrasikan AR bagi topik Transformasi Isometri Tingkatan 2. Modul ini diharapkan dapat meningkatkan pencapaian, visualisasi ruang, dan motivasi murid.

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Memperkasa Kepemimpinan Proaktif dalam Pertubuhan Belia di Malaysia Melalui Matlamat '8C' Pembangunan Belia Positif

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Abstrak

Belia dianggap sebagai pewaris negara yang akan memberi banyak manfaat pada pembangunan negara. Sehubungan itu, kerajaan mengambil ushaha untuk membentuk generasi belia dengan menggubal Dasar Belia Malaysia (DBM) 2015-2035 yang menjadi rujukan penting dalam perancangan dan pembangunan belia positif. Pembangunan belia positif merupakan proses di mana golongan belia akan memperolehi kemahiran kognitif, sosial dan emosi serta kebolehan yang diperlukan dalam sesebuah kehidupan. Pembangunan belia positif mempunyai matlamat 8C yang membawa kepada kesejahteraan dalam setiap aspek dalam kehidupan. Matlamat 8C adalah kompetensi (competence), keyakinan (confidence), karakter (character), pengikatan (connection) dan penyayang (caring)) Kajian ini akan membincangkan apakah elemen terpenting yang mempengaruhi dan membentuk kepada kepemimpinan yang proaktif yang akan menyumbang kepada kelestarian pertubuhan belia. Kajian ini menggunakan pendekatan kualitatif dengan menglibatkan tujuh orang informan yang terdiri daripada kepimpinan pertubuhan belia yang terpilih. Dapatan kajian ini telah dianalisis dengan pembinaan pengekodan, kategori- kategori dengan menjalankan teknik analisis data mengunakan perisian NVivo14. Hasil kajian mendapati mendapati bahawa antara matlamat 8C yang terpenting dalam membawa kelestarian organisasi pertubuhan belia adalah kompetensi (competence) dan keyakinan (confidence).Pemimpin pertubuhan belia yang cekap akan berupaya untuk membentuk pasukan yang berdaya saing dan mempunyai keyakinan yang tinggi dalam memastikan kepemimpinan yang proaktif dalam membawa kepada kelestarian organisasi dalam pertubuhan belia. Hasil dapatan kajian ini diharapkan dapat memberi sumbangan dan rujukan kepada pertubuhan belia di Malaysia.

Kata Kunci: Pembangunan Belia Positif, Pembangunan Belia, Pertubuhan Belia, Belia

1.0 Pengenalan

Belia merupakan pewaris kepada kepemimpinan pada masa hadapan yang memainkan peranan penting dalam kesinambungan pembangunan negara. Berdasarkan statistik pada tahun 2023 dianggarkan belia di Malaysia adalah sebanyak 8.79 juta orang daripada populasi keseluruhan 35.14 juta yang menunjukkan 25 peratus daripada keseluruhan rakyat di Malaysia terdiri daripada belia (Indeks Belia Malaysia, 2023). Hal ini jelas menunjukkan bahawa belia mempunyai potensi dalam membawa perubahan dan impak yang signifikan kepada masa hadapan negara. Sehubungan itu, program pembangunan belia perlu dijalankan secara meluas bagi memberi peluang kepada belia di Malaysia untuk menyumbang kepada sektor ekonomi, sosial dan politik. Program pembangunan belia yang dijalankan perlu bagi memupuk pengetahuan, kemahiran dan nilai positif yang akan membantu komuniti bagi mencapai kesejahteraan.

Program pembangunan belia ini juga bertujuan untuk membimbing belia ke arah kehidupan yang lebih produktif dengan mendapat sokongan dan bimbingan secara berterusan. Melalui program pembangunan belia ini akan memberi ruang kepada belia untuk meningkatkan nilai-nilai positif dalam diri mereka. Sehubungan itu, bagi mengasah nilai-nilai positif dalam diri belia, pendekatan pembangunan belia positif ini akan memberi fokus terhadap potensi belia untuk membangunkan kemahiran, keperibadian dan keyakinan secara menyeluruh (Yahya et al., 2021). Pembangunan belia positif ini merupakan salah satu teras utama dalam Dasar Belia Malaysia (DBM) 2015-2035. Melalui Dasar Belia Malaysia (DBM), ianya dapat membentuk golongan belia yang mempunyai kesedaran sosial yang tinggi. Kesedaran sosial boleh dicapai melalui matlamat '8C' dalam pembangunan belia positif. (Dasar Belia Malaysia, 2015).

Matlamat '8C' yang dirangka ini adalah mengikut kepada keperluan dalam pembangunan belia di Malaysia yang turut diselaraskan dengan aspirasi negara bagi melahirkan belia yang berwawasan dan berdaya saing di peringkat global. Terdapat lapan ciri yang dimiliki oleh belia bagi mencapai matlamat 8C adalah kompetensi (competence), keyakinan (confidence), karakter (character), pengikatan (connection), penyayang (caring), kerjasama (cooperation), berdaya saing (competitive) dan sumbangan (contribution) (Arshad et. al., 2021; Dasar Belia Malaysia, 2015; Yahya et. al., 2021). Oleh itu, matlamat '8C' boleh dicapai yang akan membentuk belia sebagai pemimpin yang proaktif dan komited dalam memberi sumbangan kepada pembangunan negara.

2.0 Sorotan Literatur

Pembangunan belia positif adalah terma yang dibentuk daripada Teori Pembangunan Sistem yang merupakan usaha dalam meningkatkan hasil melalui program dan polisi belia (Lerner & Castellino, 2002). Pembangunan belia positif merupakan sebuah sebuah proses sosial yang menglibatkan belia, orang dewasa, masyarakat, agensi kerajaan dan sekolah yang memberi peluang kepada belia dalam meningkatkan minat, kemahiran dan potensi diri dalam menghadapi persediaan menuju alam dewasa.

Program pembangunan belia positif merupakan satu proses yang dijalankan secara berterusan bagi memenuhi keperluan fizikal dan sosial yang dapat membina kompetensi yang akan menyumbang kepada pembangunan belia positif (Delgado, 2002; Lerner et al., 2015). Pembangunan belia positif terdiri daripada elemen '5C' antaranya kompetensi (competence), keyakinan (confidence), karakter (character), pengikatan (connection) dan penyayang (caring) (Arshad 2016; Lerner et al., 2015; Silbereisen & Lerner, 2007). Belia mempunyai kekuatan dan potensi yang dibangunkan dalam pembinaan pembangunan belia positif. Hal ini menunjukkan bahawa belia bukan sahaja memerlukan sokongan daripada luaran tetapi belia boleh memberi tumpuan terhadap pemerkasaan aset dan potensi yang terdapat dalam diri mereka.

Sehubungan itu, terdapat dua jenis aset dalam pembangunan belia positif antaranya ialah aset individu dan aset ekologi yang membentuk kepada Model '5C'. Keseimbangan dalam aset individu dan aset luaran ini akan melahirkan belia yang seimbang dari segi emosi, sosial dan intelek. Aset individu terdiri daripada kekuatan dalaman belia yang terdiri daripada kekuatan kognitif, emosi dan tingkah laku yang akan membentuk dalaman belia yang menjadikan belia dalam keadaan yang lebih baik (Silbereisen & Lerner, 2007; Lerner et al., 2015). Manakala bagi aset ekologi adalah aset luaran yang terdiri daripada jaringan sosial, jaringan institusi, individu sekeliling dan kebolehan untuk mengakses pelbagai sumber (Lerner et al., 2015; Agans et al., 2014). Aset ekologi yang diperolehi daripada persekitaran akan memberi peluang kepada belia untuk memperolehi kemahiran dalam kehidupan serta membina dan memelihara perhubungan yang baik di antara generasi. Oleh sebab itu, aset ekologi dalam pembangunan belia positif yang memainkan peranan penting sebagai pelengkap kepada aset individu dalam menjadikan belia sebagai individu yang mempunyai nilai positif.

Dalam kajian lepas turut membincangkan mengenai perkembangan Model '5C' yang dibangunkan kepada matlamat 8C bagi memenuhi keperluan pembangunan belia di Malaysia secara holistik (Arshad, 2016; Yahya et., 2021). Sehubungan itu, penambahan elemen seperti ini bertujuan untuk melengkapkan aspek- aspek penting dalam pendakatan pembangunan belia positif. Hasil daripada itu, penambahan elemen-elemen dalam matlamat '8C' ini akan membentuk belia yang berkemahiran tinggi dan komited dalam memberi sumbangan kepada masyarakat.

3.0 Metodologi Kajian

Pengkaji telah menjalankan kaedah kualititatif dalam menjalankan kaedah kualitiatif yang untuk mengumpul data. Pengkaji telah meneliti tujuan kajian dan persoalan kajian yang bersesuaian dengan adalah dengan menjalankan kajian kes. Pendekatan kajian merupakan penerangan daripada individu yang berakhir dengan analisis. Dapatan kajian ini dianalisis melalui proses pengekodan, pembentukan kategori dengan menggunakan perisian NVivo14 untuk membantu dalam pengumpulan, penyusunan dan pengekodan data yang diperolehi daripada tujuh orang informan. Proses analisis data ini dapat membantu pengkaji untuk mengenalpasti kategori dan tema yang dapat memberi kefahaman yang komprehensif terhadap isu yang dikaji.

4.0 Dapatan Kajian

Dapatan kajian mendapati pemimpin pertubuhan belia menerapkan beberapa elemen dalam matlamat '8C' sepanjang kepemimpinan dalam pertubuhan belia. Melalui temu bual mendalam yang dijalankan mendapati bahawa pemimpin pertubuhan belia sentiasa mempraktikan nilai-nilai positif antaranya elemen-elemen kerjasama (cooperation), penyayang (caring), kompetensi (competence) dan keyakinan (confidence).

Hasil dapatan kajian mendapati pemimpin pertubuhan belia sentiasa menglibatkan ahli pertubuhan belia dalam membuat keputusan. Melalui elemen kerjasama (cooperation) ini, ianya akan mewujudkan semangat berpasukan dalam melaksanakan program dan aktiviti yang akan mengeratkan lagi hubungan di antara satu sama lain. Selain daripada itu, kepercayaan di antara pemimpin dan ahli pasukan akan lebih meningkat. Elemen penyayang (caring), dapat dilihat melalui keprihatinan pemimpin terhadap kebajikan dan kesejahteraan ahli pertubuhan belia. Pemimpin pertubuhan belia menunjukkan sikap prihatin dengan mendengar permasalahan dan keperluan ahli pertubuhan belia, memberi sokongan emosi dan sosial yang akan mewujudkan perasaan dihargai. Elemen penyayang (caring), yang dipupuk dalam diri pemimpin pertubuhan belia ini akan membuatkan ahli pertubuhan belia merasa dihargai dan mendapat perhatian. Oleh itu, elemen kerjasama (cooperation) dan penyayang (caring) ini akan membina persekitaran yang positif di mana ahli pertubuhan belia akan merasakan bahawa disokong dan mendapat motivasi bagi memastikan misi dan visi pertubuhan belia tercapai.

Pemimpin pertubuhan belia sangat menekankan kepentingan terhadap elemen kompetensi (competence) dan keyakinan (confidence) yang menjadi faktor utama yang menyumbang kepada kelestarian organisasi. Pemimpin pertubuhan belia menyatakan bahawa kompetensi atau keupayaan pemimpin dan ahli pertubuhan yang menjalankan tugas dengan cekap dan berkesan akan membentuk kepada prestasi organisasi secara keseluruhan. Pemimpin pertubuhan belia juga bersetuju bahawa pemimpin dan ahli pertubuhan belia yang kompeten bukan sahaja meningkatkan produktiviti, tetapi juga membantu organisasi mencapai matlamatnya dengan lebih cepat dan efektif.

Elemen kompetensi (competence) ini penting dalam pertubuhan belia kerana golongan belia yang memimpin pertubuhan belia akan mengambil risiko dan mengatasi kelemahan yang berlaku dalam pertubuhan belia. Dengan elemen competence ini, pemimpin pertubuhan belia dilihat meningkatkan kemahiran dan pengetahuan untuk menguruskan pertubuhan belia secara berkesan. Sebagai contoh, pemimpin dan ahli pertubuhan belia yang competence akan membuat perancangan, pelaksanaan dan pengurusan dalam pertubuhan belia akan menjadi menjadi lebih sistematik.

Selain itu juga, keyakinan (confidence) merupakan antara elemen terpenting yang menyumbang kepada kelestarian organisasi. Elemen keyakinan (confidence) ini akan menggalakan pemimpin dan ahli pertubuhan belia membuat keputusan dengan lebih yakin walaupun berdepan dengan cabaran utama dalam pembangunan belia dari segi ekonomi, sosial, politik dan teknologi. Keyakinan yang dimiliki oleh pemimpin pertubuhan belia akan menjadikan pemimpin menjadi seorang yang lebih tegas dalam memastikan keputusan yang dibuat adalah rasional dan berani mengambil risiko dalam setiap keputusan. Melalui nilai positif yang dimiliki oleh pemimpin pertubuhan belia ini akan meningkatkan daya tahan pemimpin pertubuhan belia walaupun berdepan dengan perubahan dan cabaran persekitaran. Oleh sebab itu, pemimpin pertubuhan belia akan sentiasa memastikan misi dan visi pertubuhan belia akan tercapai sekaligus memastikan kelestarian organisasi dalam pertubuhan belia dalam tempoh yang panjang.

Oleh itu, elemen kompetensi (competence) dan keyakinan (confidence) ini akan menjadikan pemimpin dan ahli pertubuhan belia akan berkomunikasi dengan lebih yakin dalam membina hubungan jaringan yang baik dengan pemegang taruh terutamanya yang akan membantu kelestarian organisasi pertubuhan belia. Sehubungan itu, elemen competence dan confidence dalam kalangan pemimpin dan ahli pertubuhan belia akan mewujudkan budaya organisasi yang akan meningkatkan prestasi organisasi.

5.0 Kesimpulan

Dalam konteks pembangunan belia, elemen-elemen dalam matlamat 8C ini akan membentuk pemimpin pertubuhan belia menjadi cekal sekaligus memberi impak yang positif terhadap kelestarian organisasi pertubuhan belia. Sehubungan itu, nilai-nilai positif yang wujud dalam kalangan pemimpin ini akan

menggalakan pemimpin untuk sentiasa mencari peluang, menghadapi cabaran dengan yakin dan mengambil langkah proaktif dalam memastikan kelestarian organisasi pertubuhan belia. Gabungan elemen-elemen kerjasama (cooperation), penyayang (caring), kompetensi (competence) dan keyakinan (confidence) ini akan menjadikan pemimpin bersikap lebih proaktif dalam menyokong program pembangunan belia.

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Reka Bentuk dan Pembangunan Modul Pembelajaran Berasaskan Inkuiri bagi Topik Kegravitian Fizik di Malaysia: Kaedah Fuzzy Delphi (FDM)

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Abstrak

Transformasi dalam pendidikan menuntut para guru untuk menilai semula pendekatan pengajaran bagi memastikan murid dapat menjalani pembelajaran yang lebih bermakna dan mampan. Hal ini memerlukan pelaksanaan strategi pengajaran yang berkesan dan dapat meningkatkan kecekapan dalam pemindahan pengetahuan serta melahirkan murid yang berjaya. Strategi ini harus memberikan impak positif terhadap kehidupan dan kerjaya murid, di samping menerapkan kemahiran kritikal serta memperkenalkan konsep-konsep baharu yang relevan dengan aplikasi dunia sebenar. Oleh itu, modul pembelajaran dengan pendekatan pembelajaran berasaskan inkuiri untuk murid bagi tajuk Kegravitian telah dibangunkan melalui konsensus pakar di bawah Kaedah Fuzzy Delphi (FDM) . Reka bentuk kajian ini adalah kajian kuantitatif yang menggunakan kaedah Fuzzy Delphi. Instrumen soal selidik digunakan untuk mengumpul data kajian. Seramai dua belas orang pakar dalam pendidikan fizik, pembelajaran berasaskan inkuiri, pembangunan modul dan kurikulum telah menyertai kajian ini. Soal selidik dengan skala likert tujuh mata dijana daripada komponen model TABA dan Dokumen Standard Kurikulum dan Pentaksiran mata pelajaran Fizik. Hasil analisis data menunjukkan bahawa 33 daripada 36 item modul pembelajaran diterima berdasarkan nilai konsensus pakar ≥ 75%, nilai threshold (d) ≤ 0.2, dan nilai skor fuzzy (A) (α – cut) ≥ 0.5. Pakar mencadangkan bahawa tiga item daripada komponen aktiviti pengajaran dan pembelajaran perlu digantikan dengan item yang lebih sesuai. Secara keseluruhan, komponen dan item modul pembelajaran telah diterima, dengan beberapa pindaan dan penambahbaikan dilakukan untuk meningkatkan kesesuaian kandungan modul.

Kata Kunci: Reka bentuk dan Pembangunan; Kaedah Fuzzy Delphi; pembelajaran berasaskan inkuiri; modul pembelajaran Fizik ; Kegravitian

1.0 Pengenalan

Sistem Pendidikan di Malaysia mengalami perubahan yang pesat seiring dengan perubahan ekonomi global menjelang abad ke-21. Dalam memastikan sistem pendidikan berfungsi secara berkesan dan setanding dengan kualiti pendidikan bertaraf antarabangsa, beberapa transformasi kurikulum yang terdapat dalam Pelan Pembangunan Pendidikan Malaysia (PPPM) 2013-2025 telah dilaksanakan(KPM, 2013). Kurikulum Standard Sekolah Menengah (KSSM) yang dibangunkan berasaskan standard antarabangsa telah diperkenalkan pada tahun 2017 menggantikan kurikulum yang lama iaitu Kurikulum Bersepadu Sekolah Menengah (KBSM). Ini termasuklah spesifikasi kurikulum yang di tambah baik dalam KSSM bagi mata pelajaran Fizik. Konsep pembelajaran Fizik adalah berteraskan penjelasan kepada sifat asas alam semesta dengan menggunakan penjelasan yang paling mudah. Walau bagaimanapun, mata pelajaran Fizik dianggap sukar kerana konsepnya yang abstrak dan memerlukan pemahaman yang jelas berkaitan teori (Jabeen et al., 2020; Markus et al., 2021; Yuliati et al., 2018). Penemuan ini di sokong oleh (Frappart et al., 2014) yang mendapati bahawa Fizik dianggap sukar dalam memahami konsep graviti kerana ia melibatkan daya yang tidak boleh dilihat. Selain itu, guru sering menghadapi cabaran dalam menerangkan Hukum Kepler yang terdapat dalam topik Kegravitian kerana murid perlu menggambarkan pergerakan planet tanpa dapat melihat dengan mata kasar kejadian planet mengelilingi Matahari. (Yu et al., 2010). Selain itu, kebimbangan seperti kurangnya pendekatan PdP yang berkesan (Nordin, 2019) adalah antara punca yang menghalang murid daripada tertarik dengan topik graviti dan membawa kepada tahap kemahiran berfikir aras tinggi yang rendah dalam kalangan murid Malaysia secara amnya (Abdul Halim & Nur Jahan, 2022).

Peranan guru adalah untuk mewujudkan suasana pengajaran dan pembelajaran (PdP) dalam bilik darjah yang menarik dengan menggunakan strategi dan pendekatan yang menggalakkan pembelajaran aktif dalam kalangan murid. Justeru itu, Pembelajaran Berasaskan Inkuiri (PBI) merupakan satu daripada pendekatan pembelajaran berpusatkan murid yang sangat efektif dalam meningkatkan Kemahiran berfikir murid (Prayogi et al., 2018). Walau bagaimanapun, Khalaf dan Zin (2018) menyatakan bahawa kebanyakan guru masih tidak mengetahui kaedah pelaksanaan PBI sepenuhnya lantaran lebih selesa untuk melaksanakan pengajaran secara tradisional. Dapatan ini disokong oleh Ong et al., (2021) yang menyatakan pelaksanaan PBI masih terbatas kerana pemahaman konseptual guru berkaitan pelaksanaan pendekatan inkuiri masih kabur dan kurang jelas. Oleh itu, guru perlu diberikan pendedahan dengan kaedah pelaksanaan PBI bagi memenuhi keperluan dalam kurikulum baharu (Bao & Koenig, 2019; Hernandez & Ravn, 2014; KPM,
2013).

Penyelidikan mengenai analisis keperluan untuk membangunkan modul PdP bagi topik ini mendapati bahawa guru dan murid memerlukan bahan bantu mengajar dan belajar bagi topik Kegravitian kerana ia merupakan topik yang baharu diperkenalkan dalam KSSM Fizik (KPM, 2018). Oleh itu, Modul Pembelajaran berasaskan Inkuiri bagi topik Kegravitian (I-Grav) dibangunkan untuk memenuhi keperluan guru dan murid dalam melaksanakan strategi PdP berpusatkan murid dengan menggunakan pendekatan PBI bagi topik Kegravitian. Modul ini dibangunkan dengan mendapatkan konsensus pakar mengenai kesesuaian kandungan modul melalui Kaedah Fuzzy Delphi (FDM), seperti yang dibincangkan dalam bahagianbahagian berikut.

2.0 Metodologi

Pengkaji menggunakan pendekatan kajian reka bentuk dan pembangunan (PRP) dalam kajian ini. Kajian ini bertujuan untuk membangunkan modul I-Grav. (Richey & Klein, 2007) menjelaskan kajian PRP adalah sesuatu proses yang teratur dan sistematik. Fasa dalam PRP terdiri dari tiga fasa iaitu fasa analisis keperluan, fasa reka bentuk dan pembangunan dan fasa penilaian modul. Dalam kajian ini, reka bentuk dan pembangunan modul adalah fasa kedua PRP. Reka bentuk dan Pembangunan modul ini dijalankan menggunakan kaedah Fuzzy Delphi (FDM).FDM digunakan untuk mendapatkan konsensus pakar berdasarkan kaedah kuantitatif dalam menterjemahkan dapatan konsensus kumpulan pakar (Mohd Ridhuan, 2021).

2.1 Instrumen Kajian dan Pengumpulan Data

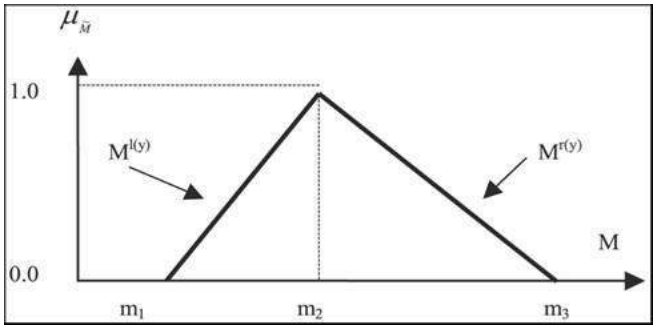
Soal selidik dengan skala likert tujuh mata digunakan dalam kajian ini untuk pengumpulan data. Soal selidik ini mempunyai tiga konstruk, termasuk demografi pakar sebagai konstruk pertama. Dua konstruk lain adalah komponen modul pembelajaran yang diperoleh daripada Model Kurikulum TABA, manakala item setiap komponen dibina daripada DSKP fizik dan melalui sorotan literatur kajian lepas. Soalan selidik FDM terdiri daripada 36 item untuk dua komponen modul pembelajaran: objektif pembelajaran, dan aktiviti PdP. Tiga pakar dalam PRP dan FDM menjalankan kesahan muka untuk memastikan soal selidik tersebut sesuai untuk mengukur konsensus pakar mengenai komponen dan item dalam modul pembelajaran sebelum ia diedarkan kepada pakar. Soal selidik diedarkan secara individu melalui emel untuk pengumpulan data. Data yang dikumpulkan kemudiannya dimasukkan ke dalam perisian Microsoft Excel untuk dianalisis.

2.2 Sampel dan Prosedur Persampelan

Adler dan Ziglio (1996) mencadangkan bilangan pakar teknik Delphi 10–15 orang, manakala, Jones dan Twiss (1978) mencadangkan sepuluh hingga lima puluh pakar dalam kaedah Delphi. Ia tidak menunjukkan jumlah pakar yang tepat dalam melaksanakan FDM. Walau bagaimanapun, pengetahuan, pengalaman, dan kualiti pakar yang dipilih lebih diutamakan oleh pengkaji. Nworie (2011) menyatakan bahawa pengetahuan tentang subjek adalah penting untuk kajian Delphi kerana data yang dikumpulkan bergantung pada pendapat pakar ini untuk menentukan tahap konsensus. Oleh itu, untuk kajian ini, 12 orang pakar telah dipilih dengan kaedah pensampelan bertujuan berdasarkan pengetahuan profesional mereka dalam pendidikan fizik, pembelajaran berasaskan inkuiri , pembangunan modul dan kurikulum dengan pengalaman lebih daripada lima tahun dalam bidang kajian.

2.3 Analisis Data

Analisis data dalam FDM menggunakan Pernomboran Segi Tiga Fuzzy dan penilaian Fuzzy atau skor Fuzzy (A). Pernomboran Segi Tiga Fuzzy terdiri daripada nilai purata nombor fuzzy iaitu m1, m2, dan m3, di mana m1 mewakili nilai minimum, m2 mewakili nilai yang paling munasabah, dan m3 merujuk kepada nilai maksimum (Mohd Ridhuan, 2021). Ketiga-tiga nilai dalam Pernomboran Segi Tiga Fuzzy ini ditunjukkan dalam Rajah 1.



Rajah 1 : Graf segitiga min melawan triangular

Pernomboran Segi Tiga Fuzzy menekankan dua syarat yang mesti dipenuhi untuk menentukan konsensus pakar mengenai komponen dan item modul pembelajaran. Syarat pertama mengenal pasti nilai Treshold (d), manakala syarat kedua menentukan peratusan penerimaan untuk setiap komponen dan item yang dikaji oleh pakar (Ridhuan et al., 2014).

Sementara itu, proses penilaian fuzzy menentukan kedudukan item-item yang diterima, di mana item dengan nilai kedudukan tertinggi dianggap sebagai itempaling penting dalam komponen tersebut. Walau bagaimanapun, kajian ini memberi tumpuan kepada mengenal pasti item-item yang diterima untuk komponen modul pembelajaran dan menentukan sama ada item tersebut diperlukan untuk modul pembelajaran. Tiga formula yang digunakan untuk mengira skor fuzzy(Amax) dalam proses penilaian fuzzy adalah seperti berikut:

i. Amax = 1/3 * (m1 + m2 + m3) ii. Amax = 1/4 * (m1 + 2m2 + m3)
iii. Amax = 1/6 * (m1 + 4m2 + m3)

Prosedur analisis dijalankan seperti berikut:

Langkah 1: Pembolehubah linguistik tujuh mata pada skala likert diterjemahkan ke dalam Pernomboran Segi Tiga Fuzzy. Jadual 1 menunjukkan setiap pembolehubah linguistik skala likert tujuh mata dengan nilai skala fuzzy. Dalam menentukan skala fuzzy, nombor fuzzy, rij dikira menggunakan formula rij=1K(r1ij±r2ij±rkij), di mana i=1,2…,m;j=1,2…,n;k=1,2…,k.

Jadual 1 : Aras persetujuan skala fuzzy 7 mata

Pemboleh ubah linguistik	Skala likert	Skala Fuzzy		
		m1	m2	m3
Teramat tidak setuju	1	0.0	0.0	0.1
Sangat tidak setuju	2	0.0	0.1	0.3
Tidak setuju	3	0.1	0.3	0.5
Sederhana setuju	4	0.3	0.5	0.7
Setuju	5	0.5	0.7	0.9
Sangat Setuju	6	0.7	0.9	1.0
Teramat setuju	7	0.9	1.0	1.0

Langkah 2: Proses analisis data diteruskan dengan mengira nilai threshold, (d) menggunakan rumus seperti Rajah 2:

$$d(\tilde{m}, \tilde{n}) = \sqrt{\frac{1}{3}(m_1 - n_1)^2 + (m_2 - n_2)^2 + (m_3 - n_3)^2}$$

Rajah 2 : Rumus bagi mendapatkan nilai Threshold,(d)

Daripada formula tersebut, m1, m2 dan m3 adalah nilai purata fuzzy pendapat pakar, manakala n1, n2 dan n3 adalah nilai fuzzy yang diperoleh daripada responden. Pengiraan nilai threshold, d menentukan tahap konsensus pakar, dan ini adalah syarat pertama yang telah ditetapkan untuk dipatuhi, di mana nilai threshold, d mesti kurang daripada atau sama dengan 0.2 ($d \leq 0.2$) (Cheng & Lin, 2002) untuk mencapai konsensus pakar mengenai item tersebut.

Langkah 3: Seterusnya, peratusan konsensus pakar dikira, dan ini adalah syarat kedua yang telah ditetapkan yang mesti dicapai, di mana peratusan konsensus pakar mesti ≥ 75.0% (Chu & Hwang, 2008)

Langkah 4: Langkah akhir analisis data dilakukan dengan mengira min nombor fuzzy, yang merupakan proses penilaian fuzzy. Analisis dijalankan untuk mengira nilai skor fuzzy.(A). Analisis ini adalah syarat ketiga yang telah ditentukan untuk menentukan sama ada setiap item boleh diterima. Nilai skor fuzzy (A) mesti lebih tinggi atau sama dengan nilai median (α - cut) 0.5 untuk menunjukkan bahawa para pakar menerima item tersebut (Ridhuan et al., 2014; Saido et al., 2018). Skor fuzzy (A) juga menentukan kedudukan setiap item mengikut pandangan pakar.

Langkah 5: Item-item untuk setiap komponen kemudian dinilai berdasarkan tiga syarat yang telah ditentukan. Langkah ini menentukan kesahihan komponen dan item modul pembelajaran berdasarkan konsensus pakar (Mohamad et al., 2015). Pembangunan prototaip modul pembelajaran adalah berdasarkan tafsiran data yang diperoleh daripada analisis FDM dan maklum balas bertulis daripada pakar, yang menentukan kesahihan komponen dan item modul pembelajaran.

3.0 Analisis Dapatan

Modul I-Grav terdiri daripada dua komponen: Objektif pembelajaran dan aktiviti pengajaran dan pembelajaran dengan 36 item untuk semua komponen. Komponen dan item ini dipersembahkan dalam soal selidik yang mewakili kandungan modul yang telah disemak oleh pakar. Penilaian terhadap soal selidik dan komen pakar akan mengesahkan prototaip Modul I-Grav.

3.1 Komponen 1 : Objektif Pembelajaran

Analisis dapatan dalam Jadual 2 menunjukkan nilai threshold (d), peratusan konsensus pakar dan skor fuzzy, A, bagi setiap item untuk objektif pembelajaran. Analisis menunjukkan semua item diterima mengikut kesepakatan pakar dengan mengambil kira tiga syarat dalam mengesahkan item. Analisis ini juga menunjukkan kedudukan setiap item, yang menentukan tahap penerimaan item-item untuk komponen objektif pembelajaran modul pembelajaran(Mohamad et al., 2015). Sebagai contoh, item 5 berada di kedudukan pertama paling dipersetujui pakar adalah merujuk kepada item membincangkan hubungan antara nilai pecutan graviti dan jarak objek dari pusat bumi.

Jadual 2 : Dapatan analisis bagi komponen Objektif Pembelajaran

Item	Syarat Pernomboran Segi Tiga Fuzzy		Syarat Proses Penilaian Fuzzy				Kesepakatan Pakar	Kedudukan
	Nilai Threshold, d	Peratus Kesepakatan Kumpulan Pakar	m1	m2	m3	Skor Fuzzy (A)		
1	0.169	85%	0.715	0.877	0.954	0.849	TERIMA	20
2	0.139	92%	0.715	0.885	0.962	0.854	TERIMA	18
3	0.145	92%	0.731	0.892	0.962	0.862	TERIMA	15
4	0.133	77%	0.746	0.900	0.977	0.874	TERIMA	12
5	0.065	100%	0.838	0.969	1.000	0.936	TERIMA	1
6	0.091	92%	0.823	0.954	0.992	0.923	TERIMA	4
7	0.076	100%	0.792	0.946	1.000	0.913	TERIMA	6
8	0.173	85%	0.731	0.885	0.954	0.856	TERIMA	17
9	0.141	85%	0.746	0.900	0.969	0.872	TERIMA	13
10	0.134	85%	0.731	0.892	0.969	0.864	TERIMA	14
11	0.113	85%	0.762	0.915	0.985	0.887	TERIMA	7
12	0.113	85%	0.762	0.915	0.985	0.887	TERIMA	7
13	0.113	85%	0.762	0.915	0.985	0.887	TERIMA	7
14	0.156	77%	0.715	0.877	0.962	0.851	TERIMA	19
15	0.095	92%	0.808	0.946	0.992	0.915	TERIMA	5
16	0.146	85%	0.762	0.908	0.969	0.879	TERIMA	11
17	0.163	77%	0.731	0.885	0.962	0.859	TERIMA	16
18	0.072	100%	0.823	0.962	1.000	0.928	TERIMA	3
19	0.065	100%	0.838	0.969	1.000	0.936	TERIMA	1
20	0.119	92%	0.762	0.915	0.977	0.885	TERIMA	

3.2 Komponen 2 :Aktiviti PdP

Komponen aktiviti PdP terdiri daripada 16 item yang direka untuk topik Kegravitian berdasarkan sorotan literatur dan analisis dokumen. Konsensus pakar untuk aktiviti PdP menunjukkan bahawa 13 item diterima dengan nilai ambang, (d) di bawah 0.2 dan peratus kesepakatan kumpulan pakar ≥75%, manakala 3 item lagi ditolak kerana tidak menepati syarat peratusan kesepakatan pakar ≥75 % seperti yang ditunjukkan dalam Jadual 3. Berdasarkan analisis kedudukan, item 9 berada pada tahap terendah manakala item 1 berada pada kedudukan tertinggi.

Jadual 3 : Dapatan analisis bagi komponen aktiviti pembelajaran

Item	Syarat Pernomboran Segi Tiga Fuzzy		Syarat Proses Penilaian Fuzzy				Kesepakatan Pakar	Kedudukan
	Nilai Threshold, d	Peratus Kesepakatan Kumpulan Pakar	m1	m2	m3	Skor Fuzzy (A)		
1	0.054	100%	0.854	0.977	1.000	0.944	TERIMA	1
2	0.095	92%	0.808	0.946	0.992	0.915	TERIMA	6
3	0.407	23%	0.577	0.715	0.815	0.703	TOLAK	
4	0.360	38%	0.654	0.785	0.862	0.767	TOLAK	
5	0.076	100%	0.808	0.954	1.000	0.921	TERIMA	5
6	0.091	92%	0.823	0.954	0.992	0.923	TERIMA	4
7	0.072	100%	0.823	0.962	1.000	0.928	TERIMA	3
8	0.117	85%	0.777	0.923	0.985	0.895	TERIMA	12
9	0.163	77%	0.731	0.885	0.962	0.859	TERIMA	13
10	0.122	92%	0.808	0.938	0.977	0.908	TERIMA	8
11	0.117	92%	0.823	0.946	0.977	0.915	TERIMA	6
12	0.474	8%	0.577	0.708	0.792	0.692	TOLAK	
13	0.122	92%	0.808	0.938	0.977	0.908	TERIMA	8
14	0.065	100%	0.838	0.969	1.000	0.936	TERIMA	2
15	0.119	85%	0.792	0.931	0.985	0.903	TERIMA	10
16	0.119	85%	0.792	0.931	0.985	0.903	TERIMA	

4.0 Perbincangan

Kajian ini berada dalam fasa dua kajian reka bentuk dan Pembangunan Modul I-Grav yang dijalankan untuk mengesahkan komponen dan item modul tersebut menggunakan kaedah FDM. Ia telah menjawab soalan-soalan kajian seperti berikut:

Adakah objektif pembelajaran Modul I-Grav sesuai berdasarkan konsensus pakar?
Adakah aktiviti PdP untuk Modul I-Grav sesuai berdasarkan konsensus pakar?

Berdasarkan analisis dapatan, kajian ini telah mencapai konsensus pakar, dengan beberapa pindaan atau penambahbaikan terhadap tiga item yang ditolak. Jadual 3 menerangkan secara ringkas pindaan untuk itemitem yang telah dihapuskan daripada komponen aktiviti PdP modul. Dapatan ini juga mengesahkan bahawa kebanyakan item Modul I-Grav adalah sesuai untuk PdP topik Kegravitian di peringkat sekolah menengah. Dengan konsensus pakar, Modul I-Grav disahkan sebagai prototaip yang akan melalui penilaian keberkesanan pada fasa akhir kajian ini.

Jadual 3 : Penambahbaikan terhadap item yang ditolak

Item	Aktiviti PdP	Pindaan/Penambahbaikan
3	Aktiviti main peranan	Aktiviti main peranan digantikan dengan aktiviti membina model ysng boleh menerangkan peranan setiap objek dalam model yang dibina.
4	Aktiviti demonstrasi	Aktiviti demonstrasi untuk tajuk daya memusat digantikan dengan aktiviti praktikal yang dlaksanakan oleh murid dengan memasukkan elemen penyiasatan saintifik dalam aktiviti yang dilaksanakan
12	Aktiviti persembahan powerpoint oleh guru	Pakar mencadangkan persembahan powerpoint digantikan dengan persembahan multimedia seperti pelibatan pelajar melalui tanyangan video yang menunjukkan pergerakkan planet mengelilingi matahari menurut Hukum Kepler

5.0 Kesimpulan

Pembangunan Modul I-Grav adalah usaha untuk membantu guru dan murid dalam menjalankan PdP yang bermakna bagi topik Kegravitian, satu topik baharu dalam kurikulum fizik yang dikenalpasti sebagai topik yang mencabar kerana sifatnya yang abstrak dan teori yang mengelirukan. Ia juga dibangunkan untuk menyokong aspirasi kementerian pendidikan dalam memupuk kemahiran dan nilai yang diperlukan dalam membangunkan modal insan dengan mengimplimentasikan pendekatan PBI ke dalam aktiviti PdP. Pandangan dan penilaian pakar terhadap modul pembelajaran adalah penting untuk memastikan komponen dan item modul tersebut sesuai, relevan dan memenuhi tujuannya. FDM telah menyusun pembangunan modul dengan menyediakan prosedur sistematik untuk mengumpul dan menganalisis data dengan syaratsyarat yang telah ditetapkan yang boleh menjamin kajian mencapai konsensus di kalangan pakar dan dengan itu mengesahkan prototaip modul. Diharapkan Modul I-Grav ini berguna dalam memudahkan guru-guru dan meningkatkan kualiti pembelajaran serta sikap murid terhadap fizik, terutamanya dalam topik Kegravitian. Oleh itu, kajian ini optimis bahawa dalam mengejar transformasi sistem pendidikan yang berjaya, ia bermula dengan meningkatkan kualiti pengajaran dan pembelajaran melalui pembelajaran aktif dan berpusatkan murid, dengan memberi tumpuan kepada menghubungkan pembelajaran dengan senario dunia sebenar seperti cara modul pembelajaran dibangunkan. Namun begitu, usaha yang signifikan, terutamanya daripada guru-guru, diperlukan untuk memastikan kejayaan inisiatif ini.

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Pengaruh Faktor Sosial terhadap Pembelajaran dan Pemudahcaraan Penulisan Karangan Deskriptif dalam Kalangan Murid Bukan Penutur Natif di Sekolah Antarabangsa Kuala Lumpur

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Abstrak

Bahasa Melayu merupakan bahasa kedua kepada murid sekolah yang lahir dari pelbagai latar belakang dan mempraktikkan penggunaan bahasa ibunda mereka sendiri. Hal ini demikian kerana didapati pelbagai bentuk kemahiran berbahasa yang diamalkan oleh kepelbagaian masyarakat yang berbilang kaum dan berbilang bahasa di Malaysia. Apabila murid-murid melangkah ke alam persekolahan, Bahasa Melayu menjadi bahasa pengantar dan wajib dipelajari dengan tidak mengira bangsa. Proses untuk mempelajari bahasa Melayu bukanlah suatu proses yang mudah terutamanya kepada murid yang jarang bertutur dalam bahasa Melayu sebagai bahasa pertuturan harian. Menyedari akan jurang yang dihadapi oleh murid bukan penutur natif ini, kajian yang lebih terperinci akan dijalankan untuk mengenal faktor sosial mempengaruhi pembelajaran dan pemudahcaraan penulisan karangan deskriptif dalam kalangan murid bukan penutur natif di Sekolah antarabangsa Kuala Lumpur. Kajian akan memberikan tumpuan kepada murid bukan penutur natif pada peringkat menengah rendah di sekolah antarabangsa.Kajian akan memberikan tumpuan kepada murid bukan penutur natif pada peringkat menengah rendah di sekolah antarabangsa. Reka bentuk penyelidikan kuantitatif akan digunakan bagi menyempurnakan kajian ini. Seramai 306 daripada 1500 responden akan dipilih secara rawak dengan melibatkan 3 buah sekolah antarabangsa yang terletak di sekitar Kuala Lumpur sebagai lokasi kajian ini. Pemilihan bilangan sampel kajian berdasarkan pengiraan saiz sampel Cohchran (Cohchran Sample Size Calculation). Teknik pengumpulan data yang dilibatkan dalam kajian ini ialah tinjauan rentas menerusi penggunaan borang soal selidik.Dapatan kajian akan dianalisis menggunakan Ujian T dan korelasi bagi menentukan skor min dan hubungan pemboleh ubah kajian.Kesimpulannya, kajian ini dapat dijangka dapat meningkatkan prestasi murid dan menarik minat murid bukan penutur natif di sekolah antarabangsa, Kuala Lumpur untuk terus cenderung menguasai mata pelajaran Bahasa Melayu terutama dalam pelbagai mod penulisan karangan.

Kata kunci: Faktor sosial; Kemahiran menulis Karangan Deskriptif, Murid Bukan Penutur Natif Sekolah Antarabangsa.

1.0 Pengenalan

Perubahan arus globalisasi telah memperlihatkan kepesatan dalam pelbagai bidang pendidikan di seluruh pelosok dunia, ianya tidak terkecuali dalam bidang Pendidikan Bahasa Melayu, keadaan ini telah memperlihatkan tahap penguasaan murid-murid khususnya dalam pembelajaran kemahiran menulis semakin membimbangkan. Bahasa Melayu merupakan bahasa kebanggaan dan menjadi nyawa dan nadi bagi setiap warganegara Malaysia.Dalam Perlembagaan Malaysia iaitu Perkara 152 telah menetapkan bahawa Bahasa Melayu merupakan bahasa kebangsaan dan bahasa rasmi negara Malaysia. Menurut Tokoh Bahasa Melayu iaitu Awang Sariyan (2006) menyatakan Bahasa Melayu telah menjadi bahasa rasmi, bahasa perdagangan pada masa lampau, bahasa pengajian agama dan lingua franca pada zaman Kesultanan Melayu Melaka dan menjadi bukti bahawa Bahasa Melayu pernah mencapai zaman kegemilangan sebagai bahasa yang teragung pada ketika itu.Bahasa Melayu merupakan medium komunikasi yang penting pada masa kini maka tidak hairanlah Bahasa Melayu menjadi pilihan masyarakat Barat sebagai bahasa kedua dalam medium komunikasi.

Bahasa merupakan alat perhubungan yang penting dalam kehidupan seharian manusia kerana

seseorang itu dapat berkomunikasi dengan orang lain untuk menyampaikan kehendak, perasaan, pendapat, pengalaman, buah fikiran, pengetahuan, mendapatkan informasi, menambah ilmu pengetahuan, memahami orang lain. Berdasarkan kajian yang telah dijalankan oleh Brown (2001), penutur bahasa pertama menguasai pengetahuan bahasa mereka sejak kecil dan dalam persekitaran semula jadi, manakala bagi penutur bahasa kedua pula, biasanya mereka menguasai pengetahuan bahasa kedua menerusi proses pendidikan yang bersifat formal dan hanya mampu berkembang melalui latihan dan pengukuhan.

Kepelbagaian masyarakat yang berbilang kaum dan berbilang bahasa di Malaysia, didapati pelbagai bentuk kemahiran berbahasa muncul dalam kalangan murid sekolah yang lahir dari pelbagai latar belakang. Apabila murid-murid melangkah ke alam persekolahan, Bahasa Melayu menjadi bahasa pengantar dan wajib dipelajari dengan tidak mengira bangsa. Namun begitu, fenomena semasa di Malaysia memperlihatkan bahawa generasi muda, terutamanya bukan Melayu tidak mendukung kedaulatan bahasa Melayu sebagai bahasa rasmi kerana tidak boleh bertutur dan menguasai bahasa Melayu (Teo Kok Seong, 2014; Nora'azian Nahar & Fadzilah Abd. Rahman, 2018). Bagi mereka mempelajari bahasa Melayu merupakan proses mempelajari bahasa baharu. Bagi murid bukan penutur natif, adalah menjadi kelaziman bagi alat artikulasi mereka menyebut bunyi dalam bahasa ibunda dan mudah bertutur menggunakan bahasa ibunda masing-masing. Natijahnya, Bahasa Melayu akan dianggap sebagai bahasa santai dalam sesebuah perhubungan dan tidak penting Bahasa Melayu dianggap tidak penting (Chew Fong Peng, 2016).

Dalam konteks kajian ini murid bukan penutur natif ialah murid yang terdiri daripada murid yang belajar di sekolah antarabangsa di sekitar Kuala Lumpur, pada peringkat sekolah menengah rendah. Mereka akan menggunakan bahasa ibunda dan Bahasa Inggeris sebagai bahasa pertama di rumah atau untuk berkomunikasi manakala di sekolah antarabangsa, Bahasa Inggeris digunakan sebagai bahasa pengantar dalam pembelajaran mahupun komunikasi, Bahasa Melayu hanya digunakan di dalam kelas mata pelajaran Bahasa Melayu sahaja. Pemerolehan daripada murid bukan penutur natif hanya akan dicapai apabila menggunakan Bahasa Melayu sebagai bahasa kedua dalam komunikasi. Malah murid bukan penutur natif ini juga menggunakan kurikulum Cambridge Assessment International Education (2021). Selain itu, Kurikulum Cambridge merujuk kepada kurikulum yang dikembangkan oleh Cambridge Assessment International Education, sebuah badan pendidikan antarabangsa yang menyediakan program pendidikan dan kelayakan yang diiktiraf secara global. Kurikulum Cambridge menekankan pembelajaran yang holistik, pembangunan kemahiran kritis, kreativiti, dan pemikiran kritis dalam pelajar. Program-program Cambridge termasuk International General Certificate of Secondary Education (IGCSE), International AS and A Levels, dan lain-lain yang menawarkan standard pendidikan yang tinggi dan diiktiraf di seluruh dunia.

Kurikulum yang diguna pakai di sekolah antarabangsa ini bagi keperluan pembelajaran murid-murid yang berumur dalam lingkungan 13 hingga 15 tahun. Ia membantu murid-murid membuat persediaan untuk langkah seterusnya dalam pendidikan mereka.Kurikulum pendidikan yang dirangka ini membantu murid-murid meningkatkan keyakinan diri, sikap bertanggungjawab, mencerminkan keperibadian yang unggul serta berfikiran kreatif dan dalam penglibatan kurikulum yang telah dirangka. Sistem pendidikan Cambridge Lower Secondary ini turut menawarkan sistem pendidikan yang luas dan seimbang kepada murid-murid yang berupaya membantu mereka berkembang maju dalam alam persekolahan, alam pekerjaan dan kehidupan mereka. Sistem pendidikan Cambridge Lower Secondary memerlukan murid pada peringkat menengah rendah mempelajari 10 mata pelajaran utama, termasuk Bahasa Inggeris, Matematik dan Sains. Melalui program yang ditawarkan ia menyediakan laluan yang jelas untuk ke peringkat seterusnya dalam pendidikan, serta banyak membuka peluang untuk berkembang maju dalam pelbagai bidang.

2.0 Objektif Kajian

Kajian ini bertujuan untuk mengenal pasti pengaruh faktor sosial terhadap pembelajaran dan pemudahcaraan kemahiran penulisan karangan deskriptif dalam kalangan murid bukan penutur natif di sekolah antarabangsa, Kuala Lumpur. Berikut adalah enam objektif khusus kajian ini.

1. Mengenal pasti pengaruh faktor sikap terhadap pembelajaran dan pemudahcaraan kemahiran penulisan karangan deskriptif dalam kalangan murid bukan penutur natif di sekolah antarabangsa, Kuala Lumpur.
2. Mengenal pasti pengaruh faktor motivasi terhadap pembelajaran dan pemudahcaraan kemahiran penulisan karangan deskriptif dalam kalangan murid bukan penutur natif di sekolah antarabangsa, Kuala Lumpur.

3. Mengenal pasti pengaruh faktor keluarga terhadap pembelajaran dan pemudahcaraan kemahiran penulisan karangan deskriptif dalam kalangan murid bukan penutur natif di sekolah antarabangsa, Kuala Lumpur.
4. Mengenal pasti pengaruh faktor rakan sebaya terhadap pembelajaran dan pemudahcaraan kemahiran penulisan karangan deskriptif dalam kalangan murid bukan penutur natif di sekolah antarabangsa, Kuala Lumpur.
5. Mengenal pasti pengaruh faktor persekitaran murid terhadap pembelajaran dan pemudahcaraan kemahiran penulisan karangan deskriptif dalam kalangan murid bukan penutur natif di sekolah antarabangsa, Kuala Lumpur.
6. Mengenal pasti hubungan yang signifikan antara pengaruh faktor sikap, faktor motivasi dan faktor keluarga, faktor rakan sebaya dan faktor persekitaran terhadap pembelajaran dan pemudahcaraan kemahiran penulisan karangan deskriptif dalam kalangan murid bukan penutur natif di sekolah antarabangsa, Kuala Lumpur.

3.0 Sorotan Kajian

3.1 Pengaruh Faktor Sosial dan Pemerolehan Bahasa Kedua Murid Bukan Penutur Natif

Umum perlu memahami bahawa proses pemerolehan bahasa pertama dan kedua amatlah berbeza. Pemerolehan bahasa pertama merupakan proses yang berlaku secara semula jadi dan melibatkan keadaan mental separa sedar atau tidak sengaja umpamanya tatacara kanak-kanak memperoleh bahasa ibundanya. Proses pemerolehan bahasa kedua pula berlaku menerusi proses pengajaran dan pembelajaran bahasa baharu yang sistematik dan terancang sifatnya. Justeru, bagi golongan murid bukan penutur natif adalah perlu untuk mereka diberikan dorongan, rangsangan dan sikap yang positif untuk mempelajari bahasa kedua. Pandangan ini telah dipersetujui oleh ramai tokoh-tokoh bahasa seperti Berwick, 1985; Chomsky, 1991; Crain, 1992; Fletcher & MacWhinney, 1995; Gleason, 1993; Pinker, 1994 dalam Tay Meng Guat & Wong Shia Ho (2016).

Mok Soon Sang (2008) menjelaskan bahawa motivasi merupakan dorongan dalam diri seseorang untuk melakukan sesuatu dengan motivasi, iltizam dan kesabaran yang tinggi bagi memenuhi matlamat yang ditetapkan. Brown (2001) puula berpendapat bahawa motivasi adalah kekuatan jangkaan (anticipation) unsur penting dalam pembelajaran dan faktor dalaman yang mempengaruhi perbezaan individu dalam pemerolehan bahasa kedua serta mempunyai hubungan yang erat dengan pencapaian akademik. Pandangan ini bertepatan dengan Gardner (1985) yang menegaskan bahawa dalam mempelajari bahasa, individu memerlukan motivasi yang tinggi bagi mencapai kejayaan dan matlamat. Motivasi juga boleh dibahagikan kepada dua, iaitu motivasi luaran dan motivasi dalaman. Menurut kajian yang telah dijalankan oleh Zamri Mahamod, Ruslin Amir & Mohamed Amin Embi (2015), motivasi dalaman dilihat melalui motivasi instrinsik dalam diri seseorang individu. Individu yang mempunyai motivasi untuk mencapai kejayaan dalam pendidikan bahasa mereka lebih mudah untuk memperoleh bahasa kedua mereka. Hal ini menunjukkan bahawa motivasi diperlukan dalam apa juga keadaan atau situasi bagi murid bukan penutur natif untuk menguasai sesuatu bahasa. Zamri Mahamod (2015, 2016b) selanjutnya mendapati bahawa pemerolehan Bahasa Melayu sebagai bahasa kedua menuntut guru untuk menggunakan strategi yang berupaya menarik minat murid bukan penutur natif untuk mempelajari dan menguasai Bahasa Melayu dengan mudah, cepat dan berkesan. Pandangan ini telah dibuktikan menerusi dapatan kajian Zaliza Mohamad Nasir dan Zaitul Azma Zainon Hamzah (2014) yang menunjukkan bahawa sikap dan motivasi murid asing akan mempengaruhi penguasaan Bahasa Melayu sebagai bahasa ketiga. Hal ini diperhatikan menerusi maklum balas daripada 16 orang responden mempunyai sikap yang positif dan motivasi yang tinggi ketika mempelajari Bahasa Melayu akibat daripada motivasi dan dorongan yang diterima daripada tenaga pengajar Bahasa Melayu.

Seterusnya, kepelbagaian latar belakang atau persekitaran pembelajaran murid dijangka dapat mempengaruhi sikap terhadap bahasa dan pembelajaran bahasa di sekolah. Persekitaran yang kondusif dalam perkembangan bahasa memudahkan seseorang murid itu menguasai bahasa tersebut. Persekitaran yang baik dapat mendorong seseorang untuk mempelajari bahasa dengan lebih baik. Persekitaran dalam kajian ini termasuklah persekitaran di dalam bilik darjah, persekitaran komunikasi murid bersama-sama dengan rakan dan persekitaran komunikasi murid bersama-sama dengan keluarga. Zakaria et al. (2012) menyatakan bahawa persekitaran sekolah dan guru sangat memainkan peranan yang penting dalam memperkembangkan potensi individu murid secara keseluruhan dan bersepadu. Gagasan ini telah diperkukuhkan melalui kajian

Tengku Nor Adila (2017) berkaitan penguasaan Bahasa Melayu sebagai bahasa kedua dari aspek pengaruh persekitaran linguistik dan Nor Hashimah Jalaluddin, Junaini Kasdan dan Zaharani Ahmad (2010) berkaitan aspek "sosial kognitif pelajar remaja terhadap bahasa Melayu" yang mengkaji sikap dan persepsi terhadap Bahasa Melayu dan melihat pertalian antara latar belakang sosial pelajar. Tay Meng Guat & Wong Shia Ho (2016) pula melaksanakan kajian berkaitan Minat Murid Bukan Penutur Natif Terhadap Pembelajaran Bahasa Melayu: Satu Kajian Kes terhadap remaja khususnya dari segi perbezaan jantina, kaum/etnik dan aliran kelas kognisi mereka terhadap Bahasa Melayu dengan melibatkan 1500 orang murid. Dapatan kajian menunjukkan bahawa hampir 80 peratus (%) mereka bersikap positif terhadap Bahasa Melayu. Kajian ini juga mendapati bahawa hanya 29.9% murid mempunyai persepsi yang tinggi terhadap Bahasa Melayu. Dibuktikan bahawa kognisi murid terhadap Bahasa Melayu mempunyai perkaitan yang signifikan dengan faktor sosial yang mempengaruhi latar belakang mereka. Persepsi yang tinggi dan sikap yang positif terhadap Bahasa Melayu perlu dipupuk agar murid tetap yakin akan kemampuan Bahasa Melayu.

3.2 Pembelajaran dan Pemudahcaraan Penulisan Karangan Deskriptif dalam Kalangan Murid Bukan Penutur Natif

Bahasa adalah elemen penting dalam komunikasi manusia dalam kehidupan seharian. ' Menurut kajian yang dijalankan oleh Raminah Sabran (1993), seseorang itu dapat berkomunikasi dengan orang lain untuk menyampaikan kehendak, perasaan, pendapat, pengalaman, buah fikiran, pengetahuan, mendapatkan informasi, menambah ilmu pengetahuan, memahami orang lain dan sebagainya .Bahasa Melayu merupakan bahasa pilihan kedua bagi murid bukan penutur natif di sekolah antarabangsa, seperti dalam kajian ini. Bahasa ibunda ialah bahasa pertama yang dituturkan di rumah dan Bahasa Inggerish semasa mengajar di sekolah.

Pembelajaran Abad ke-21 ialah suatu transformasi dalam dunia pendidikan iaitu daripada kaedah pengajaran dan pembelajaran (PdP) secara konvensional seperti chalk and talk kepada kaedah pembelajaran dan pemudahcaraan (PdPc) yang lebih dinamik dan kreatif dengan kandungan pembelajaran yang relevan dan sesuai dengan perkembangan semasa.Guru perlu menyedari bahawa dunia pendidikan kini perlu seiring dengan perkembangan zaman agar tidak ketinggalan. Kaedah PdPc perlu diubahsuai ke arah perkembangan teknologi siber dan berpusatkan murid agar menarik minat murid untuk menghayati mata pelajaran yang dipelajari sekaligus memantapkan kemahiran berfikir aras tinggi (KBAT) mereka. Dalam konteks pembelajaran dan pemudahcaraan (PdPc), guru berperanan sebagai perancang, pengawal, pembimbing, pendorong, dan penilai untuk memperkembangkan potensi murid secara menyeluruh dan menghasilkan pencapaian murid pada tahap optimum secara berterusan. Seterusnya, peranan murid adalah sebagai pembelajar aktif untuk menguasai kemahiran dan pengetahuan serta mengamalkan nilai positif.

Hubungan antara pengalaman, pemikiran dan bahasa merupakan hubungan yang anjal. Berdasarkan pendapat dan penemuan ahli-ahli linguistik, psikologi tentang hubungan antara pengalaman, pemikiran dan bahasa telah melahirkan beberapa prinsip dalam pengajaran penulisan karangan berasaskan pengalaman. Kemahiran menulis merujuk kepada keupayaan murid menulis perkataan dan ayat, dan menjana idea melalui mod penulisan yang pelbagai bagi dihubungkan dengan ilmu pengetahuan dan pemerolehan pengalaman kendiri. Pertimbangan khusus dalam kecekapan kemahiran menulis ialah terhadap keupayaan murid menggunakan ayat yang gramatis, tanda baca dan ejaan yang betul, dan tulisan yang jelas, cantik dan kemas. Kemahiran menulis juga difahami sebagai kemampuan murid-murid berfikir, menaakul, menyusun dan mengolah idea sebelum dilahirkan dalam bentuk wacana yang lengkap. Murid-murid perlu menguasai struktur karangan seperti mahir membuat pemerengganan dan menulis kesimpulan. Tuntutan ini dilihat selari dengan gagasan Don Bryne (1979) menyatakan bahawa simbol grafik diperlukan semasa menulis iaitu penggunaan huruf-huruf atau gabungjalin huruf-huruf yang berkaitan dengan lambang bunyi yang kita buat semasa kita bertutur. Hal ini meliputi empat aspek iaitu (a) menggunakan pelbagai jenis ayat; (b) mencatat dan menyusun maklumat; (c) menghasilkan penulisan kreatif dan bukan kreatif; dan (d) membuat ulasan tentang bahan yang didengar ditonton dan dibaca. Kementerian Pendidikan Malaysia (2001) telah menggariskan ideologi bagi kemahiran menulis dalam pendidikan Bahasa Melayu iaitu:
Kemahiran menulis merujuk kepada keupayaan murid mengeluarkan idea melalui pelbagai jenis penulisan yang berkaitan dengan ilmu pengetahuan dan pengalaman peribadi yang telah dilalui dengan menggunakan ayat yang gramatis, tanda baca dan ejaan yang betul, serta tulisan yang jelas dan kemas. Murid juga digalakkan untuk menggunakan kreativiti mereka untuk menghasilkan penulisan bahan ilmu dan imaginatif Sumber: Kementerian Pendidikan Malaysia, 2001).

Penulisan karangan deskriptif adalah proses penulisan yang bertujuan untuk menggambarkan atau menjelaskan sesuatu secara terperinci. Dalam penulisan karangan deskriptif, penulis berusaha untuk menggambarkan objek, tempat, peristiwa, atau situasi dengan menggunakan kata-kata yang lebih jelas dalam menggambarkan secara visual agar pembaca dapat membayangkan dengan jelas apa yang sedang dijelaskan. Mengikut Kerangka Kurikulum Standard Sekolah Menengah (KSSM), Dokumen Standard Kurikulum dan Pentaksiran (DSKP) Bahasa Melayu menyatakan bahawa pendekatan berbentuk modular dan pembelajaran didik hibur serta pentaksiran secara holistik bagi mencungkil potensi murid untuk meneroka pelbagai bidang ilmu pengetahuan, memperkembangkan dan menilai keupayaan penguasaan kemahiran berbahasa dengan mempamerkan keterampilan dan kecekapan berbahasa.

Menurut kajian telah dijalankan oleh Nik Safiah (2004) dan Van de Kopple et al. dlm. Roselan (2003), menyatakan kemahiran menulis merupakan kemahiran yang sukar diajarkan dan dikuasai oleh murid kerana penulisan melibatkan tahap literasi yang paling kompleks dan memerlukan proses kognisi yang tinggi. Dalam pengajaran Bahasa Melayu di sekolah, guru-guru berdepan dengan cabaran yang paling besar iaitu pelajar yang mempelajari Bahasa Melayu sebagai bahasa kedua adalah menguasai kemahiran bahasa khususnya kemahiran menulis. Selain itu, kemahiran menulis merupakan kemahiran kompleks yang perlu dikuasai oleh murid selepas kemahiran bertutur dan membaca. Kenyataan tersebut bertepatan dengan kajian yang telah dijalankan oleh Che Zanariah dan Fadzilah (2011) yang menyatakan bahawa menghasilkan penulisan merupakan proses yang kompleks dan perlu dilaksanakan mengikut tahap secara sistematik. Menulis juga dikaitkan dengan keupayaan seseorang murid menulis perkataan atau ayat yang gramatis dan mematuhi hukum-hukum penulisan.

3.3 Masalah Pembelajaran dan Pemudahcaraan Penulisan Karangan Deskriptif dalam Kalangan Murid Bukan Penutur Natif

Pengaruh bahasa ibunda seringkali menjadi faktor kepada kegagalan dalam penguasaan bahasa kedua. Penguasaan Bahasa Melayu sebagai bahasa kedua sangat memberi kesan terhadap prestasi murid dalam PdPc. Pembelajaran Bahasa Melayu sebagai bahasa kedua bukan merupakan suatu proses yang mudah. Gangguan bahasa ibunda seringkali menjadi penyebab kepada permasalahan tersebut. Hal ini memberi cabaran kepada guru-guru untuk mengajar murid-murid bagi menguasai bahasa kedua. Hal ini disokong oleh Ilangko et al. (2013) yang menyatakan proses pengajaran Bahasa Melayu sebagai bahasa kedua memberi cabaran kepada pendidik di kawasan bandar di sekolah antarabangsa di Kuala Lumpur.

Berdasarkan kajian-kajian lepas, terdapat enam masalah utama murid bukan penutur natif menguasai pembelajaran penulisan Bahasa Melayu (Aman Shah Syed Ali & Zamri Mahamod (2021), i. masalah penggunaan kosa kata yang terhad, ii. kurangnya minat membaca dalam kalangan murid, iii. pengaruh daripada bahasa ibunda yang digunakan dalam penulisan iv. pembinaan ayat yang gramatis. v. tidak dapat melahirkan idea yang bernas seterusnya menjadikan olahan idea dalam karangan kurang menarik (Rohaida dan Zamri, 2015: Rozita, Latifah dan Fadzilah (2017)) dan vi. Penggunaan tanda baca dalam penulisan. Malahan hasil dapatan yang dijalankan murid bukan penutur natif bermasalah dalam menguasai format karangan.

Masalah ini juga berlaku disebabkan oleh terdapat murid bukan penutur natif yang masih gagal menguasai kemahiran asas menulis dan menyebabkan mereka tidak dapat menyiapkan sesuatu latihan penulisan karangan dengan baik. Situasi ini disebabkan oleh murid bukan penutur natif tidak memahami kehendak soalan seterusnya tidak mampu menghasilkan karangan dengan baik. Menurut kajian yang telah dijalankan oleh Alhaadi dan Norimah Zakaria (2019), Wan Muna Ruzanna, Maz Abu Supian dan Mohd Jasmy (2018), murid bukan penutur natif kerap melakukan kesalahan tatabahasa khususnya dalam aspek penggunaan imbuhan semasa menulis karangan. Bahkan melalui kajian yang telah dijalankan oleh Mohamad Yazid (2016) mendapati murid bukan Melayu mempunyai tanggapan yang negatif terhadap pembelajaran bahasa Melayu. Murid bukan Melayu beranggapan bahawa bahasa Melayu tidak penting untuk dipelajari dan hanya untuk lulus dalam peperiksaan sahaja.

Menurut kajian lepas masalah sikap dan motivasi murid, terutamanya dalam kalangan murid bukan Melayu kajian yang telah dilakukan di sebuah sekolah swasta telah menunjukkan hampir 90 peratus muridnya ialah pelajar bukan Melayu, terutamanya daripada kaum Cina tidak dapat menguasai bahasa Melayu dengan baik. Seterusnya, Menurut kajian lain yang telah dijalankan oleh Jerie dan Zamri (2011), murid-murid etnik Iban bersikap positif dan bermotivasi tinggi terhadap pembelajaran Bahasa Melayu. Ini

menunjukkan murid-murid mempunyai keinginan yang tinggi dalam mempelajari Bahasa Melayu sekiranya mendapat sokongan serta dorongan yang baik. Malahan, menurut kajian lepas yang telah dijalankan oleh Tengku Nor Adila (2017) menyatakan pengaruh persekitaran linguistik mempengaruhi pembelajaran Bahasa Melayu sebagai bahasa kedua. Persekitaran linguistik ini merangkumi latar belakang tempat tinggal, penggunaan bahasa perbualan di rumah, latar belakang rakan dan jiran yang sangat mempengaruhi penguasaan Bahasa

3.4 Teori Input Krashen

Dalam konteks kajian ini , Teori Input Krashen (1985) didapati sesuai untuk kajian ini kerana berdasarkan teori-teori yang dikemukakan di atas, penyelidik beranggapan bahawa kesemua hipotesis yang dibincangkan dapat diaplikasikan untuk melihat keberkesanan penguasaan bahasa kedua dari segi profesiensi (mendengar, bertutur, membaca dan menulis) bahasa Melayu dan hubungannya dengan pemboleh ubah yang dipilih dalam kalangan murid Malayisa bukan penutur natif di sekolah antarabangsa. Hipotesis pertama iaitu Hipotesis Urutan Alamiah (Natural Order Hypothesis) (1976) pemerolehan tatabahasa bahasa Melayu sebagai bahasa kedua berlaku secara natural bergantung kepada faktor umur, latar belakang dan tahap pendedahan kepada bahasa kedua. Dalam Hipotesis kedua Kreshen (1981a), iaitu Hipotesis Pemerolehan dan Pembelajaran (Acquisition Learning Hypothesis, murid bukan penutur natif boleh memperoleh bahasa kedua melalui interaksi secara lisan semasa berkomunikasi hari-hari dan melalui proses pengajaran dan pembelajaran PdPc di dalam kelas. Bagi Krashen (1981) kompetensi menguasai bahasa kedua melalui pemerolehan bukan pembelajaran.

3.5 Tertib Mengarang Awang Sariyan

Menurut Awang Sariyan (2010) dan Mohd Rashid Md Idris (2012:13), falsafah pendidikan bahasa itu haruslah selari dengan Falsafah Pendidikan Negara dari aspek jasmani, emosi, rohani dan intelek serta sumbangan bahasa terhadap pembangunan masyarakat dan negara. Falsafah Pendidikan Bahasa juga merupakan kesepaduan antara Falsafah Pendidikan Kebangsaan dengan falsafah bahasa yang merangkumi intipati konsep JERI dan tiga prinsip kesempurnaan berbahasa (Teori Falsafah Bahasa). Menurut Mohd Rashid Md Idris dan Abu Hassan Abdul (2010), konsep JERI ini amat penting dalam penyepaduannya dengan prinsip asas Teori Falsafah Bahasa untuk mencapai kesempurnaan berbahasa. Menurut mereka lagi, pembangunan JERI melalui pendidikan bahasa adalah berasaskan kepada tiga kemahiran yang utama, iaitu kemahiran kognitif, afektif, dan psikomotor.

Dalam konteks penulisan karangan deskriptif, menurut Awang Sariyan (1991), perenggan bukan sekadar himpunan ayat atau kata, tetapi merupakan unit wacana yang menunjukkan kesatuan idea dalam binaan bahasa. Oleh itu, penyusunan perenggan perlu dilakukan dengan teliti untuk memastikan karangan mempunyai ikatan pemikiran yang konsisten dari awal hingga akhir. Kajian lain yang menyokong, kajian yang dijalankan oleh Naapie Mat (1997), Fergensen (1989), Trimmer & McCrimmon (1988), Weiner (1987), dan Tomkins (1990) yang menyatakan bahawa proses mengarang merupakan aktiviti yang kompleks yang melibatkan beberapa tahap, iaitu perancangan, penulisan draf, dan penyusunan karangan. Setiap tahap ini secara tidak langsung melibatkan proses perenggangan. Penyusunan perenggan dalam sebuah karangan bertujuan untuk memisahkan bahagian-bahagian seperti pengenalan, perkembangan, dan penutup, serta memastikan kaitan yang jelas antara setiap bahagian.

4.0 Metodologi Kajian

4.1 Reka Bentuk Kajian

Dalam konteks kajian ini akan menggunakan kaedah pengumpulan data secara kuantitatif dengan reka bentuk analisis korelasi dipilih. Kaedah kuantitatif dilihat dapat menjelaskan maklumat yang ingin diperoleh secara holistik daripada sumber yang sepatutnya tanpa wujudnya sebarang manipulasi oleh penyelidik (Merriam 2009). Data akan dikumpulkan sekali sahaja daripada sampel pada satu masa tertentu. Kaedah korelaasi dipilih kerana pertama, adalah kepelbagaian (versatility) kegunaan iaitu kebolehan untuk menyiasat hampir kesemua permasalahan dan persoalan. Kedua, kecekapan (efficiency) iaitu data daripada pelbagai pemboleh ubah boleh digabungkan tanpa meningkatkan kos dan penggunaan masa. Jangka masa yang diperuntukkan semasa pemungutan data dapat dilakukan dalam masa yang singkat. Ketiga, generalisasi boleh dibuat terhadap populasi kajian yang lebih besar dengan tepat dan berkesan.

4.2 Sampel Kajian

Pemilihan bilangan sampel kajian berdasarkan "Cohchran sample size calculation" Cohen & Cohen (1988), dalam konteks kajian ini adalah seramai 306 daripada 1500 responden murid bukan penutur natif, terdiri dari 3 buah sekolah antarabangsa yang terletak di sekitar Kuala Lumpur akan dipilih untuk memulakan pemilihan sampel. Selain itu, berdasarkan kajian telah dijalankan oleh Omair (2014), menyatakan bahawa:
"It is important to select a representative sample in quantitative research in order to be able to generalize the results to the target population. The sample should be of the required sample size and must be selected using an appropriate probability sampling technique".

4.3 Lokasi Kajian

Dalam konteks kajian ini, Sekolah Antarabangsa yang terletak di sekitar Kuala Lumpur menjadi lokasi utama dalam kajian ini. Sebanyak 3 buah sekolah antarabangsa yang akan dipilih sebagai lokasi kajian ini yang terletak di daerah Petaling Jaya. Sekolah antarabangsa telah dipilih sebagai lokasi kajian adalah berdasarkan faktor berikut, sekolah antarabangsa merupakan sekolah yang ditubuhkan untuk golongan ekspatriat yang bekerja atau menjalankan perniagaan di Malaysia. Lokasi pemilihan di Kuala lumpur dipilih kerana lokasi menjadi tumpuan utama rakyat Malaysia yang berpendapatan tinggi (T20) lebih gemar menghantar anak-anak mereka belajar di sekolah antarabangsa.Peratusan peningkatan ke masukan murid-murid ke sekolah antarabangsa saban tahun semakin meningkat. Menurut kajian yang lepas oleh Ahmad Suhael (2019) melaporkan bahawa 64 peratus daripada murid di sekolah antarabangsa merupakan warganegara Malaysia.

4.4 Instrumen Kajian

Instrumen yang akan digunakan bagi penyempurnaan kajian melibatkan dua set instrumen iaitu Ujian Penilaian Bahasa Melayu Pertama(IGCSE)-Penulisan Deskriptif ; dan Borang Soal Selidik Pengaruh Faktor Sosial dan Pembelajaran dan Pemudahcaraan Penulisan Karangan Deskriptif dalam Kalangan Murid Bukan Penutur Natif. Bagi Ujian Penilaian Bahasa Melayu Pertama (IGCSE) akan melalui lima peringkat pembangunan instrumen, peringkat pertama persediaan ujian, peringkat kedua melibatkan pemeriksaan dan pengukuran, peringkat ketiga melibatkan analisis ujian, Peringkat keempat melibatkan analisis ujian, peringkat kelima melibatkan tindakan susulan.Pembinaan soalan Ujian Penilaian Bahasa Melayu Pertama (IGCSE) berdasarkan buku Teks KSSR dan Buku Teks Cambridge Bahasa Melayu Pertama 06969. Ujian Penilaian Bahasa Melayu Pertama(IGCSE) yang akan dilaksanakan ini bertujuan mengenal pasti tahap kemahiran menulis murid Malaysia bukan penutur natif menghasilkan penulisan kreatif dalam pelbagai genre menggunakan perkataan dan kosa kata yang pelbagai dan kompleks, serta menggunakan sistem bahasa yang tepat dan betul.

Borang Soal Pengaruh Faktor Persekitaran Murid Bukan Penutur Natif dalam Pembelajaran dan Pemudahcaraan Penulisan Karangan Deskriptif ini akan dibangunkan kepada dua bahagian. Bahagian A dalam borang soal selidik akan memberikan perhatian kepada informasi demografi; dan Bahagian B: Pengaruh Faktor Persekitaran Sosial merangkumi faktor sikap, faktor motivasi, faktor rakan sebaya, faktor keluarga dan faktor persekitaran. Maklumat-maklumat ini akan digunakan untuk pengumpulan data kuantitatif daripada responden.

5.0 Kesimpulan

Setelah meneliti kajian-kajian lepas berkaitan faktor persekitaran sosial dan pembelajaran dan pemudahcaraan penulisan karangan deskriptif dalam kalangan murid bukan penutur natif, adalah diharapkan kajian ini dapat dilaksanakan di sekolah antarabangsa di Kuala Lumpur. Adalah diharapkan dapatan kajian ini berupaya menambah khazanah ilmu dalam penulisan karangan deskriptif Bahasa Melayu. Malah, dapatan kajian ini juga berupaya menjadi satu indikator bagi mengatasi isu yang terkait dengan situasi yang dihadapi oleh golongan murid di sekolah antarabangsa secara keseluruhan.

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Penyelidikan Kemahiran Teknikal TVET Terhadap Konsep Andragogi dalam Penerapan Kendiri Komuniti Klien AADK

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Abstrak

Politeknik Malaysia merupakan institusi Pendidikan Latihan Teknikal dan Vokasional (TVET) yang terkemuka dalam melahirkan graduan modal insan yang berdaya saing bagi memenuhi keperluan industri. Selaras dengan itu, pelbagai agenda menyokong Pelan Strategik Pengajian Tinggi dalam menggarap dan membina potensi jasmani, emosi dan rohani pelajar secara holistik. TVET menggalakkan pembelajaran sepanjang hayat yang meliputi semua peringkat sekolah menengah, lepasan sekolah sehingga ke tenaga kerja di industri berasaskan pekerjaan, latihan berterusan dan pembangunan profesional. Menepati sasaran ini, sebuah program Pembangunan Kemahiran TVET dilaksanakan di Politeknik Sultan Azlan Shah melibatkan Klian AADK daerah Batang Padang. Cakna atas saranan TVET Madani ini, program pendekatan Andragogi diaplikasikan kepada pembangunan nilai penerapan kendiri terhadap KLIEN AADK. Andragogi merupakan teknik pendekatan pembelajaran yang difokuskan kepada golongan dewasa melalui pengalaman yang menjadi sumber pengetahuan, pengalaman dalam pembelajaran, latihan konsep mandiri dan pembelajaran secara fleksibel diterapkan dalam program Latihan Kemahiran Vokasional Asas Pendawaian Elektrik bagi Klien Agensi Anti Dadah (AADK) Daerah Batang Padang. Program ini telah dijalankan melalui fasa pertama dan fasa kedua melibatkan hampir 40 peserta klian AADK. Kajian selidik ini dianalisa menggunakan Social Science Statistics Package (SPSS) versi 29.0. Program ini bertujuan mengenalpasti asas kefahaman pendawaian elektrik terhadap klien AADK, penilaian tahap kemahiran pendawaian elektrik dan hubungan kolerasi antara penerimaan dan perlaksanaan (persepsi) klien AADK terhadap program ini. Menerusi hasil kajian ini, dapat dinyatakan bahawa program ini menunjukkan hubungan kolerasi yang sangat signifikan iaitu bacaan 0.912 terhadap motivasi Klien AADK menerusi kursus yang dijalankan. Melalui penyelidikan kursus berkaitan tahap kefahaman Klien, pengujian alpha cronbatch menunjukkan nilai 0.922 dimana ia keputusan menunjukkan sangat dipercayai. Ia jelas menunjukkan bahawa klien AADK mendapat kefahaman berkaitan pembelajaran asas pendawaian difahami antara perkaitan kemahiran TVET iaitu asas pendawaian dan pembangunan Kabel Extension dapat dijadikan satu peluang pendapatan atau penggunaan kabel dalam seharian. Selain itu, analisa diskriptif menunjukkan keputusan yang tinggi iaitu melebihi 4.00 dimana secara keseluruhan dapat disimpulkan peningkatan motivasi di kalangan klien AADK dapat ditingkatkan dengan adanya program ini.

Kata kunci: Pendidikan Latihan Teknikal dan Vokasional (TVET), Agensi Anti Dadah (AADK), Social Science Statistics Package (SPSS), Andragogi

1.0 Pengenalan

Politeknik Malaysia adalah sebuah institusi Pendidikan Latihan Teknikal dan Vokasional (TVET) yang memainkan peranan penting dalam membangunkan sumber daya manusia yang berkualiti dan berkemahiran tinggi. Institusi ini menawarkan pelbagai program pengajian di peringkat diploma dalam bidang teknikal dan vokasional, bertujuan untuk memenuhi keperluan industri serta menyumbang kepada pembangunan ekonomi negara [14].

Melalui pendekatan yang berorientasikan industri, Politeknik Malaysia memastikan para graduannya dilengkapi dengan kemahiran teknikal yang relevan, serta kemampuan untuk beradaptasi dalam persekitaran kerja yang sentiasa berubah. Dengan kerjasama erat antara politeknik dan sektor industri, graduan dapat memperoleh peluang pekerjaan yang lebih baik dan berdaya saing dalam pasaran kerja global.

Selain itu, Politeknik Malaysia juga memberikan penekanan kepada aspek pembangunan modal insan, di mana ia bukan sahaja menekankan kemahiran teknikal tetapi juga pengembangan nilai-nilai seperti kepimpinan, komunikasi, dan etika kerja yang baik. Ini menjadikan graduan politeknik bukan hanya berkemahiran tinggi, tetapi juga memiliki sikap dan sikap profesional yang diperlukan dalam dunia pekerjaan masa kini.

Pendidikan dan Latihan Teknikal dan Vokasional (TVET) di Politeknik diperkenal di Malaysia melalui penubuhan Politeknik pertama, Politeknik Ungku Omar di Ipoh di bawah Pelan Pembangunan Pertubuhan Bangsa-bangsa Bersatu pada tahun 1969. TVET diperkukuhkan dengan perakuan Jawatankuasa Kabinet berkaitan pendidikan pada tahun 1979 di bawah Pelan Induk Perindustrian Kebangsaan pertama (1985–1995) [3].

Hala Tuju Transformasi Politeknik yang melibatkan empat teras berikut:

Pertama : Memperkasa politeknik ke arah menjadi pilihan yang setanding dengan universiti awam;

Kedua : Membangunkan program pengajian dan penyelidikan dalam bidang tujahan yang bertunjangkan kekuatan di setiap politeknik;

Ketiga : Memperkasa warga politeknik dengan pengetahuan dan kemahiran tinggi; Keempat : Membina imej bereputasi tinggi budaya kerja cemerlang.

Pendidikan dan Latihan Teknikal dan Vokasional (TVET) merupakan proses pendidikan dan latihan yang menjurus ke arah pekerjaan dan menekankan amalan industri dalam pelbagai bidang berkaitan. TVET menggalakkan pembelajaran sepanjang hayat sehingga ke tenaga kerja di industri melalui latihan berasaskan pekerjaan serta latihan berterusan dan pembangunan profesional.

Kerajaan secara berterusan memberi penekanan terhadap TVET kerana sedar akan permintaan dan keperluan industri kepada modal insan yang berkeupayaan seiring dengan peredaran teknologi yang amat pantas sama ada di peringkat nasional mahupun di peringkat global. TVET menjadi pemacu utama atau ‘game changer’ bagi melahirkan tenaga mahir tempatan yang secara langsung akan mengurangkan kebergantungan kepada tenaga kerja asing [17].

Lepasan program TVET KPT mampu menguasai pengetahuan dan kemahiran praktikal (hands-on) dengan kompeten. Kelebihan kemahiran praktikal dan latihan industri (on the job training) ini dapat membuka peluang kepada lepasan TVET bagi mendapatkan pekerjaan. Dengan penerapan modul keusahawanan di dalam struktur kurikulum sedia ada, lepasan TVET juga berupaya menjadi pencipta pekerjaan sebagai usahawan muda. Laluan menyambung pengajian ke peringkat lebih tinggi juga telah disediakan dengan kerjasama institusi TVET yang lain, Malaysian Technical University Network (MTUN), Institut Pengajian Tinggi Awam dan Swasta [14].

Bertepatan dengan saranan itu, Politeknik Sultan Azlan Shah dengan khususnya, Jabatan Kejuruteraan Elektrik (JKE) dengan kerjasama Agensi Anti Dadah Kebangsaan (AADK) dan Jawatankuasa Pemulihan Dadah (JKPD) Daerah Muallim telah menjalankan sebuah program Pembangunan Kemahiran TVET terhadap Konsep Andragogi dalam Penerapan Kendiri Komuniti Klien AADK. Program ini berasaskan kepada konsep Andragogi iaitu teknik pendekatan pembelajaran yang difokuskan kepada golongan dewasa melalui pengalaman yang menjadi sumber pengetahuan, pengalaman dalam pembelajaran, latihan konsep mandiri dan pembelajaran secara fleksibel. Menurut Malcolm Shepherd Knowles, tahun 1950-an [24], Andragogi adalah pendekatan dalam pembelajaran kaedah dewasa dan berbeza dengan kaedah pembelajaran kanak-kanak. Andragogi, yang berasal dari kata Yunani yang berarti "pendidikan untuk orang dewasa", menekankan pentingnya pemahaman terhadap karakteristik dan keperluan unik orang dewasa dalam proses pembelajaran [24]. Knowles mengidentifikasi beberapa prinsip utama dalam teori Andragogi yang dapat membantu memfasilitasi pembelajaran yang lebih efektif bagi orang dewasa:

Keperluan untuk mengetahui (Need to Know):

Orang dewasa cenderung ingin memahami alasan mengapa mereka harus belajar sesuatu sebelum mereka

bersedia untuk memberi komitmen kepada proses pembelajaran. Mereka lebih termotivasi ketika mereka tahu bagaimana bentuk yang dipelajari dapat diterapkan dalam kehidupan atau pekerjaan mereka.

Pengalaman sebagai sumber belajar (Experience as a Resource for Learning):

Orang dewasa mempunyai banyak pengalaman hidup yang berharga dalam proses pembelajaran. Pengalaman ini bukan hanya meliputi pengalaman profesional, tetapi juga pengalaman peribadi. Pembelajaran bagi orang dewasa lebih efektif ketika mereka dapat menghubungkan pembelajaran baru dengan pengalaman yang sudah mereka miliki.

Persediaan untuk belajar (Readiness to Learn):

Orang dewasa cenderung untuk belajar ketika mereka merasa bahwa pembelajaran tersebut relevan dengan peranan mereka dalam kehidupan sehari-hari, seperti pekerjaan atau kehidupan keluarga. Keinginan untuk belajar timbul ketika ada keperluan langsung atau masalah yang ingin diselesaikan.

Orientasi pembelajaran bagi problem-centered (Problem-Centered Orientation):

Orang dewasa lebih suka pembelajaran yang berfokus pada penyelesaian masalah daripada pembelajaran yang berfokus pada teori atau abstrak. Mereka lebih cenderung untuk belajar kaedah penyelesaian masalah dalam hidup atau pekerjaan mereka.

Motivasi intrinsik (Intrinsic Motivation):

Meskipun faktor eksternal seperti penghargaan atau pengiktirafan dapat memotivasi orang dewasa, kecenderungan lebih kepada motivasi intrinsik, seperti pencapaian peribadi, kepuasan dalam menguasai keterampilan baru, dan keinginan untuk berjaya secara pribadi.

Kemandirian dalam belajar (Self-Concept):

Seiring bertambahnya usia, orang dewasa cenderung melihat diri sebagai pembelajar yang lebih mandiri. Mereka bertanggungjawab atas proses pembelajaran dan menentukan corak pembelajaran dan teknik belajar secara kendiri.

Keperluan untuk menghargai pengalaman peribadi (Respect for Experience):

Orang dewasa ingin dihargai atas pengalaman hidup dan pekerjaan mereka, serta pandangan dan pengetahuan yang mereka alami ke dalam pembelajaran. Dalam konteks ini, fasilitator pembelajaran perlu memberi ruang untuk mereka aktif dan diskusi, serta memanfaatkan pengalaman orang dewasa sebagai sumber belajar.

Bersesuaian dengan konsep Andragogi, program ini memilih Klien AADK bagi proses pembelajaran secara dewasa. Seperti sedia maklum, Klien AADK terdiri daripada mereka yang tergolong kepada 3 kesalahan iaitu terdiri daripada pihak yang pernah ditempatkan di Pusat Pemulihan Penagihan Narkotik (PUSPEN AADK), pernah dipenjarakan dan pernah menjalani Hukuman LLPK (Langkahlangkah Pencegahan Khas) akibat penyalahgunaan Dadah. Program ini menawarkan khidmat kemahiran keselamatan terhadap penggunaan alatan elektrik dalam kehidupan seharian. Seterusnya pengisian program ini diteruskan dengan sesi teori asas pembangunan ‘Kabel Extension’. Kursus dimulakan dengan peralatan yang akan digunakan, fungsi setiap peralatan, teori asas jenis wayar dan fungsinya wayar, cara membuat pemasangan kepada soket berkembar badan dan penutup bersama wayar, pemasangan kepala plug bersama wayar, kaedah pemotongan strip Copper Cable, seterusnya menguji kefungsian kepala plug dan soket berkembar. Dengan adanya penawaran kursus asas pendawaian dalam merekabentuk ‘Extension Kabel’ ia dapat membuka minda, jati diri klien AADK dalam kelangsungan hidup dan bergerak aktif dalam pembangunan kendiri yang lebih positif bagi pembangunan masa depan dalam menjana pendapatan dan kelangsungan hidup [17]. Program ini dapat memberi peluang dan mendokong saranan kerajaan dalam bergandingbahu membantu memberikan peluang kepada KLIEN AADK untuk terus berubah kepada kebaikan dan mempunyai hala tuju kehidupan [1].

Program Pembangunan Kemahiran TVET terhadap Konsep Andragogi dalam Penerapan Kendiri Komuniti Klien AADK ini bertujuan adalah:-

- Asas kefahaman pendawaian elektrik terhadap Klien AADK (Pelatih) melalui Kursus Pendawaian Elektrik di politeknik.
- Menilai tahap kemahiran pendawaian elektrik terhadap Klien AADK (Pelatih) melalui Kursus Pendawaian Elektrik di politeknik.
- Mengenalpasti hubungan antara penerimaan dan perlaksanaan (persepsi) klien AADK (Pelatih) melalui Kursus Pendawaian Elektrik di politeknik.

Program ini telah dilaksanakan dalam dua fasa iaitu Fasa Pertama dilaksanakan pada 7 Mei 2024 dengan seramai 20 orang Klien AADK yang terdiri daripada umur 30 hingga 50 tahun dari daerah Slim River dan Tanjong Malim. Manakala Fasa Kedua diadakan pada 16 Oktober 2024 dengan seramai 20 orang Klien AADK yang terdiri daripada umur 20 tahun hingga 40 tahun daripada Trolak dan Sungkai. Semua Klien AADK dapat menghasilkan Éxtension Kabel' secara individu dan berjaya berfungsi dengan baik. Penyelidikan ini diperolehi dengan edaran Soalan Kaji Selidik melalui Google Form dan edaran manual kepada Pejabat Agensi Anti Dadah Daerah Batang Padang kepada semua Klien AADK Daerah Batang Padang.

2.0 Kajian Literatur

Politeknik Malaysia memainkan peranan penting dalam menyediakan pendidikan teknikal dan vokasional yang relevan dengan keperluan industri semasa. Dengan pendekatan pembelajaran yang berfokuskan kepada penguasaan kemahiran praktikal, Politeknik berusaha melahirkan graduan yang bukan hanya mahir dalam bidang teknikal tetapi juga memiliki kemahiran insaniah yang tinggi, seperti kepimpinan, komunikasi, dan penyelesaian masalah. Ini adalah elemen penting dalam memastikan graduan dapat berdaya saing dalam dunia pekerjaan yang semakin dinamik dan berteknologi tinggi [4].

Visi Politeknik Malaysia untuk menjadi institusi TVET (Pendidikan dan Latihan Teknikal dan Vokasional) termaju selaras dengan agenda negara dalam memperkukuhkan sektor pendidikan teknikal dan vokasional. Melalui pendekatan pendidikan yang holistik, Politeknik Malaysia tidak hanya memberi penekanan kepada pembelajaran berasaskan kemahiran praktikal tetapi juga menekankan nilai-nilai keusahawanan dan kreativiti. Ini memberikan peluang kepada graduan untuk menjadi lebih berdaya saing dan mampu mencipta peluang pekerjaan, bukan hanya mencari pekerjaan [5]. Politeknik Malaysia memainkan peranan utama dalam menyediakan tenaga kerja yang memenuhi permintaan bukan hanya kemahiran teknikal, tetapi juga aspek nilai kerja beretika, komunikasi yang baik, dan keupayaan untuk bekerja dalam pasukan [4].

Dengan kurikulum yang sentiasa dikemas kini mengikut perkembangan teknologi dan keperluan industri, Politeknik Malaysia memastikan graduannya dilengkapi dengan pengetahuan dan kemahiran terkini. Oleh itu, Politeknik Malaysia bukan sahaja berperanan sebagai penyedia tenaga kerja yang mahir tetapi juga sebagai pusat inovasi dan perkembangan dalam bidang pendidikan vokasional dan teknikal [7].

Dalam merealisasikan garapan kerajaan Madani, Politeknik juga menekankan dalam pembangunan komuniti setempat. Selaras dengan itu, sebuah program bertunjangkan Pemantapan Andragogi dalam komuniti diperkenalkan iaitu Program Pembangunan Kemahiran TVET terhadap Konsep Andragogi dalam Penerapan Kendiri Komuniti Klien AADK dilaksanakan.

Andragogi adalah konsep atau teori yang membincangkan pendekatan pembelajaran yang berfokuskan kepada golongan dewasa. Ia berbeza dengan pedagogi, yang lebih berfokus kepada pendidikan kanakkanak. Dalam andragogi, beberapa prinsip utama telah digariskan untuk membantu dewasa dalam proses pembelajaran mereka, dengan menekankan pengalaman hidup mereka sebagai sumber utama pengetahuan. Berikut adalah beberapa aspek penting dalam andragogi [17]:

1. Pengalaman Sebagai Sumber Pengetahuan

Mereka lebih cenderung untuk mengaitkan pengetahuan baru dengan pengalaman hidup mereka. Oleh itu, dalam pendekatan andragogi, pengalaman individu dianggap sebagai komponen penting dalam pembelajaran. Misalnya, latihan berasaskan situasi sebenar atau perbincangan pengalaman peribadi lebih

berkesan daripada pendekatan teori yang semata-mata.

2. Pembelajaran Berdasarkan Masalah

Kecenderungan untuk lebih berminat dalam pembelajaran yang berkaitan dengan penyelesaian masalah sebenar. Oleh itu, pembelajaran berasaskan masalah (Problem-Based Learning, PBL) adalah pendekatan yang sesuai dalam andragogi. Mereka ingin melihat aplikasi praktikal terhadap apa yang mereka pelajari dan cara ia dapat digunakan untuk meningkatkan kehidupan atau kerjaya mereka.

3. Kemandirian dalam Pembelajaran

Kecenderungan untuk belajar secara mandiri, yang bermaksud mereka memerlukan lebih banyak kawalan ke atas proses pembelajaran mereka. Mereka lebih suka menetapkan matlamat pembelajaran mereka sendiri, memilih sumber pembelajaran, dan menilai kemajuan mereka secara peribadi. Oleh itu, kaedah pembelajaran yang memberi kebebasan untuk belajar dengan cara dan kelajuan masing-masing sangat disyorkan dalam andragogi.

4. Pembelajaran Fleksibel

Golongan dewasa sering kali mempunyai komitmen lain seperti pekerjaan, keluarga, atau tanggungjawab sosial, yang menjadikan jadual yang fleksibel amat penting dalam pendidikan mereka. Oleh itu, pendekatan andragogi memberikan fleksibiliti dalam masa dan tempat pembelajaran, supaya mereka dapat belajar tanpa terlalu membebankan komitmen lain dalam hidup mereka.

5. Motivasi Intrinsik

Dewasa lebih bermotivasi untuk belajar apabila mereka merasakan pembelajaran itu berkaitan langsung dengan keperluan dan matlamat mereka. Mereka biasanya lebih berminat untuk mempelajari sesuatu yang boleh membawa manfaat praktikal atau memenuhi keperluan peribadi mereka, berbanding kanak-kanak yang lebih mudah dipengaruhi oleh faktor luar seperti ganjaran atau hukuman.

6. Pentingnya Rasa Penghargaan dan Penghormatan

Dewasa ingin diperlakukan dengan penuh rasa hormat dan penghargaan dalam proses pembelajaran. Mereka mahu dilibatkan dalam perbincangan dan diberi peluang untuk berkongsi pendapat serta pengalaman mereka. Ini membantu meningkatkan keyakinan diri dan semangat untuk terus belajar.

Andragogi lebih menekankan pembelajaran yang bersifat praktikal, relevan dengan kehidupan, dan memberi ruang kepada dewasa untuk belajar dengan cara mereka sendiri. Dengan mengenali pengalaman dan motivasi mereka, pendekatan ini menyediakan cara yang lebih berkesan dalam membantu golongan dewasa menguasai pengetahuan baru dan meningkatkan kemahiran mereka [13].

Menurut Knowles, Holton, dan Swanson (1998), andragogi mengacu pada teori dan praktik pembelajaran yang dirancang untuk kebutuhan orang dewasa, dengan fokus pada pemberdayaan mereka untuk mengelola proses belajar mereka sendiri. Hal ini memungkinkan orang dewasa untuk lebih aktif dalam mengatur tujuan pembelajaran dan merancang pengalaman belajar yang sesuai dengan kebutuhan hidup mereka.

Selain itu, Donaldson, Flannery, dan Roos-Gordon (1993), Pembelajaran yang bersifat kendiri: Pendekatan ini melalui individu untuk menetapkan tujuan mereka sendiri dan memilih cara mereka belajar, yang sangat relevan dengan kebutuhan dan situasi hidup mereka.

Menurut Cranton (1994), Kebebasan dalam memilih tujuan dan sumber belajar menyatakan orang dewasa memberikan kebebasan untuk menetapkan tujuan belajar mereka sendiri, kaedah dan kesuaian proses pembelajaran dengan kehidupan mereka. Hal ini menjadikan pembelajaran lebih fleksibel.
Clair dalam Debat tentang andragogi mencatat bahwa andragogi didefinasikan sebagai teori pembelajaran orang dewasa, kaedah pengajaran daripada pengalaman orang dewasa.

3.0 Metodologi Penyelidikan

Penyelidikan bagi Program Pembangunan Kemahiran TVET terhadap Konsep Andragogi dalam Penerapan Kendiri Komuniti Klien AADK menggunakan dua kaedah iaitu penghantaran Google Form daripada pautan kepada Cawangan Agensi Anti Dadah Kebangsaan (AADK) Daerah Batang Padang dan juga secara manual di hantar ke Ibu Pejabat Agensi Anti Dadah Kebangsaan (AADK) Daerah Batang Padang di Tapah. Seterusnya pengedaran dilaksanakan kepada 40 Klien AADK (Pelatih) oleh Ibu Pejabata AADK Tapah.

Kaedah analisa menggunakan Social Science Statistics Package (SPSS) versi 29.0 [16]. Dua teknik kajian yang digunapakai adalah analisis kuantitatif deskriptif dan analisis Anova. Analisis kuantitatif deskriptif adalah suatu pendekatan dalam penelitian yang digunakan untuk menggambarkan atau memaparkan karakteristik data yang berbentuk angka secara sistematis dan menyeluruh [16]. Tujuan utama dari analisis ini adalah untuk memberikan gambaran umum mengenai data yang ada tanpa melakukan pengujian hubungan atau perbandingan antara variabel. Statistik Deskriptif merupakan analisis statistik asas untuk meringkaskan data (cth, min, sisihan piawai, frekuensi). Analisis Anova (Analisis Varians) ialah kaedah statistik yang digunakan untuk membandingkan min bagi tiga tau lebih kumpulan dalam menentukan kehadiran perbezaan yang signifikan secara statistik [17]. Objektif pertama iaitu asas kefahaman pendawaian elektrik terhadap Klien AADK (Pelatih) melalui Kursus Pendawaian Elektrik di politeknik dan objektif ketiga iaitu mengenalpasti hubungan antara penerimaan dan perlaksanaan (persepsi) klien AADK (Pelatih) melalui Kursus Pendawaian Elektrik di Politeknik dianalisa mengikut analisa kuantitatif deskriptif. Manakala objektif ketiga iaitu menilai tahap kemahiran pendawaian elektrik Klien melalui kursus pendawaian elektrik dianalisa menggunakan Analisis Anova.

Terdapar 35 soalan dalam kajian soal selidik dan dibahagikan kepada (4) bahagian. Soal selidik ini telah diuji dan mempunyai nilai Alpha Cronbatch 0.922. Menurut Taber (2018), nilai minimum kebolehpercayaan Alpha Cronbach ialah 0.70 bagi ukuran kepercayaan dalaman sesuatu instrumen [7]. Nilai Alpha Cronbach bagi analisa ini dipamerkan pada jadual 1 di bawah:

Jadual 1: Statistik Kebolehpercayaan (Reliability)

Jenis Seksyen	Cronbach's Alpha	Bilangan Items
Section B	0.922	15

Skala Likert digunakan untuk mengukur respons klien AADK yang diberikan bagi setiap item . Terdapat dua bentuk pernyataan iaitu pernyataan positif bagi mengukur sikap positif manakala pernyataan negatif bagi mengukur sikap negatif. Jadual 2 dibawah menunjukkan skala Likert yang terkandung dalam soal selidik.

Jadual 2: Skala Likert

Skor	Skala Penerimaan
5	Sangat Setuju
4	Setuju
3	Tidak Pasti
2	Tidak setuju
1	Sangat tidak setuju

Data akan dianalisa bagi mendapatkan nilai alpha daripada hasil kajian rintis. Kajian ini menggunakan ujian Alpha Cronbach. Merujuk kepada Konting (2005), nilai 0.6 menunjukkan nilai minimum bagi index realibility. Walaubagaimanapun, merujuk kepada George (2003), nilai Alpha Cronbach mesti sekurang-kurangnya 0.7 [7]. Bagi nilai yang menunjukkan kurang daripada 0.6 adalah sangat rendah dan tidak valid (tidak diterima) dalam Alpha Cronbach. Manakala nilai pengukuran Alpha lebih daripada 0.8 menunjukkan nilai yang sangat tinggi kebolehpercayaannya (high realibility) [20]. Hasil daripada penyelidikan, Seksyen B, Seksyen C dan Seksyen D menunjukkan nilai Alpha Cronbach yang sangat tinggi kebolehpercayaan iaitu dalam Jadual 3.

Jadual 3: Analisis Alpha Cronbach Score

Bilangan Seksyen	Skor Alpha Cronbach
Seksyen B	0.922
Seksyen C	0.905
Seksyen D	0.926

4.0 Analisa Dan Perbincangan

Kertas Kajian ini menguji tahap penguasaan klien AADK terhadap penguasaan asas elektrik terhadap program yang dijalankan. Program ini telah dijalankan secara dua fasa, iaitu fasa pertama dilaksanakan dilaksanakan pada 7 Mei 2024 dan fasa kedua pada 16 Oktober 2024 melibatkan seramai 20 orang klien yang berbeza. Hanya 28 orang klien AADK Daerah Batang Padang telah menjadi responden dalam kajian dimana telah menjawab soal selidik yang diedarkan secara atas talian dengan edaran Google Form. Kajian ini dianalisa menggunakan Social Science Statistics Package (SPSS) versi 29.0 [16]. Pendekatan yang digunapakai dalam SPSS ini ialah analisis kuantitatif deskriptif dan analisis statistik Anova. Kaedah peratusan dan frekuensi digunakan untuk memaparkan data dan persoalan yang dikaji [7]. Dalam kajian ini, analisis deskriptif min digunakan untuk mengukur skor min yang membawa kepada gambaran keseluruhan. Data yang diperolehi akan ditafsirkan merujuk kepada tafsiran skor di dalam Jadual 4 [7].

Jadual 4 : Interpretasi Skor Mean

Skala Skor-Mean	Level Penerimaan	Interpretasi Skor-Mean
1.00 – 2.33	RENDAH	(kurang setuju / kurang dibantu / kurang kemahiran)
2.34 – 3.67	SEDERHANA	(setuju / dibantu / berkemahiran)
3.68 – 5.00	TINGGI	(sangat setuju / sangat membantu /sangat berkemahiran

Kajian ini berasaskan kepada tiga objektif iaitu asas kefahaman pendawaian elektrik, menilai tahap kemahiran pendawaian elektrik dan mengenalpasti hubungan antara penerimaan dan perlaksanaan (persepsi) Klien AADK terhadap kursus pendawaian elektrik. Instrumen kajian ini terbahagi kepada empat bahagian seperti dibawah:

Bahagian A : Demografi Klien
Bahagian B : Asas Pendawaian Elektrik
Bahagian C : Kemahiran Pendawaian Elektrik
Bahagian D : Persepsi (Penerimaan dan perlaksanaan) Kursus Pendawaian Elektrik
Bahagian Demografi memperihalkan latar belakang klien yang mengikuti kursus ini. Antara maklumat yang terdapat adalah jantina, umur, bangsa, pekerjaan dan latar belakang dari AADK. Jadual 5 dibawah menunjukkan statistik hasil daripada kaji selidik oleh 28 klien AADK. Demografi pekerjaan menunjukkan nilai min 3.43 dimana data yang ditunjukkan adalah valid dan kepercayaan yang tinggi menurut Jadual 4 Interprasi Skor Min [7].

Jadual 5 : Statistik Deskriptif 28 Klien AADK

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
JANTINA	28	1.00	2.00	1.1786	.39002
UMUR	28	1.00	3.00	1.3929	.68526
BANGSA	28	1.00	2.00	1.0357	.18898
PEKERJAAN	28	1.00	7.00	3.4286	2.31626
SEBELUM CLIENT	28	1.00	3.00	1.8214	.94491
Valid N (listwise)	28				

Soal selidik di Bahagian B memperihalkan asas pendawaian elektrik bagi 28 orang klien AADK. Bentuk soalan digambarkan secara bentuk positif dan juga negatif. Tujuan soalan ini adalah mengkaji kemahiran klien berdasarkan pengalaman kendiri, tahap pembelajaran kendiri, permasalahan dalam penyelesaian dan kaedah pemikiran secara konsep Andragogi [22]. Soalan berbentuk positif bermula B1-B8, B10 dan B14-B15 dalam Jadual 6. Manakala soalan menguji kemahiran daripada permasalahan (Negatif) digambarkan melalui soalan B9, B12 dan B13.

Merujuk Jadual 6 Statistik Deskriptif, dapatan analisa menunjukkan data statistik deskriptif menunjukkan bilangan Min melebihi nilai kebolehpercayaan yang tinggi iaitu >3.67. Bilangan min yang rendah hanya ditunjukkan pada soalan B12 iaitu Min 2.79 berkaitan pemasangan soket manakala tiga soalan menunjukan penguasaaan kemahiran secara sederhana pada soalan B4, B13 dan B15 terhadap keselamatan umum. Min keseluruhan bagi bahagian B menunjukkan nilai 3.945 (Kebolehpercayaan Tinggi) ditunjukkan pada Jadual 7 [7]. Secara kesimpulan kadar kebolehpercayaan asas pendawaian elektrik sangat tinggi dibuktikan dengan Alpha Cronbeach 0.922 di Jadual 7. Ini dibuktikan dengan pernyataan George (2003), nilai Alpha Cronbeach mesti melebihi 0.6 [7].

Jadual 6: Statistik Deskriptif Bahagian B

BIL	ITEM	MIN
B1	Saya boleh membaca, mengira dan menulis.	4.64
B 2	Elektrik memudahkan urusan harian saya.	4.39
B3	Saya berminat dengan kursus asas pendawaian elektrik.	3.86
B4	Saya mempunyai pengetahuan berkaitan pendawaian elektrik.	3.39
B5	Saya tahu kebaikan dan keburukan penggunaan alat elektrik.	4.04
B6	Saya akan terkena renjatan elektrik jika tangan saya basah.	4.69
B7	Aliran elektrik akan tetap mengalir walaupun saya telah menutup suis.	4.00
B8	Saya tahu membezakan warna kabel elektrik (hijau, biru, coklat)	4.11
B9	Saya akan terkena renjatan elektrik jika tangan saya basah.	4.04

B10	Saya tahu menggunakan alatan seperti test pen, dan pemotong cable (Cutter) bagi membuat extension kabel.	4.43
B11	Saya tahu memasang kabel wayar dalam soket plug.	4.00
B12	Plug soket tetap akan berfungsi walaupun salah penyambungan.	2.79
B13	Extension cable tidak akan meletup sekiranya tersalah pasang wayar kabel.	3.46
B14	Saya tahu menggunakan alat penguji bagi pengujian kefungsian.	3.86
B15	Extension cable yang di buat boleh di jual kepada pihak luar sekiranya berminat.	3.5

Jadual 7: Analisis Statistik Alpha Cronbach Score

Alpha Cronbach's	Min Keseluruhan	Item
0.922	3.945	15

Soal selidik di Bahagian C menunjukkan tahap kemahiran pendawaian elektrik sedia ada kepada klien AADK. Jadual 8 menunjukkan Analisa Deskriptif bagi kemahiran pendawaian elektrik dari latar belakang 28 Klien AADK yang sedia ada (Andragogi). Soalan C1 hingga C5 menunjukkan nilai min >3.67 dimana kadar kebolehcayaan yang sangat tinggi seperti di Jadual 8. Min keseluruhan bagi bahagian 2 menunjukkan nilai 4.037 (Kebolehpercayaan Tinggi) ditunjukkan pada Jadual 9 [7]. Tujuan soalan ini adalah mengkaji kemahiran klien berdasarkan pengalaman kendiri, tahap pembelajaran kendiri, permasalahan dalam penyelesaian dan kaedah pemikiran secara konsep Andragogi. Analisa Alpha Cronbeach menunjukkan nilai 0.905 melepasi tahap mimimum iaitu 0.6 pada Jadual 9. Sehubungan dengan itu, kadar valid kebolehpercayaan tahap kemahiran klien aadk menunjukkan tinggi dan positif. Ia menyokong pernyataan George (2003), nilai Alpha Cronbeach mesti melebihi 0.6 [20].

Jadual 8 : Statistik Deskriptif Bahagian C

BIL	ITEM	Min
C1	Saya boleh membuat cable extention untuk penggunaan sendiri.	3.89
C2	Selepas menyertai kursus, saya boleh menjadi rakan contoh kepada rakan lain berkaitan asas pendawaian elektrik.	4.07
C3	Pemahaman berkaitan asas pendawaian elektrik saya lebih baik dari sebelum ini.	4.22
C4	Saya berkeyakinan boleh bekerja dalam bidang elektrik selepas menjalani program ini.	3.71
C5	Program kursus kemahiran elektrik di AADK memberi semangat kepada saya untuk bekerja.	4.29

Jadual 9: Analisis Statistik Alpha Cronbach Score

Alpha Cronbach's	Min Keseluruhan	Item
0.905	4.047	5

Soal selidik di Bahagian D menunjukkan persepsi terhadap penerimaan dan perlaksanaan Klien AADK terhadap Kursus Pendawaian Elektrik. Jadual 10 menunjukkan analisa deskriptif bagi 28 Klien AADK bagi aspek persepsi. Terdapat 10 soalan dalam bahagian D. Jadual 8 menunjukkan Analisa Deskriptif bagi nilai min menunjukkan hanya soalan D6 menunjukkan nilai yang rendah iaitu <2.33. Manakala 9 soalan dalam bahagian D menunjukkan bacaan min yang sangat tinggi diantara 3.75 sehingga 4.5. Min keseluruhan bagi bahagian D menunjukkan nilai 3.89 (Kebolehpercayaan Tinggi) pada Jadual 11[22]. Analisa ini menunjukkan kebolehpercayaan yang sangat tinggi dan valid bagi analisa deskriptif. Ini jelas menerangkan bahawa persepsi klien AADK terhadap penerimaan dan perlaksanaan kursus pendawaian ini sangat

memberikan impak yang positif dan menyokong pembelajaran berdasarkan pengalaman kendiri, tahap pembelajaran kendiri, permasalahan dalam penyelesaian dan kaedah pemikiran secara konsep Andragogi [9]. Analisa Alpha Cronbeach bagi bahagian D menunjukkan bacaan 0.926 melepasi tahap mimimum analisa Alpha Cronbach iaitu 0.6. Sehubungan dengan itu, kadar valid kebolehpercayaan bagi analisa statistik deskriptif terhadap persepsi klien aadk terhadap kursus pendawaian elektrik menunjukkan nilai yang tinggi dan positif.

Pernyataan ini menyokong pernyataan George (2003), nilai Alpha Cronbeach mesti melebihi 0.6 [20].

Jadual 10 : Statistik Deskriptif Bahagian D

BIL	ITEM	Min
D1	Program pendawaian elektrik membantu saya lebih mengenali diri dan rakanrakan.	4.25
D2	Tenaga pengajar bersungguh mengajar saya walaupun mereka tahu saya klien AADK.	4.5
D3	Saya lebih berkreativiti setelah menjalani program kemahiran elektrik.	4.04
D4	Saya akan mengamalkan kemahiran ini di luar program.	4.21
D5	Saya merasakan aktiviti program kepada klien telah mencukupi.	3.79
D6	Saya hadir kursus elektrik secara terpaksa.	2.00
D7	Minat saya bertambah selepas menjalani kursus pendawaian elektrik.	3.86
D8	Kursus ini meyakinkan saya seorang yang berbakat dalam bidang kemahiran elektrik (TVET).	3.82
D9	Saya merasakan pembelajaran berasaskan hand on (menggunakan tangan) adalah mudah difahami.	4.07
D10	Saya boleh mendapatkan kerja dengan menyertai kursus pendawaian elektrik.	3.75

Jadual 11: Analisis Statistik Alpha Cronbach Score dan Min Keseluruhan Bagi Bahagian D

Alpha Cronbach's	Min Keseluruhan	Item
0.905	3.89	5

Melalui hubungan kolarasi signifikasi 2 tail, data menunjukkan data kolerasi 0.912. Ini jelas menerangkan bahawa wujudnya hubungan signifikasi antara motivasi klien AADK terhadap Kursus Pendawaian Elektrik di Politeknik Sultan Azlan Shah melalui Jadual 12. Data analisa statistik deskriptif diperkukuhkan dengan nilai bacaan Min bagi motivasi adalah 4.04 dan manakala min bagi Kursus Pendawaian adalah 3.83. Hasil daripada hubungan ini membuktikan objektif pertama iaitu asas kefahaman pendawaian elektrik dan hubungan antara penerimaan dan perlaksanaan (persepsi) klien AADK mempunyai hubungan signifikan yang tinggi terhadap Kursus Pendawaian Elektrik.

Jadual 12: Analisis Koralasi

		Motivation	Kursus_Pendawaian
Motivation	Pearson Correlation	1	.912**
	Sig. (2-tailed)		.000
	N	28	28
Kursus_Pendawaian	Pearson Correlation	.912**	1
	Sig. (2-tailed)	.000	
	N	28	28

4.1 Analisa Anova

Analisa ini bagi penilaian tahap kemahiran pendawaian elektrik terhadap Klien AADK melalui Kursus Pendawaian Elektrik di Politeknik Sultan Azlan Shah menggunakan kaedah Hipotesis Kajian melalui dua tindakan iaitu
H0 : Tiada perbezaan signifikan tahap kemahiran pendawaian elektrik terhadap klien AADK selepas menyertai Kursus Pendawaian Elektrik di Politeknik Sultan Azlan Shah.
Hα : Terdapat perbezaan signifikan tahap kemahiran pendawaian elektrik terhadap klien AADK selepas menyertai Kursus Pendawaian Elektrik di Politeknik Sultan Azlan Shah.

Analisa Kajian dijalankan menggunakan Analisi Varians Satu Hala (One way Anova) dimana syarat yang harus dipatuhi adalah :

Skala pengukuran mestilah dalam bentuk nisbah atau bebas (independent).
Setiap responden yang terlibat dalam kajian adalah bebas dan tidak mempengaruhi satu sama lain
Skor Kumpulan mempunyai taburan normal
Data mempunyai varians yang homogeny

4.2 Ujian Kenormalan

Merujuk kepada Jadual 13, kaedah Julat Shapiro-Wilk menunjukkan data statistik yang diperolehi adalah 0.936, 0.968 dan 0.945. Ia menunjukkan nilai signifikan pada p>.05. Ini menunjukkan data bagi semua kumpulan yg dianalisis adalah normal.

Jadual 13 : Ujian Normalan

		Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	Kursus Pendawaian	Statistic	df	Sig.	Statistic	df	Sig.
ASAS_PENDAWAIAN	3.20	.260	2	.			
	3.40	.282	3	.	.936	3	.510
	3.50	.231	5	.200*	.968	5	.865
	3.60	.260	2	.			
	3.80	.250	4	.	.945	4	.683
	4.00	.260	2	.			
	4.50	.260	2	.			
	4.60	.260	2	.			

*. This is a lower bound of the true significance.

4.3 Ujian Kehomogenan Varians

Analisa Kehomogenan Varians ditunjukkan melalui Jadual 14 bahawa ujian Levene tidak signifikan pada α= 0.05 (F = 2.400, Sig = 0.065). Dengan itu, Kesimpulan bahawa andaian varian yang homogen dipatuhi. Daripada ujian kenormalan dan ujian kehomogenan varians, analisis mendapati data yang didapati adalah normal dan homogen. Oleh yang demikian, Analisis Varians Satu Hala (One way ANOVA) boleh dijalankan.

Jadual 14 : Ujian Kehomogenan Varians

ASAS_PENDAWAIAN

Levene Statistic	df1	df2	Sig.
2.400	8	16	.065

Analisis Varians Satu Hala (One way ANOVA)
Jadual 15. menujukkan analisa Anova, dimana nilai Sig. adalah kurang daripada 0.05. Oleh yang demikian, dapat disimpulkan bahawa terdapat perbezaan yang signifikan antara skor terhadap dua kumpulan yang dikaji.

Jadual 15 : Varians Satu Hala (One way ANOVA)

ASAS_PENDAWAIAN

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.421	11	1.038	7.747	.000
Within Groups	2.144	16	.134		
Total	13.565	27			

5.0 Kesimpulan

Analisis varians satu-hala (ANOVA) antara Kumpulan dijalankan untuk mengkaji tahap Kemahiran pendawaian elektrik terhadap klien AADK selepas melalui kursus pendawaian elektrik di Politeknik Sultan Azlan Shah.

Penelitian statistik kepencongan, kurtosis dan Shapiro-Walk menunjukkan andaian kenormalan adalah dipatuhi. Hasil Ujian Levene menunjukkan data adalah tidak signifikan iaitu $p>.05$ yang menunjukkan varians data adalah homogen. Ujian ANOVA adalah signifikan [$F(11, 16) = 7.747$, $p< 0.05$]. 0Keputusan ini menolak H0 dan menerima Hα. Ini menunjukkan terdapat perbezaan signifikan tahap kemahiran pendawaian elektrik terhadap klien AADK selepas menyertai Kursus Pendawaian Elektrik di Politeknik Sultan Azlan Shah.

Daripada data yang dianalisis membuktikan Kursus Pendawaian Elektrik yang dijalankan di Politeknik Sultan Azlan Shah telah memberi impak yang baik kepada peningkatan kemahiran klien AADK yang menyertainya melalui Ujian Anova yang dilaksanakan.

Rujukan

Julie Tay Gek Hsia1 , Nur Hafizah Yusoff Geografia-Malaysian Journal of Society and Space 20 issue 3 (171-184) © 2024, e-ISSN 2682-7727 https://doi.org/10.17576/geo-20242003-11 171 Pengaruh agen-agen kawalan sosial tidak formal dalam mewujudkan kesedaran dan sokongan untuk kekal pulih bekas pengguna dadah:

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Tahap Profesionalisme dan Pembudayaan Pembelajaran Abad Ke-21 (PAK21) Guru: Analisis Mengikut Demografi

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Abstrak

Kementerian Pendidikan Malaysia telah memperkenalkan Pembelajaran Abad Ke-21 (PAK21) iaitu proses pembelajaran berpusatkan murid bercirikan elemen kemahiran 4K1N iaitu komunikasi, kolaboratif, pemikiran kritis, kreativiti dan nilai murni yang mensasarkan pembentukan modal insan secara holistik. Bagi mencapai hasrat ini, pengajaran dan pembelajaran (PdPC) guru perlu berkesan dan memberi impak kepada murid. Bahagian Pendidikan Guru telah menggariskan dalam Standard Guru Malaysia bahawa peningkatan profesionalisme guru adalah tunjang kepada sistem pendidikan di Malaysia. Oleh itu, pembudayaan PAK21 dalam PdPC memerlukan guru yang profesional. Objektif kajian ini adalah untuk mengenal pasti tahap profesionalisme guru dan tahap pembudayaan PAK21 berdasarkan analisis demografi. Seramai 330 orang guru di empat buah sekolah menengah di Daerah Sentul, Kuala Lumpur iaitu SMK Maxwell, SMK Segambut, SMK Batu Muda dan SMK Sinar Bintang dijadikan responden kajian ini. Hasil kajian telah menunjukkan bahawa amalan profesionalisme dalam kalangan guru bagi aspek sikap, pengetahuan dan kemahiran berada di tahap yang tinggi dalam pembudayaan PAK21. Kajian ini membuktikan bahawa guru perlu disediakan dengan tahap profesionalisme yang tinggi untuk membudayakan PAK21 bersesuaian dengan slogan KPM, 'Menerajui Perubahan'.

Kata kunci: Profesionalisme, pembelajaran abad ke-21 (PAK21), pengajaran dan pembelajaran (PdPC).

1.0 Pengenalan

Malaysia berhasrat melahirkan modal insan kelas pertama ke arah mencapai status negara maju selaras dengan Pelan Pembangunan Pendidikan Malaysia 2013-2025. Bagi mencapai hasrat ini pengajaran dan pembelajaran (PdPC) guru perlu berkesan dan memberi impak kepada murid selaku modal insan yang dihasratkan. PdPC berkesan ini pula dikaitkan dengan sikap dan kompetensi guru dalam merancang PdPC berdasarkan objektif pembelajaran kerana menurut Zahri Ramlan (2017), sikap, pengetahuan dan kompetensi guru menentukan amalan pengajaran guru dan tahap profesionalisme mereka.

Bahagian Pendidikan Guru menggariskan dalam Standard Guru Malaysia bahawa peningkatan profesionalisme guru adalah tunjang kepada sistem pendidikan di Malaysia. Merujuk kepada penghasilan modal insan, KPM (2014) telah memperkenalkan pembelajaran abad ke 21 iaitu PAK21. PAK21 ini adalah proses pembelajaran berpusatkan murid yang bercirikan elemen kemahiran 4K1N iaitu komunikasi, kolaboratif, pemikiran kritis, kreativiti dan nilai murni. Semua elemen ini mensasarkan pembentukan modal insan secara holistik. Oleh itu, untuk mencapai hasrat ini pembudayaan PAK21 dalam PdPC memerlukan guru yang profesional. Maka kajian ini akan menentukan tahap profesionalisme guru terhadap pembudayaan PAK21 dalam kalangan guru.

Pada hari ini, guru perlu kompeten dengan tahap profesionalisme yang tinggi dalam memastikan pembudayaan PAK21 di sekolah. Tahap profesionalisme ini juga berbeza mengikut gender dan peringkat perkembangan guru. Hasil dapatan kajian lepas menunjukkan pembudayaan PAK21 masih di tahap sederhana. Faktor seperti tahap profesionalisme guru, gender dan peringkat perkembangan guru seperti mempengaruhi. Guru sendiri mengakui memerlukan program latihan yang berfokus dan berkesan dalam pelaksanaan sesuatu program. Pembelajaran secara kendiri perlu disokong dengan pembangunan profesional guru secara berterusan. Salleh (2018) telah mencadangkan supaya guru dibekalkan dengan kefahaman tentang kurikulum dan pengajaran agar dapat memaksimumkan pengajaran, mengembangkan potensi insan

dan meningkatkan tahap profesionalisme keguruan. Kesedaran tentang perubahan dan amalan pedagogi berdasarkan pemahaman konsepsi guru kerap menerima kegagalan kerana kecairan maklumat yang berlaku.

Tahap profesionalisme guru dalam bidang tugas, isi kandungan pembelajaran, pedagogi, kurikulum, falsafah, matlamat, tujuan, nilai dan sejarah pendidikan perlu dipertingkatkan supaya guru lebih bersedia dengan sesuatu perubahan dalam pendidikan yang berlaku. Hasil dapatan kajian ini, diharap dapat membantu pihak seperti KPM, Jabatan Pendidikan Negeri (JPN), Pejabat Pendidikan Daerah (PPD) dan pentadbir sekolah dalam merangka program peningkatan profesionalisme keguruan yang berfokus kepada pembudayaan PAK21 kerana kajian terdahulu menunjukkan masih terdapat guru yang tidak pernah mengikuti kursus berkaitan PAK21 dan mengambil inisiatif menjalankan pembelajaran kendiri untuk mendapatkan pengetahuan tentang PAK21 ini. Pihak yang terlibat juga perlu memikirkan tentang kursus yang sesuai kepada guru pelatih kerana menurut Maizura dan Nur Surayyah (2018), guru pelatih berusaha menjalankan PAK21 walaupun terdapat cabaran dan masalah tertentu walaupun kurang didedahkan dengan latihan PAK21. Ini disokong oleh Badrul Hisham (2016) bahawa guru perlu berupaya memajukan pertumbuhan intelektual dan perkembangan pencapaian akademik yang berterusan semasa berada di Institut Pengajian Guru mahupun di sekolah.

Hasil kajian lepas masih mendapati bahawa terdapat isu dan cabaran dalam pembudayaan PAK21 di sekolah. Menurut Nurazlin dan Siti Rahaimah (2019), amalan PAK21 dalam bilik darjah masih pada tahap sederhana disebabkan oleh cabaran dan halangan yang dihadapi. Kekurangan pengetahuan, kemudahan, sumber dan beban tugas yang tidak berkaitan telah mempengaruhi amalan pengajaran mereka. Ini disokong oleh Abdul Rahim, Nooraini dan Abdul Halim (2017) bahawa gangguan tugas lain selain mengajar dan kekangan masa menganggu pelaksanaan PAK21. Selain kekurangan sumber dan infrastruktur, bilangan murid yang ramai di dalam sesuatu kelas juga mengganggu dalam merancang dan melaksana pengajaran dan pembelajaran PAK21. Bilangan murid yang ramai ini, menyukarkan aktiviti kumpulan dalam PdPC dijalankan. Ini berkaitan dengan tahap kemahiran guru untuk mengendalikan PAK21 ini. Oleh itu, guru mengakui bahawa mereka memerlukan kursus pembangunan profesional berkaitan PAK21 ini.

Guru berpengalaman mengajar melebihi 20 tahun mempunyai kesediaan lebih tinggi berbanding kumpulan lain (Jaggil & Muhamad Suhaimi, 2018). Manakala guru yang mengajar kurang daripada 10 tahun didapati mempunyai kesediaan yang rendah. Apa yang menjadikan kajian ini perlu dilakukan terhadap pengalaman mengajar adalah kerana dapatan yang berbeza-beza kajian-kajian sebelum ini. Jika dilihat dapatan kajian daripada Vuyisile (2015) telah mendapati bahawa guru kurang berpengalaman lebih bertoleransi terhadap perubahan. Manakala Adil (2016) pula mengatakan bahawa kesediaan perubahan didapati mempunyai kesan berbeza terhadap komitmen perubahan berdasarkan pengalaman mengajar ini. Benar, jika dilihat daripada hasil dapatan sebelum ini memberi gambaran bahawa pembudayaan PAK21 masih di tahap sederhana. Oleh itu, kita perlu mengenal pasti sama ada pembudayaan PAK 21 ini melibatkan tahap profesionalisme, gender atau peringkat perkembangan guru.

Oleh yang demikian, objektif kajian ini ialah: (a) menentukan tahap amalan profesionalisme guru berdasarkan sikap, pengetahuan dan kemahiran terhadap pembudayaan PAK21, (b) menentukan tahap amalan profesionalisme guru berdasarkan sikap, pengetahuan dan kemahiran mengikut gender dan pengalaman mengajar.

2.0 Profesionalisme dan Pembelajaran Abad Ke-21 (PAK21) dalam Kalangan Guru

Amalan PdPC memerlukan kesediaan guru dari sudut profesionalisme keguruan. Guru telah dilatih untuk menjadi guru beretika dan profesional. Menurut Ornstein dan Levine (2017), terdapat empat ciri dalam suatu profesion iaitu ahli perlu menguasai ilmu pengetahuan yang mendalam, kecekapan dan kepakaran dalam bidang tertentu, adanya kod etika dalam mengawal tingkah laku ahli dan kebenaran diberi kepada masyarakat untuk beroperasi. Oleh itu guru dianggap satu profesion kerana berpengetahuan dan berkemahiran dalam subjek yang diajar, berpengetahuan mengenai murid dengan adanya peningkatan profesionalisme guru. Ciri-ciri guru yang profesional haruslah berilmu, berkemahiran dan berketerampilan dalam pengetahuan pedagogi dan mempunyai sahsiah yang baik yang boleh diteladani.

Menurut teori keprihatinan Fuller (1969), peringkat keprihatinan diri adalah guru berasa bimbang tentang kemampuan diri untuk mengawal kelas dan apa jua yang akan diperkatakan oleh ibu bapa serta guru lain, peringkat keprihatinan terhadap tugas iaitu memperbaiki pengajaran serta menguasai isi kandungan

mata pelajaran dan peringkat impak adalah guru melihat muridnya sebagai individu yang mempunyai pelbagai keperluan. Selaras dengan perkembangan pedagogi masa kini, PAK21 memerlukan guru yang profesional dan berkompetensi untuk membudayakannya dalam PdPC. Guru harus sedar akan perubahan peranan, keadaan yang memerlukan reformasi dan etika komuniti dalam masyarakat. Guru yang dapat membawa diri ke tahap profesional, dapat menikmati tahap kejayaan yang lebih baik dan terancang. Sebaiknya, guru mengemaskini perkembangan pendidikan diri dengan bacaan dan inkuiri diri tentang bidang tugas dan menjalankan penyelidikan supaya sentiasa berpengetahuan dan berkemahiran untuk peningkatan diri dan kerjaya.

Penyelidikan membawa kepada inovasi dalam pendidikan kerana penyelidikan merubah paradigma dan pemikiran. Ternyata pemikiran profesional guru merupakan terjemahan konstruk profesionalisme. Menurut Jaggil dan Muhamad Suhaimi (2018), sikap dan kesediaan guru mempengaruhi dan amat penting bagi menentukan kejayaan pelaksanaan PAK21 ini. Pernyataan ini disokong oleh Junita dan Wan Mohd Rashid (2020) iaitu isu berkaitan profesionalisme guru ini perlu diberi keutamaan kerana ia membawa kesan terhadap sistem pendidikan negara. Habibah, Zaharah, Saedah, Mohd Ridhuan, Ahmad Arifin dan Norshahrul (2016) turut bersetuju bahawa aspek kemahiran pengajaran perlu dititik beratkan kerana tanpa adanya kemahiran, keberkesanan proses pengajaran dan pembelajaran sudah pasti akan terganggu dan menjejaskan kecemerlangan murid. Merujuk kepada Kod Profesional Pengajaran Malaysia, KPM (2016), bidang perguruan di Malaysia mempunyai kod etika pengajarannya iaitu tanggungjawab guru kualiti peribadi, sosial, dan profesional seperti adil, berdedikasi, peka, inovatif dan sebagainya. Oleh itu, walaupun peningkatan profesionalisme guru memerlukan proses dan masa, Mohd Aizat dan Kamarudin (2020) merumuskan bahawa guru bertanggungjawab mempertingkatkan semua dimensi profesionalisme melalui pelbagai cara.

Kaedah PdPC di abad ke-21 ini berubah seiring dengan perkembangan dunia pendidikan. Penerapan semua kemahiran yang menghasratkan kemenjadian murid secara menyeluruh meliputi pengetahuan, kemahiran dan perwatakan. Kurikulum Kebangsaan dan Sistem Pentaksiran Pendidikan Kebangsaan telah dikaji semula bersesuaian dengan perubahan yang berlaku. Ia diharapkan berupaya menghasilkan murid yang holistik dan dapat menguasai kemahiran abad ke-21 untuk persiapan diri menghadapi cabaran alam kerjaya akan datang. Bertepatan dengan itu amalan pedagogi berfokuskan murid diperkenalkan seperti pembelajaran berasaskan inkuiri, pembelajaran berasaskan projek, pembelajaran berasaskan masalah, pendekatan STEM (Science, Technology, Engineering and Mathematics) dan aktiviti PAK21. PdPC berkesan ini dikaitkan dengan sikap dan kompetensi guru untuk merancang PdPC berdasarkan objektif pembelajaran.

Menurut KPM (2014), PAK21 dikenali sebagai proses pembelajaran berpusatkan murid berteraskan elemen kemahiran 4K (komunikasi, kolaboratif, pemikiran kritis dan kreativiti) serta penerapan nilai murni dan etika. Nilai dan etika pula membawa maksud murid membudayakan nilai murni yang dipelajari dan mempraktikkannya dalam kehidupan seharian. Kepentingan nilai murni ini untuk membina keperibadian murid bercirikan abad ke-21, melahirkan pemimpin yang berwibawa, mendidik menjadi warga masyarakat yang bertanggungjawab, membina perpaduan dan sahsiah terpuji. Kemahiran komunikasi berlaku di antara guru dengan murid, murid dengan murid dan murid dengan bahan yang digunakan dalam proses pembelajaran dan pemudahcaraan. Kemahiran kolaboratif adalah murid bekerjasama dalam aktiviti berpasangan atau berkumpulan untuk bertukar idea dan pandangan. Kemahiran berfikir secara kritis adalah murid mengenal pasti dan menyelesaikan masalah dengan cara yang berlainan dan pelbagai. Teknik penyoalan yang betul juga digunakan. Kemahiran kreativiti adalah pendekatan guru dalam PdPC menggunakan unsur kreativiti dalam aktiviti iaitu kreatif pada bahan, soalan dan mampu menjana murid untuk menjadi kreatif dalam pemikiran dan tindakan. Manakala dalam kajian ini, PAK21 merujuk kepada amalan pedagogi guru seperti yang dimaksudkan. Menurut Kamus Dewan Bahasa dan Pustaka edisi keempat (1994), pembudayaan adalah proses atau cara membudayakan sesuatu (pemikiran, ilmu dan sebagainya). Manakala dalam kajian ini, pembudayaan bermaksud PAK21 menjadi satu praktik, amalan dan kebiasaan para guru.

Data boleh dikumpul secara berasingan berdasarkan demografi gender dan pengalaman untuk menentukan perbezaan dalam tahap profesionalisme dan pembudayaan pembelajaran abad ke-21. Pembelajaran abad ke-21 menggariskan 4 elemen utama 4K1N iaitu komunikasi, kolaboratif, pemikiran kritis, kreatif dan pemupukan nilai murni. Manakala tahap profesionalisme melibatkan antara elemen seperti etika kerja, tanggungjawab, dan kejujuran. Oleh itu, untuk menentukan sama ada terdapat perbezaan yang

signifikan dalam tahap profesionalisme dan pembudayaan pembelajaran abad ke-21 guru, mereka boleh dibahagikan mengikut gender dan kategori pengalaman mereka contohnya berpengalaman mengajar kurang dari 5 tahun, 5 hingga 10 tahun, atau lebih dari 10 tahun.

Profesionalisme adalah sifat-sifat seperti kemampuan, kemahiran, cara pelaksanaan sesuatu dan sebagainya sebagaimana yang sewajarnya terdapat pada atau dilakukan oleh seorang profesional. Oleh itu, profesionalisme adalah tingkah laku, kepakaran atau kualiti dari seseorang yang profesional. Manakala dalam kajian ini profesionalisme merujuk kepada sikap, tahap pengetahuan dan kemahiran seseorang guru. Sikap boleh berubah dan dipengaruhi perasaan, keadaan, persekitaran atau apa sahaja. Manakala dalam kajian ini sikap merujuk kepada sikap dan penerimaan guru terhadap pembudayaan PAK21. Pengetahuan adalah kefahaman manusia tentang sesuatu perkara secara sistematik hasil daripada kajian terhadap sesuatu perkara atau sesuatu yang memberikan makna apabila datangnya sesuatu sumber maklumat yang dikatakan berkaitan dengan sesuatu kajian ataupun memerlukan kefahaman. Dalam kajian ini pengetahuan merujuk kepada pengetahuan guru terhadap pembudayaan PAK21. Kemahiran adalah kecekapan dan kepandaian melakukan sesuatu. Oleh itu, orang yang mahir berjaya melakukan sesuatu kerana kemahirannya. Manakala dalam kajian ini kemahiran merujuk kepada kemahiran guru terhadap pembudayaan PAK21.

Menurut pandangan O'Brien (2016), terdapat banyak kajian yang dijalankan tentang tahap profesionalisme guru ini. Ini menunjukkan pentingnya tahap profesionalisme guru dalam menyokong hasrat pendidikan negara. Oleh itu, kita perlu merujuk kepada peringkat perkembangan guru dalam teori keprihatinan Fuller (1969). Teori ini menyatakan perkembangan guru sebagai proses yang dilalui oleh guru dari peringkat keprihatinan terhadap diri, tugas dan murid. Peringkat kemandirian diri apabila guru berkemampuan untuk mengawal kelas dan maklum balas daripada ibu bapa dan guru lain. Peringkat tugas adalah keprihatinan guru dalam memperbaiki pengajarannya serta menguasai isi kandungan mata pelajaran. Manakala peringkat impak adalah guru prihatin dengan impak pengajaran dan pembelajaran dengan mengambil kira tahap keupayaan murid yang berbeza. Perkembangan guru ini merupakan proses semulajadi yang bertindak balas kepada perubahan persekitaran pembelajaran seperti kurikulum, tahap keupayaan murid dan tempat bertugas.

Menurut Trotter (1986) terdapat lima peringkat perkembangan guru iaitu peringkat novis, novis lanjutan, cekap, mahir dan pakar. Peringkat novis adalah guru yang telah berkhidmat sekitar 1 tahun. Guru novis sering dianggap pasif dan kurang kreatif kerana masih belum mencapai tahap yang dikehendaki oleh pihak sekolah. Mereka masih dalam proses penyesuaian diri dengan persekitaran sebenar bilik darjah dan sekolah. Sepanjang peringkat ini guru telah mula mempelajari cara mengajar secara berfakta dan berkonsep dengan peraturan asas pengajaran tetapi masih mempunyai kawalan kelas yang lemah dan kurang berpengalaman dalam permasalahan yang berlaku di sekolah. Mereka juga masih kurang mahir dalam menguruskan aktiviti kurikulum, ko-kurikulum dan sukan. Mereka masih perlu menimba pengetahuan dan kemahiran dalam banyak aspek terutama berkaitan kaedah dan pedagogi PdPC. Caroline dan Abdul Said (2014) menyokong tentang tahap profesionalisme guru novis dalam pengurusan pengetahuan, kesediaan mengajar dan kemahiran terhadap pelaksanaan pengajaran di sekolah ini.

Peringkat novis lanjutan pula telah berkhidmat sekitar 3 tahun. Sepanjang tempoh ini, mereka telah dapat menambah dan memantapkan kefahaman fakta, konsep, prinsip berkaitan PdPC. Pengalaman dalam amalan bilik darjah membantu dalam membina keyakinan diri tetapi masih memerlukan bimbingan guru mentor untuk mengekalkan minat dan motivasi. Guru pada peringkat cekap pula telah berkhidmat sekitar 5 tahun dan memiliki kelayakan ikhtisas. Oleh itu mereka lebih memberikan fokus kepada pembelajaran murid, memahami prinsip dan konsep pembelajaran dalam pelbagai situasi, mempunyai kepelbagaian strategi pengajaran mengikut tahap keupayaan murid yang berbeza. Mereka mula cekap dalam profesionalisme, melaksanakan visi, prinsip, mempunyai keutuhan peribadi dan cekap dalam menggunakan teknologi maklumat. Mereka mempunyai matlamat, berfikiran positif, yakin, sabar, mempunyai kesungguhan kendiri, membuat penambahbaikan berterusan, sentiasa berusaha meningkatkan kualiti pengajaran, prihatin dengan kehendak murid dan ibu bapa, menilai kekuatan dan kelemahan murid dan melengkapkan diri dengan kemahiran.

Manakala guru pada peringkat mahir telah berkhidmat sekitar 10 tahun. Ini bermaksud mereka telah mahir dalam bidang kerjaya perguruan ini dan terlatih, menjadi idola murid kerana mempunyai gaya, ironi dan aura tersendiri. Berkebolehan membuat keputusan berdasarkan pengalaman, dapat menganalisis maklumat kompleks, berfikiran kreatif, mahir berkomunikasi dan berusaha menghasilkan suasana

pembelajaran dinamik selaras motivasi yang berkesan.

Manakala guru pada peringkat pakar mempunyai pengalaman berkhidmat sekitar 15 tahun. Peringkat ini guru mempunyai kemahiran, pengetahuan, dan kepakaran tinggi dalam mata pelajaran khususnya dalam PdPC dan berada di tahap pencapaian menjadi pakar rujuk kerana dapat mengaplikasi apa yang dipelajari dengan lancar, pelbagai dan menguasai isi kandungan mata pelajaran. Mereka mempunyai autoriti dalam kerjaya, idea dan kemahiran yang boleh mempengaruhi polisi pengendalian di bilik darjah. Guru pakar mampu menyerlahkan diri secara profesional, mempunyai idea, bersahsiah terpuji, berketerampilan, berpegang teguh kepada etika perguruan dan etika perkhidmatan awam. Mereka bijak mengurus masa, bahan dan sumber, memiliki kemahiran komunikasi tinggi dan berupaya menyampaikan idea dan mesej yang berkesan, berwawasan, proaktif, responsif dan inovatif dalam meningkatkan mutu pendidikan. Bertepatan dengan itu, Mohd Aizat dan Kamarudin (2020) berpendapat bahawa guru perlu bertanggungjawab dalam meningkatkan semua dimensi profesionalisme guru melalui pelbagai cara sama ada melalui usaha sendiri, disediakan oleh pihak sekolah mahupun KPM. Guru perlulah dinamik bagi memastikan mereka kekal profesional.

Berliner (1988) telah memperkenalkan teori perkembangan guru berfokus kepada pemikiran guru berdasarkan tingkah laku dalam bilik darjah. Menurut Berliner (1995) pula, model ini mentafsir perkembangan guru sebagai proses pembentukan guru untuk mencapai tahap kepakaran dan kecemerlangan. Contohnya guru novis mempelajari fakta, menimba pengalaman dan diajar peraturan umum yang sesuai untuk semua konteks, guru novis lanjutan pula lebih maju kerana mempunyai pengalaman yang kurang. Pelbagai perkara mula mempengaruhi tingkah laku guru, guru cekap pula mampu membuat pilihan mengikut keutamaan dan sudah bijak membuat perancangan kerana telah berpengalaman untuk menjadi lebih peka terhadap perkara yang penting. Namun kemahiran mengajar masih di tahap biasa. Guru mahir pula boleh mengesan maklumat dalam pelbagai situasi dan mampu meramal tentang sesuatu kejadian dengan cepat. Manakala guru pakar pula telah menguasai semua pengetahuan dan kemahiran yang diperlukan dalam bidang mereka dan sememanngnya sukar untuk seseorang guru mencapai tahap ini. Model ini menjelaskan bahawa guru perlu melalui beberapa peringkat dalam kerjaya sebelum dapat mencapai ke tahap pakar dan cemerlang.

Menurut Kang Mu Huai dan Lim Hooi Lian (2015), guru sememangnya mempunyai pengetahuan dan keprihatinan dalam melaksanakan perubahan kurikulum. Pengalaman mengajar tidak mempengaruhi pengetahuan dan keprihatinan guru. Oleh itu usaha seperti mengadakan latihan intensif dan galakan yang sesuai seperti program dan latihan untuk guru harus dilakukan bagi membantu meningkatkan tahap pengetahuan dan keprihatinan guru. Kurikulum yang berkualiti memerlukan guru yang berpengetahuan dan berkeprihatinan tinggi bagi memastikan kejayaan pelaksanaannya. Menurut Nazihah (2018), teori peringkat perkembangan guru Trotter (1986) menerangkan tentang proses perkembangan yang dialami oleh guru pelatih kepada guru profesional dalam suatu tempoh jangka masa yang panjang. Ia dapat membantu perkembangan profesionalisme diri kerana membantu membentuk karakter diri lebih prihatin dalam masalah yang dihadapi oleh murid dan kreatif dalam tindakan perancangan dan pelaksanaan strategi dalam menyelesaikan masalah tersebut. Ia banyak membantu menambah baik amalan pengajaran dan menimba ilmu pengetahuan baharu untuk memantapkan kompetensi diri. Ini menunjukkan perlunya pembangunan profesionalisme guru di sekolah. Kemahiran kepimpinan guru pula perlu dipertingkatkan untuk pencapaian murid dan sekolah. Pelbagai kursus atau program pembangunan profesionalisme perlu disediakan untuk guru (Yusof & Mei Hung, 2018). Sebenarnya peringkat keprihatinan diri terhadap tugas mengambil kira peringkat impak prihatin diri terhadap tugas, bahan bantu mengajar yang digunakan, maklum balas murid dan pencapaian murid. Oleh itu dapat disimpulkan bahawa terdapat dua kategori guru iaitu guru pakar dan guru bukan pakar (novis, novis lanjutan, cekap dan mahir.)

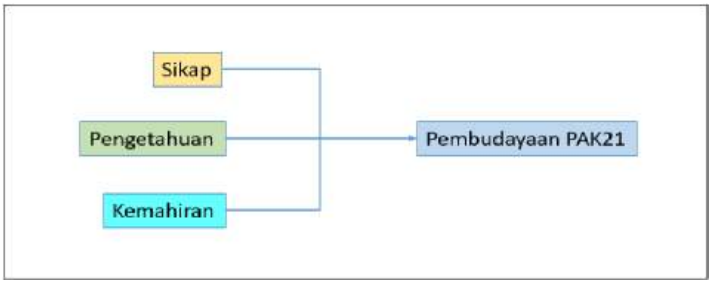
Guru akan melaksanakan tugasnya secara efektif sekiranya memiliki tahap profesionalisme yang tinggi bersesuaian dengan kompetensi dan keterampilan yang dimiliki. Profesionalisme adalah sifat sewajarnya dilakukan oleh seorang profesional kerana mempunyai komitmen terhadap profesion yang diceburi. Ciri-ciri profesionalisme adalah berketerampilan dan berkemahiran dalam bidang tertentu, berilmu dan berpengalaman dalam menganalisis masalah serta peka dalam mengambil keputusan, bersikap berorientasi ke hadapan dan bersikap terbuka menghargai pendapat orang lain. Daripada kerangka di Rajah 1 di bawah ini dapat dilihat tiga elemen tahap profesionalisme iaitu sikap, pengetahuan dan kemahiran saling bersandaran bagi merealisasikan pembudayaan PAK21.

Rajah 1 : Kerangka Teori Profesionalisme

Ia menunjukkan kerangka teori profesionalisme terdiri daripada tiga kompetensi yang perlu ada dalam diri seseorang guru iaitu kompetensi peribadi yang merujuk kepada kemampuan guru dalam mengaplikasi nilai-nilai murni seperti kejujuran, keadilan, kebersihan, dan sebagainya. Ia menentukan pemikiran guru tentang apa yang dilaksanakan, memahami penerimaan dan penolakan kurikulum terhadap murid. Pemikiran guru akan menentukan sejauh mana PAK21 ini akan terlaksana.

Seterusnya adalah kompetensi sosial iaitu keprihatinan guru terhadap masalah sosial selaras dengan ajaran Islam seperti tolong-menolong, gotong-royong dan sebagainya. Manakala kompetensi pedagogi pula melibatkan pengetahuan dan pengalaman guru yang kukuh tentang kandungan dan pemilihan pedagogi pengajaran berkesan di bilik darjah. Ia dapat membantu pelajar memahami dengan baik konsep dan fakta. Guru perlu menguasai falsafah, matlamat, tujuan, nilai, sejarah pendidikan, kurikulum, pedagogi dan isi kandungan kerana guru perlu menggunakan pengetahuan, kemahiran serta pengalaman mereka untuk membudayakan PAK21 ini. Oleh itu, kajian ini akan berfokuskan kepada kompetensi guru ini kerana profesionalisme guru meliputi tiga aspek ini.

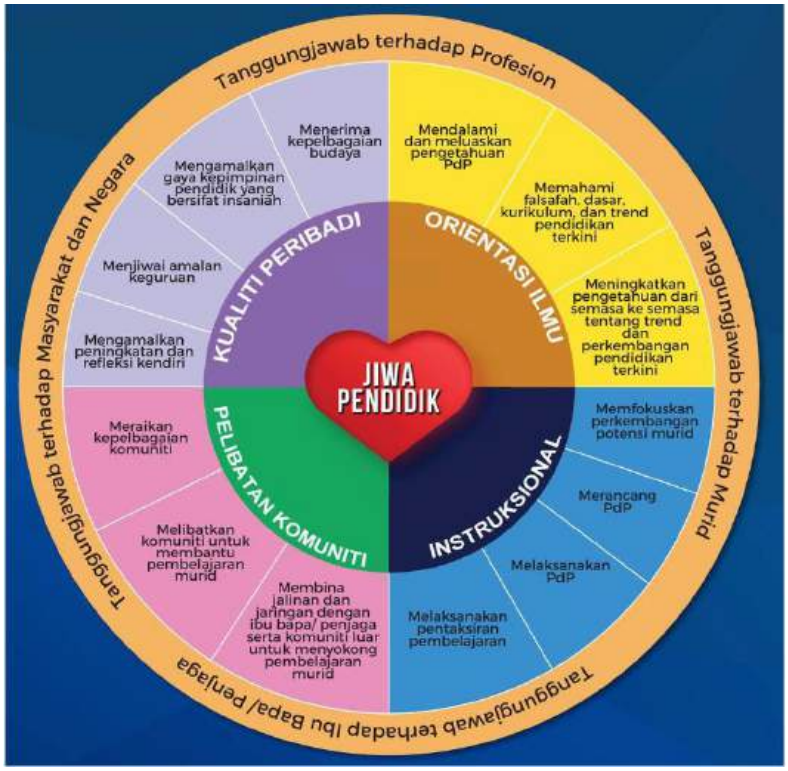
Menurut KPM (2016) pembangunan profesionalisme keguruan merupakan keperluan dalam usaha memantapkan keupayaan Pegawai Perkhidmatan Pendidikan (PPP) melaksanakan tugas dengan cekap dan berkesan dalam pelbagai peringkat kerjaya. Ciri profesional seperti kelayakan menjadi PPP, etika profesional dan diiktiraf oleh badan profesional dikaitkan dengan profesionalisme keguruan. Oleh itu, profesionalisme PPP pada setiap peringkat perlu sentiasa ditingkatkan dalam memastikan kejayaan perancangan dasar pendidikan. Pelbagai inisiatif diambil oleh KPM seperti memperkemas laluan kerjaya PPP, membangunkan konsep Guru Malaysia dan Penilaian Bersepadu PPP (PBPPP) serta menggalakkan PPB bagi meningkatkan profesionalisme keguruan. Rajah 2 di bawah menunjukkan kerangka konseptual kajian ini.



Rajah 2 : Kerangka Konseptual Kajian

Oleh itu boleh dirumuskan bahawa teori keprihatinan dan peringkat perkembangan guru mempengaruhi dalam profesionalisme keguruan. Ia mempengaruhi profesionalisme guru dalam pembudayaan PAK21 di sekolah kerana guru yang profesional boleh menyesuaikan diri dengan budaya kerja, bekerjasama, menunjukkan kemahiran interpersonal yang baik dan menunjukkan penampilan diri yang sesuai dengan profesion keguruan, Mereka juga akan menunjukkan kesungguhan, mengamalkan nilai-nilai murni, berkemampuan untuk menghadapi cabaran dan menunjukkan amalan proaktif dalam pelaksanaan tugas di sekolah. Mereka juga berdisplin, berusaha untuk memperbaiki diri, menepati masa dan bersedia melibatkan diri dalam aktiviti-aktiviti pembangunan profesional. Sudah pasti guru yang profesional berkebolehan merancang pengajaran harian berpandukan sukatan pelajaran dengan mempraktikkan PAK21, boleh

menyampaikan isi pelajaran mengikut kebolehan murid, dapat menggunakan pelbagai bahan sumber dalam PdPC, boleh melaksanakan penilaian berterusan untuk meningkatkan pembelajaran murid, dapat menggunakan pelbagai kaedah dalam PdPC termasuk aktiviti PAK21 di samping menerapkan nilai-nilai murni. Guru juga dapat mengamalkan unsur-unsur kesepaduan, berupaya memotivasikan murid, boleh merangsang murid untuk berfikir, mewujudkan suasana PdPC yang menyeronokkan, mengawal disiplin murid semasa mengajar, berkomunikasi dengan berkesan di bilik darjah dan boleh memeriksa dan merekodkan hasil kerja murid secara berterusan.



Rajah 3 : Komponen Standard Guru Malaysia (SGM) 2.0

Merujuk kepada Standard Guru Malaysia (SGM) 2.0 pula ia memandu guru tentang kompetensi yang perlu dicapai dan etika yang perlu dihayati dan dibudayakan oleh guru. Merujuk Rajah 3 di atas, terdapat dua bahagian di dalam SGM 2.0 ini iaitu dimensi kompetensi dan etika keguruan. Dimensi kompetensi merupakan kompetensi yang perlu ada pada setiap guru di pelbagai tahap pembangunan profesionalisme dalam melaksanakan PdPC bermakna dan berkesan. Manakala etika keguruan pula adalah nilai akhlak dan prinsip moral yang seharusnya dipupuk dan menjadi pegangan guru di Malaysia untuk memastikan profesion keguruan menjadi kerjaya profesional dan dipandang tinggi oleh masyarakat.

Para guru, guru pelatih, pengurus pendidikan, pengetua atau guru besar, agensi latihan keguruan awam dan swasta, dan pembekal latihan dalam perkhidmatan perlulah memanfaatkan apa yang terkandung dalam SGM 2.0 ini untuk membina guru yang profesional kerana ia dapat mengenal pasti kompetensi dan etika yang perlu ada, pengetahuan dan kompetensi diri yang boleh dibina serta membantu dalam penambahbaikan untuk merancang keperluan pembangunan profesionalisme. SGM 2.0 ini juga dapat membantu guru pelatih dalam mengenal pasti keperluan kompetensi dan etika dalam persediaan untuk melengkapkan diri sebelum memasuki profesion keguruan. Ia juga boleh dijadikan rujukan oleh pengurus pendidikan dalam mengenal pasti keperluan latihan pihak institusi dan pembekal latihan bagi memastikan guru berpeluang menjalani pembangunan profesionalisme berterusan (PPB) yang sesuai mengikut laluan kerjaya dan tempoh perkhidmatan. Dokumen ini dijadikan rujukan untuk menetapkan kriteria pemilihan dan pengambilan guru. Pengetua dan Guru Besar pula dapat mengenal pasti kompetensi guru di sekolah dalam merancang dan melaksanakan PPB supaya guru sentiasa relavan dan berkualiti tinggi dalam mencapai kemenjadian murid dan sekolah berkualiti.

Sementara itu, agensi latihan keguruan awam dan swasta merujuk SGM 2.0 ini dalam merancang dan menambah baik strategi pembangunan profesionalisme dan peningkatan profesion keguruan. Ia boleh dijadikan rujukan dalam penetapan syarat-syarat pemilihan dan pengambilan guru pelatih. Manakala

pembekal latihan dalam perkhidmatan pula boleh menjadikannya rujukan dalam menetapkan fokus perancangan dan pelaksanaan latihan yang sesuai dengan keperluan guru.

Rajah 4 : Empat Domain Kompetensi

SGM 2.0 juga mengandungi empat domain kompetensi dan empat teras etika keguruan. Merujuk Rajah 4 di atas, empat domain kompetensi adalah orientasi ilmu, instruksional, pelibatan komuniti dan kualiti peribadi. Domain kompetensi ini menetapkan kompetensi yang perlu ada pada setiap guru di pelbagai tahap pembangunan profesionalisme dalam melaksanakan PdPC yang berkesan. Manakala empat teras etika keguruan pula adalah tanggungjawab terhadap profesional, ibu bapa atau penjaga, murid, masyarakat dan negara. Komponen ini merujuk kepada prinsip moral dan nilai akhlak yang prinsip amalan guru Malaysia. SGM 2.0 ini diharapkan membantu dalam melahirkan guru yang berhemah tinggi, berketerampilan, berpengetahuan, berkemahiran dan bertanggung jawab ke atas tugas yang diamanahkan berpandukan Falsafah Pendidikan Negara.

3.0 Metodologi Kajian

Penyelidikan secara kuantitatif telah dipilih sebagai metodologi kajian. Kajian dijalankan di Kuala Lumpur, Malaysia. Populasi kajian ialah guru sekolah menengah di Daerah Sentul melibatkan seramai 330 orang guru di empat buah sekolah menengah iaitu Sekolah Menengah Kebangsaan Maxwell, Sekolah Menengah Kebangsaan Segambut, Sekolah Menengah Kebangsaan Batu Muda dan Sekolah Menengah Kebangsaan Sinar Bintang telah dijadikan sampel responden kajian untuk menjawab instrumen soal selidik. Saiz sampel telah diperolehi dengan merujuk kepada Jadual Cohen, Manion & Morisson dan Jadual Krejcie dan Morgan.

Instrumen soal selidik kajian ini terbahagi kepada lima bahagian iaitu a) Bahagian A: Maklumat Demografi Responden, b) Bahagian B: Tahap Profesionalisme Sikap Guru, c) Bahagian C: Tahap Profesionalisme Pengetahuan Guru, d) Bahagian D: Tahap Profesionalisme Kemahiran Guru, e) Bahagian E: Pembudayaan PAK21. Responden memilih jawapan mengikut skala Interval 10 mata iaitu skala 1 untuk sangat tidak setuju sehingga skala 10 iatu sangat setuju. Instrumen soal selidik yang dibina dan digunakan mempunyai kesahan dan kebolehpercayaan yang tinggi kerana telah dinilai oleh 3 orang penilai pakar dan bertauliah. Satu kajian rintis dijalankan melibatkan 40 orang responden di Sekolah Menengah Kebangsaan Menjalara, Kuala Lumpur untuk menguji kebolehpercayaan item soal selidik ini sebelum diedarkan kepada 330 orang guru yang menjadi responden sebenar. Item soal selidik kajian ini mempunyai ketekalan dan kebolehpercayaan yang tinggi dengan nilai Alfa Cronbach melebihi 0.7 ($\alpha > 0.7$). Jadual 1 di bawah menunjukkan maklumat demografi responden terlibat :

Jadual 1 : Maklumat Demografi Responden (n=40)

Pembolehubah		Frekuensi (%)
Gender	Lelaki	6 (15.0)
	Perempuan	34 (85.0)
Pengalaman Mengajar	1 hingga 10 tahun berkhidmat	4 (10.0)
	Lebih daripada 10 tahun berkhidmat	36 (90.0)

3.1 Analisis Nilai Kebolehpercayaan bagi Setiap Konstruk.

Jadual 2 di bawah menunjukkan analisis nilai kebolehpercayaan yang tinggi bagi setiap kontruk dengan purata di antara 0.92 hingga 0.94. Ini menunjukkan responden mempunyai tahap kebolehfahaman yang sangat baik terhadap soalan diberikan.

Jadual 2 : Nilai Kebolehpercayaan (Alpha Cronbach)

Item	Alpha Cronbach	Bilangan soalan
Bahagian B: Tahap Profesionalisme Sikap Guru	0.92	10
Bahagian C: Tahap Profesionalisme Pengetahuan Guru	0.94	7
Bahagian D: Tahap Profesionalisme Kemahiran Guru	0.94	7
Bahagian E: Pembudayaan PAK21	0.93	7

4.0 Dapatan Kajian dan Perbincangan

Seramai 330 orang responden yang terlibat dalam kajian ini terdiri daripada 21% responden lelaki dan 79% responden perempuan. Sebanyak 68.5% daripada mereka mempunyai pengalaman mengajar melebihi 10 tahun dan selebihnya berpengalaman mengajar di antara 1 tahun hingga 10 tahun. Mereka terdiri daripada bidang pengkhususan yang pelbagai. Rumusan data kajian seperti Jadual 3 di bawah.

Jadual 3 : Maklumat Demografi Responden (n=330)

Demografi		Kekerapan	Peratusan (%)
Gender			
	Lelaki	70	21.2
	Perempuan	260	78.8
Pengalaman Mengajar			
	1 – 10 tahun	104	31.5
	Lebih 10 tahun	226	68.5

4.1 Tahap Profesionalisme Sikap Guru

Item	Min (M)	Sisihan Piawai (SP)	Interpretasi
Saya memahami bidang perguruan merupakan kerjaya profesional.	8.74	1.32	Berdasarkan 10 item yang diberi, kebanyakkan responden menunjukkan maklum balas positif. Namun begitu, terdapat beberapa responden yang sangat tidak bersetuju dengan item yang diberikan. Secara keseluruhannya dengan purata sebanyak 8.37 menunjukkan tahap profesionalisme sikap guru adalah meyakinkan. Hasil dapatan ini boleh membantu dalam meningkatkan tahap profesional guru tentang peranan dan tanggungjawab mereka terhadap pembudayaan PAK21.
Saya bersedia menerima transformasi pendidikan.	8.75	1.32	
Saya bertanggungjawab mengoptimumkan pengetahuan dan kemahiran dalam PAK21.	8.45	1.69	
PAK21 tidak membebankan tugas sebagai guru.	8.44	1.78	
Saya mengurus masa instruktional secara optimum dalam PAK21.	8.54	1.74	
Saya bersikap rasional dalam menguruskan keperluan murid.	8.48	1.78	
Saya memberi peluang murid untuk menyerlahkan potensi mengikut tahap keupayaan mereka.	8.05	1.38	
Saya menggunakan pertimbangan profesional semasa memberikan tahap penguasaan murid dalam pentaksiran bilik darjah (PBD).	7.87	1.63	
Saya membuat refleksi pada Rancangan Pengajaran Harian (RPH) dengan telus setiap kali selepas PdPC.	7.96	1.54	
Saya merujuk refleksi pada RPH untuk merancang penambahbaikan PdPC.	8.18	1.62	
Keseluruhan Profesionalisme Sikap Guru	8.37	0.98	

4.2 Tahap Profesionalisme Pengetahuan Guru

Item	Min (M)	Sisihan Piawai (SP)	Interpretasi
Saya memahami kerangka konsep PAK21.	7.59	1.33	Terdapat hanya seorang responden tidak bersetuju dengan item ‘saya memahami kerangka konsep PAK21, saya memahami standard asas PAK21 (4K1N), saya memahami tentang PBD dan saya dapat merancang PBD yang sesuai dengan objektif pembelajaran PAK21’. Sebaliknya, majoriti responden sangat bersetuju dengan purata 8.11 untuk semua item. Oleh itu, tahap profesionalisme pengetahuan guru menunjukkan hasil dapatan yang positif.
Saya memahami standard asas PAK21 (komunikasi, kolaboratif, kreatif, kritis dan nilai (4K1N)).	7.74	1.43	
Saya memahami tentang persediaan fizikal bilik darjah.	7.81	1.39	
Saya memahami tentang PBD.	7.69	1.62	
Saya dapat merancang PBD yang sesuai dengan objektif pembelajaran PAK21.	8.17	1.69	
Saya berkongsi objektif pembelajaran dengan murid supaya mereka mampu mencapai hasil pembelajaran yang ditetapkan.	7.82	1.45	
Saya boleh mengaitkan isi pelajaran dengan kehidupan sebenar murid.	7.89	1.32	
Keseluruhan Profesionalisme Pengetahuan Guru	8.11	1.14	

4.3 Tahap Profesionalisme Kemahiran Guru

Item	Min (M)	Sisihan Piawai (SP)	Interpretasi
Saya boleh menyampaikan konsep isi pelajaran dengan jelas.	8.12	1.25	Analisis tahap profesionalisme kemahiran guru ini menunjukkan purata kekerapan sebanyak 7.90. Kebanyakkan responden bersetuju dengan hampir kesemua item yang diberikan. Namun begitu, terdapat hanya seorang responden memilih sangat tidak bersetuju dengan pernyataan 'saya mahir dalam melaksanakan aktiviti pembelajaran PAK21 (Think Pair Share, Hot Seat, Gallery Walk dan sebagainya)' dan 'saya mahir menggunakan kaedah penyoalan 5W1H untuk merangsang pemikiran aras tinggi murid'. Item 'saya mahir mengintegrasikan pengetahuan STEM melalui strategi projek dalam konteks dunia sebenar' telah mencatatkan maklum balas terendah bagi sangat setuju dengan hanya 4.2% jika dibandingkan dengan item 'saya mahir memberi tunjuk ajar tentang penyelesaian masalah kepada murid yang merekodkan maklum balas sangat setuju tertinggi dengan 17.6%'.
Saya mahir memberi tunjuk ajar tentang penyelesaian masalah kepada murid.	8.02	1.27	
Saya mahir dalam melaksanakan aktiviti pembelajaran PAK21 (Think Pair Share, Hot Seat, Gallery Walk dan sebagainya).	7.57	1.52	
Saya mahir menggunakan elemen merentas kurikulum semasa menyampaikan isi pelajaran kepada murid.	7.95	1.39	
Saya mahir menggunakan kaedah penyoalan 5W1H untuk merangsang pemikiran aras tinggi murid.	8.02	1.44	
Saya mahir menggunakan sumber pendidikan secara optimum.	7.91	1.34	
Saya mahir mengintegrasikan pengetahuan STEM melalui strategi projek dalam konteks dunia sebenar.	7.36	1.54	
Keseluruhan Profesionalisme Kemahiran Guru	7.90	1.12	

4.4 Tahap Pembudayaan Pembelajaran Abad Ke-21 (PAK21)

Item	Min (M)	Sisihan Piawai (SP)	Interpretasi
Saya mengamalkan PAK21 kerana percaya impak hasil pembelajarannya.	7.65	1.40	Hasil dapatan menunjukkan maklum balas yang pelbagai tentang pembudayaan PAK21 dengan purata kekerapan 7.86. Terdapat beberapa orang responden memberikan maklum balas sangat tidak bersetuju kepada beberapa item. Walaubagaimanapun, lebih 5% responden sangat bersetuju dengan semua item dalam bahagian ini.
Saya menyusun semula keperluan DSKP mengikut keupayaan murid bagi mencapai objektif pembelajaran.	7.83	1.36	
Saya sentiasa mewujudkan persekitaran pembelajaran yang adil kepada semua murid.	8.26	1.27	
Saya mengamalkan komunikasi efektif dalam menerapkan nilai murni dalam PAK21.	8.06	1.36	
Saya sentiasa menggunakan maklum balas murid untuk membuat penambahbaikan dalam pengajaran dan pembelajaran.	8.07	1.24	
Saya sentiasa mempamerkan hasil kerja murid di dalam bilik darjah.	7.65	1.45	
Saya sentiasa bekerjasama dengan pemegang taruh untuk membudayakan PAK21.	7.50	1.69	
Keseluruhan Pembudayaan Abad Ke-21	7.86	1.19	

4.5 Perbezaan Tahap Amalan Profesionalisme Mengikut Gender dan Pengalaman Mengajar

Item	Gender		Pengalaman Mengajar	
	t	Nilai-p	t	Nilai-p
Profesionalisme Sikap	0.63	0.527	1.00	0.319
Profesionalisme Pengetahuan	-0.55	0.587	1.49	0.138
Profesionalisme Kemahiran	-0.08	0.934	2.01	0.045
Pembelajaran PAK21	-0.11	0.916	2.95	0.004

Hasil keputusan analisis menggunakan ujian-t tak bersandar menunjukkan bahawa tahap profesionalisme guru dari segi sikap, pengetahuan dan kemahiran serta pembudayaan guru terhadap PAK21 tidak dibezakan mengikut gender apabila nilai t yang terhasil adalah tidak signifikan dengan nilai p melebihi dari 0.05 (nilai p : 0.527, 0.587, 0.934 dan 0.916). Ini merumuskan bahawa tiada perbezaan yang signifikan di antara lelaki mahupun perempuan dalam tahap profesionalisme sikap, pengetahuan dan kemahiran serta pembudayaan guru terhadap PAK21.

Analisis keputusan juga menunjukkan bahawa tiada perbezaan purata yang signifikan di antara guru pakar dan guru bukan pakar (guru novis, novis lanjutan, cekap dan mahir). Nilai p yang terhasil masing-masing melebihi 0.05 iaitu 0.319 dan 0.138. Sebaliknya bagi tahap profesionalisme guru berdasarkan kemahiran, hasil dapatan menunjukkan terdapat perbezaan purata yang signifikan iaitu nilai p, 0.045. Ini merumuskan bahawa wujudnya perbezaan yang signifikan di antara guru pakar dan guru bukan pakar (guru novis, novis lanjutan, cekap dan mahir) terhadap tahap profesionalisme berdasarkan kemahiran. Maklum balas pembudayaan PAK21 juga menunjukkan wujudnya perbezaan purata yang signifikan apabila nilai p kurang dari 0.05 (0.004). Ia menunjukkan terdapat perbezaan dari segi maklum balas di antara guru pakar dan guru bukan pakar (guru novis, novis lanjutan, cekap dan mahir) terhadap pembudayaan PAK21.

5.0 Kesimpulan dan Implikasi

Pada masa kini, PdPC guru yang menerapkan elemen PAK21 amatlah penting bagi memastikan keberkesanan pembelajaran dan ketersediaan para pelajar bagi menghadapi perkembangan pesat dan peradaban global. Namun, kajian-kajian terdahulu membuktikan masih terdapat pelbagai isu dan cabaran di dalam usaha kerajaan ke arah pembudayaan PAK21 dalam kalangan guru di sekolah (Nooraini & Abdul Halim, 2017; Norazlin & Siti Rahaimah, 2019; Abu Yazid et al., 2019). Ini termasuklah isu-isu berkaitan pengetahuan, kemahiran guru, kemudahan, sumber yang disediakan dan beban tugas tidak berkaitan yang turut mempengaruhi amalan serta kualiti pengajaran guru di sekolah. Ianya masih menunjukkan dapatan yang berbeza dari segi pelbagai aspek, seperti tahap kesediaan guru (Jaggil & Muhamad Suhaimi, 2018; Adil, 2016; Vuyisile; 2015) dan pandangan serta faktor-faktor pelaksanaan PAK21 di sekolah (Norazlin & Siti Rahaimah, 2019; Noor Lela et al., 2019).

Amalan profesionalisme guru merupakan antara aspek terpenting di dalam memastikan kualiti pendidikan di negara ini. Hakikatnya, pembangunan profesional guru dalam abad ke-21 dapat melengkapkan mereka dengan pelbagai alat mengajar yang moden serta relevan dengan keperluan generasi pelajar pada masa kini. Amalan profesionalisme yang tinggi dapat menjadikan golongan guru lebih berpengetahuan serta mahir di dalam PdPC (Mohd Aizat & Kamarudin, 2020). Pembangunan dan pengaplikasian kemahiran PdPC abad ke-21 penting bagi profesionalisme guru bagi memastikan pembelajaran relevan, membangunkan kepimpinan dan menambahkan ilmu dalam bidang pendidikan (Washington, 2019).

Dapatan kajian ini selari dengan beberapa kajian terdahulu. Noor Lela et al. (2019) mendapati bahawa amalan PAK21 dalam kalangan guru di 34 buah sekolah di Perak adalah tinggi di mana aspek ini mempunyai hubungan yang positif dengan kualiti dan kemahiran pengajaran guru seperti kemahiran teknologi maklumat dan komunikasi. Jamilah dan Siti Noor (2020) pula melaporkan terdapat hubungan teguh dan positif di antara kecekapan profesional dan kemahiran abad ke-21 dalam kalangan guru di 242 buah sekolah menengah di Zon Selatan Semenanjung Malaysia. Selain itu, beberapa kajian di luar negara turut melaporkan tahap pengajaran abad ke-21 yang tinggi berdasarkan nilai positif amalan profesionalisme guru (Pa-alisbo, 2017; Haug & Mork, 2021) dan (Anagün, 2018; Warner & Kaur, 2017) . Maka, dapat disimpulkan bahawa amalan profesionalisme memainkan peranan penting ke atas pembudayaan PAK21 dalam kalangan guru di sekolah.

Perbezaan atau jurang gender merupakan antara isu yang masih hangat dibincangkan mengenai kerjaya perguruan di seluruh dunia (OECD, 2017). Hakikatnya, di Malaysia, walaupun hampir tiada halangan berdasarkan gender untuk kebanyakan industri atau pekerjaan, masih terdapat perbezaan pilihan dan aspirasi kerjaya di antara lelaki dan perempuan yang dipengaruhi oleh faktor-faktor seperti keluarga, minat, pengalaman lepas, stereotaip atau gaji (Lim, 2019). Bagi kerjaya perguruan, beberapa kajian lepas telah mengenalpasti bahawa seperti kebanyakan kerjaya yang lain, terdapat perbezaan gender bagi pelbagai aspek profesionalisme. Sebagai contoh, guru lelaki didapati lebih bersedia untuk meneroka, mendalami, dan menerima lebih banyak inovasi berbanding guru wanita (Kim et al., 2017). Ahiatrogah (2017) turut mendapati bahawa terdapat perbezaan gender yang signifikan secara statistik bagi penilaian kemahiran mengajar yang diperoleh, di mana guru pelatih perempuan menunjukkan prestasi yang lebih baik berbanding lelaki.

Sebaliknya, dapatan berbeza dilaporkan di dalam kajian ini di mana perbezaan gender didapati tidak dapat mempengaruhi tahap amalan profesionalisme dalam kalangan guru. Ini adalah selari dengan beberapa hasil kajian terdahulu yang turut mengenalpasti tiada kesan faktor gender ke atas pelbagai aspek berkaitan amalan profesionalisme guru terhadap PAK21. Jamilah dan Siti Noor (2020) mendapati bahawa tiada perbezaan ketara di antara guru lelaki dan perempuan di dalam PAK21 di sekolah-sekolah menengah Zon Selatan Semenanjung Malaysia. Ini disokong oleh Roustaee (2014) dan Mohammad Azri dan Han (2020). Selain itu, beberapa kajian menyokong tiada hubungan yang signifikan di antara gender dan amalan pengajaran serta profesionalisme guru (Clifford & Akpochafo, 2015; Wanakacha et al., 2018).

Pengalaman mengajar merupakan salah satu aspek yang diberi penekanan bagi profesion perguruan. Kepentingan guru berpengalaman dalam satu organisasi atau institusi dibangunkan berdasarkan penglibatan dan interaksi manusia, maka perkembangan di dalam proses pendidikan selalunya berlaku secara berperingkat (Avvisati, 2018). Beberapa kajian terdahulu membuktikan bahawa pengalaman mengajar memainkan peranan penting di dalam profesionalisme guru. Jaggil dan Muhamad Suhaimi (2018) menyatakan bahawa guru-guru berpengalaman mengajar melebihi 20 tahun mempunyai kesediaan lebih tinggi berbanding guru-guru yang kurang berpengalaman. Selain itu, pengalaman kerja guru juga dikaitkan dengan kemajuan sistem pendidikan, prestasi kerja kendiri dan juga pencapaian murid (Kini & Podolsky, 2016; Ladd, 2013). Terdapat juga kajian yang dijalankan bagi mengkaji tentang kepuasan kerja dan ketahanan pekerjaan guru berdasarkan ciri-ciri peribadi, termasuklah pengalaman mengajar (Toropova et al., 2019).

Walau bagaimanapun, kajian ini menunjukkan dapatan agak berbeza di mana peringkat perkembangan guru berdasarkan pengalaman dan tempoh perkhidmatan didapati mempengaruhi tahap profesionalisme segi aspek kemahiran namun tiada perbezaan ketara dari segi sikap dan pengetahuan. Beberapa hasil kajian terdahulu yang mengkaji aspek pengalaman guru turut mengenalpasti faktor peringkat perkembangan ini tidak mempengaruhi aspek profesionalisme guru. Pa-alisbo (2017) mendapati bahawa kemahiran guru tidak berbeza secara ketara apabila dianalisis mengikut profil, termasuklah dari segi tahun perkhidmatan. Sebaliknya, guru-guru di dalam kajian tersebut lebih mempercayai bahawa mereka boleh melaksanakan kemahiran yang diharapkan tanpa mengira faktor pengalaman masing-masing. Selain itu, kajian oleh Turmini et al. (2020) menyatakan bahawa pengalaman mengajar bukanlah satu penentu kepada tahap profesionalisme guru. Sementara itu, beberapa kajian lain mendapati bahawa guru-guru dengan pengalaman mengajar yang lebih lama mempunyai tahap kemahiran yang berbeza berbanding mereka yang kurang berpengalaman (Khalis et al., 2009; Sheng, 2020; Razila et al. 2019) dan aspek pengalaman guru berpotensi untuk meningkatkan kemahiran pengajaran (Kini & Podolsky, 2016) serta hubungan di antara pengalaman mengajar dan keberkesanan pengajaran adalah kompleks, berbeza-beza dan tidak linear (Irvine, 2018). Penggunaan pelbagai teknologi dan kaedah terkini di dalam sistem pendidikan merupakan suatu perubahan yang baharu bukan sahaja untuk guru baharu tetapi juga mereka yang lebih berpengalaman (Palmer, 2015). Maka sokongan dan peningkatan kemahiran amalan profesionalisme perlulah dijadikan keutamaan bagi seluruh peringkat guru bukan sahaja untuk mereka yang baru berkhidmat (Graham et al., 2020).

Secara amnya, dapatan-dapatan kajian yang telah dibincangkan dapat memberikan implikasi yang meluas dari segi penambahan ilmu pengetahuan dalam bidang kajian berkaitan profesionalisme guru serta pendidikan abad ke-21. Terdapat tiga implikasi utama kajian ini yang dapat menyumbang kepada individu, institusi, dan negara, khususnya ke arah meningkatkan kualiti sistem pendidikan di Malaysia. Pertama, dapatan kajian ini dapat memberikan implikasi yang penting dari segi peranan amalan profesionalisme guru

terhadap keberkesanan pelaksanaan pengajaran abad ke-21 di sekolah-sekolah di negara ini. Beberapa kajian yang dibincangkan di atas telah membuktikan hubungan aspek pengetahuan, sikap dan kemahiran sebagai komponen kecekapan profesionalisme guru terhadap pembudayaan PAK21. Namun pada masa kini, masih terdapat jurang dan kekurangan kajian ke atas tahap profesionalisme dalam kalangan guru sekolah di negara ini. Hal ini amatlah kritikal memandangkan kualiti dan tahap profesionalisme guru yang rendah akan membantutkan usaha penambahbaikan pembangunan sistem pendidikan negara yang sentiasa berada dalam persekitaran yang dinamik (Mohd Aizat & Kamarudin, 2020). Maka, seiring dengan kajian-kajian yang lain, dapatan ini dapat memberikan input berguna, khususnya melibatkan pihak-pihak berkepentingan ke arah meningkatkan tahap profesionalisme dalam kalangan guru sekolah melalui kerangka PAK21.

Selain itu, dapatan kajian turut menjelaskan kepentingan faktor pengalaman guru di dalam keberkesanan amalan profesionalisme dan PAK21 dalam kalangan guru-guru di sekolah. Berdasarkan analisis di dalam kajian ini, pengalaman guru dari segi tahun berkhidmat didapati tidak mempengaruhi tahap profesionalisme mereka, namun hakikatnya pengalaman merupakan faktor yang meluas dan perlu diberi perhatian di dalam mempertingkatkan pembudayaan PAK21 dalam kalangan guru di sekolah-sekolah. Seperti yang dilaporkan oleh Pa-alisbo (2017), walaupun prestasi kerja guru tidak semestinya berbeza dari segi pengalaman mengajar dan tempoh perkhidmatan, faktor pengalaman mereka dari aspek kemahiran adalah penting di dalam keberkesanan pendidikan, sebagai contoh, sama ada guru dilengkapi dengan kompetensi dan standard penting yang diperlukan atau sebaliknya. Faktor pengalaman guru ini dapat mengambil kira aspek latihan dan pendedahan kepada pembangunan kemahiran abad ke-21 yang meliputi konsep 4K1N iaitu komunikasi, kreativiti, pemikiran kritis, kolaboratif dan nilai.

Tambahan lagi, kajian ini turut memberikan sumbangan data empirikal kepada bidang kajian ilmiah berkaitan peranan faktor demografi, khususnya gender dalam aspek profesionalisme guru di Malaysia. Pada masa kini, tanpa mengira perbezaan individu, aspek profesionalisme guru amatlah penting di dalam penilaian kecekapan kendiri, terutamanya dari segi kemahiran abad ke-21. Berdasarkan dapatan kajian, adalah disyorkan agar penekanan diberikan ke atas keperluan kemahiran abad ke-21 di dalam pembangunan profesionalisme guru dengan mengambil kira aspek gender. Tambahan lagi, guru memainkan peranan penting sebagai titik permulaan bagi memastikan kesaksamaan di dalam manfaat dan peluang pendidikan, memandangkan sikap dan amalan pengajaran guru dapat mempengaruhi motivasi dan prestasi pelajar (Kollmayer et al., 2020).

6.0 Limitasi Kajian

Hasil dapatan yang dipelajari daripada kajian ini adalah penting dalam membantu pemahaman dan usaha-usaha pihak berkaitan yang mengkaji tentang peranan amalan profesionalisme guru sekolah dan faktor-faktor ke arah memastikan kejayaan pelaksanaan dan pembudayaan PAK21 di dalam sistem pendidikan negara. Walau bagaimanapun, penemuan daripada kajian ini perlu dipertimbangkan berdasarkan beberapa batasan yang tersendiri. Berikut adalah batasan-batasan utama kajian ini yang turut menyumbangkan input berguna sebagai asas untuk kajian lanjutan pada masa depan.

Pertama sekali, kajian ini telah dijalankan dengan hanya melibatkan guru -guru di beberapa buah sekolah di dalam satu daerah sahaja di Kuala Lumpur, iaitu Daerah Sentul. Oleh itu, dapatan yang diperoleh di dalam kajian ini tidak dapat digeneralisasi untuk mewakili gambaran keseluruhan tentang tahap profesionalisme dan pembudayaan PAK21 dalam kalangan guru-guru sekolah di Malaysia. Pada masa yang sama, sekolah-sekolah yang dikaji adalah dari kawasan bandar sahaja, maka dapatan kajian ini adalah terhad kerana tidakmelibatka n guru-guru dari kawasan luar bandar. Kajian-kajian terdahulu telah membuktikan bahawa guru-guru dari persekitaran pengajaran yang berbeza mempunyai keperluan, pengalaman, serta persepsi yang berbeza tentang aspek-aspek pengajaran, seperti kepuasan kerja (Sabariah et al., 2013) dan gaya pengajaran (Ainonmadiah et al., 2016). Oleh hal yang demikian, kajian ini dapat direplikasikan oleh kajian lanjutan yang melibatkan golongan sasaran yang sama, iaitu guru, daripada pelbagai kelompok berbeza dari segi geografi dan sebagainya. Hasil kajian lanjutan ini dapat menunjukkan dapatan yang lebih komprehensif berkaitan amalan profesionalisme dan PAK21 oleh guru-guru sekolah di Malaysia.

Selain itu, kajian ini hanya mempertimbangkan aspek demografi dari segi gender dan pengalaman mengajar bagi mengkaji faktor-faktor yang dapat mempengaruhi amalan profesionalisme dan PAK21 guru-guru di sekolah terbabit. Di dalam era pembangunan yang pesat kini, keupayaan dan keberkesanan guru-guru di dalam mempraktikkan unsur-unsur profesionalisme dan kemahiran abad ke-21 di dalam pengajaran

dan pembelajaran turut bergantung kepada faktor-faktor praktikal lain yang lebih relevan berbanding faktor gender dan tahun berkhidmat, seperti prestasi kerja, pembangunan kendiri dan profesional (Pa-alisbo, 2017), pengurusan kelas (Ninlawan, 2015) dan sebagainya. Akhir sekali, disebabkan oleh keterbatasan sumber dan kemudahan dari segi pelaksanaan metodologi pengumpulan data, kajian ini juga terhad di mana ia hanya melibatkan kaedah soal selidik berbentuk kuantitatif. Selain itu, penyebaran soal selidik juga telah dijalankan dengan menggunakan kaedah dalam talian atau 'online' melalui platform Google Form. Kajian oleh Saleh dan Bista (2017) melaporkan bahawa kadar tindak balas responden terhadap soal selidik secara 'online' ini sebenarnya bergantung kepada beberapa faktor yang dapat mempengaruhi maklum balas diberikan seperti faktor individu dikenali seperti rakan sekerja, kecenderungan minat, serta kerahsiaan maklumat yang dikongsi melalui platform dalam talian. Justeru, kajian-kajian pada masa depan juga boleh menerokai skop kajian ini melalui perancangan prosedur pengumpulan data yang dapat memberikan hasil kajian yang lebih mendalam dari pelbagai perspektif, contohnya melalui kaedah kualitatif daripada temubual dan analisis dokumen berkaitan.

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Penggunaan Kaedah Mengalami Dan Menghayati Dalam Aspek Pengajaran Puisi Murid Berkeperluan Khas Pendengaran Sekolah Menengah Pendidikan Khas Persekutuan Pulau Pinang

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Abstrak

Pendekatan Pembelajaran Mengalami dan Menghayati diperkenalkan kepada murid tingkatan 2A yang mengalami masalah pendengaran untuk melihat keberkesanan mereka dalam menghayati dan menguasai puisi. Pendekatan Mengalami dan Menghayati adalah penerapan dan dan pengintegrasian dalam nilai dan pengetahuan kemahiran dan nilai dipelajari merangkumi kesemua disiplin ilmu dalam menyelesaikan masalah. Murid menggunakan pengetahuan sedia ada dan digabungkan dengan pengetahuan baru lalu menimbulkan lebih penghayatan dalam diri mereka terhadap sesebuah teks. Murid akan lebih bermotivasi kerana dapat menguasai pembelajaran yang disampaikan. Ujian pasca dilakukan bagi menganalisis keberkesanan penggunaan pendekatan Mengalami dan Menghayati dalam pembelajaran lengkap. Dapatan kajian menunjukkan pendekatan Mengalami dan Menghayati dengan bantuan deklamasi sajak sangat berkesan dalam membantu murid meningkatkan kemahiran menghayati puisi.

Kata Kunci: Pendekatan Mengalami dan Menghayati; Deklamasi Sajak; Menghayati puisi; Ujian Pra dan Pasca

1.0 Pengenalan

Sekolah Menengah Pendidikan Khas Persekutuan Pulau Pinang merupakan sekolah yang mempunyai murid yang mengalami masalah fizikal iaitu masalah pendengaran. Namun begitu, mereka masih boleh berfikiran normal seperti murid aliran perdana dan layak menduduki Sijil Pelajaran Malaysia (SPM). Secara umumnya untuk memastikan salah sebuah sekolah itu mencapai kedudukan terbaik dan berdaya saing dengan murid-murid aliran perdana dalam SPM murid-murid perlulah menguasai subjek Bahasa Melayu dengan baik dan tidak gagal dalam subjek Bahasa Melayu ketika SPM. Justeru, sepanjang pemerhatian pengkaji ketika mengajar mendapati muridmurid sekolah ini menguasai subjek Bahasa Melayu namun kurang dari aspek kefahaman puisi. Mereka mempunyai masalah untuk menguasai puisi terutama dari segi tema, persoalan dan makna di sebalik puisi yang diberikan. Oleh itu, Hal ini menyebabkan pengkaji terpanggil unutuk mencuba sesuatu yang baru dan mengubah corak pengajaran bersesuaian dengan pembelajaran abad ke-21.Dalam pendidikan Bahasa Melayu komponen sastera merupakan elemen penting bagi memastikan murid dapat berfikir, bertingkahlaku dan bertutur dengan cara yang betul dan tepat. Namun begitu, bagi murid yang mengalami masalah pendengaran memerlukan pendekatan yang berlainan berbanding murid normal. Oleh itu, salah satu pendekatan yang boleh digunakan ialah pendekatan mengalami dan menghayati yang merupakan pendekatan yang memerlukan murid dapat menghayati pengalaman penulis melalui teks yang dibaca. Sesebuah karya boleh di fahami secara terperinci dan menyeluruh termasuk memahami aspek-aspek struktur sesebuah karya menggunakan pendekatan ini. Murid dapat memehami dan menjiwai segala aspek dalam sesebuah karya sastera untuk mendeklamasi puisi sajak ini dengan menggunakan pendekatan mengalami dan menghayati tersebut. Selain itu, dalam sesebuah karya segala watak-watak dapat di lakonkan oleh murid dalam menjiwai karya tersebut dan dapat berkongsi pengalaman mereka. Kaedah ini dikemukakan oleh Googman (1962) dimana sesuatu pengalaman itu dikaji mengikut apa yang ditanggapi oleh pembaca itu sendiri. Hal ini akan dapat meningkatkan kemahiran Pengajaran dan pembelajaran murid berkeperluan khas seperti mampu mempunyai pemikiran yang kreatif dan kritis, bekerjasama di dalam kelas dan tidak malu untuk berkomunikasi antara mereka. Genre puisi merupakan satu komponen yang penting dalam menguasai Bahasa Melayu. Kefahaman dalam puisi akan membantu murid untuk memahami dan menguasai isi tersirat dan juga tersurat. Hal ini akan membantu murid

berkeperluan khas membentuk pemikiran yang kreatif dan mempuinyai pemikiran yang beraras tinggi. Mereka hanya menghafal apa yang saya beri namun tidak menghayati pengajaran guru. Kefahamandalam puisi ini amat penting bagi membantu murid mampu berdaya saing dengan murid-murid arus perdana. Murid Berkeperluan Khas pendengaran adalah murid yang tidak mempunyai keupayaan mendengar. Ciri-ciri mereka ialah kurang memberi perhatian di dalam kelas, tidak memahami arahan, kurang melibatkan diri dalam aktiviti yangmelibatkan pertuturan, sering bertanya tugasan berulang kali dan sering khayal di dalam kelas (Aziz Sulaiman & Siti Rubiyani Omar, 2018). Oleh itu, masalah yang dihadapi oleh murid berkeperluan Khas Pendengaran ini memerlukan teknik pengajaran yang berbeza bagi menarik perhatian mereka untuk menguasai pembelajaran puisi sekaligus membentuk keyakinan diri untuk melibatkan diri dalam aktiviti pertuturan walaupun menggunakan bahasa isyarat.

1.1 Objektif kajian ini adalah untuk:

1. Menganalisis tahap pengetahuan puisi dalam kalangan murid tingkatan dua berkeperluan khas di Sekolah Menengah Pendidikan Khas Persekutuan.
2. Menganalisis kesan penggunaan kaedah mengalami dan menghayati dalam pengajaran puisi murid berkeperluan khas di Sekolah Menengah Pendidikan Khas Persekutuan.

Kajian ini akan memberi fokus terhadap salah satu komponen bidang Bahasa Melayu yang terdiri daripada puisi. Puisi yang akan diberi penekanan ialah puisi moden sajak. Kaedah yang akan digunakan dalam kajian ini ialah kaedah mengalami dan menghayati. Kajian ini akan berfokus pada kaedah mengalami dan menghayati sahaja tanpa bergabung dengan mana-mana kaedah pembeljaran yang lain. Kajian ini juga akan mengunakan kaedah kualitatif.Selain itu, kajian ini juga akan memberi fokus terhadap satu buah sekolah yang terletak di negeri Pulau Pinang. Sekolah yang akan diberi tumpuan dalam kajian ini, Sekolah Menengah Pendidikan Khas Persekutuan Pulau Pinang yang merupakan sekolah untuk murid berkeperluan khas (MBK) pendengaran yang mengambil peperiksaan PT3, Sijil Pelajaran Malaysia (SPM) dan Sijil Tinggi Muridan Malaysia(STPM). Dokumen Standard Kurikulum Pendidikan Bahasa Melayu Murid Berkeperluan Khas bersandarkan Dokumen Standard Kurikulum Pendidikan Bahasa murid normal tingkatan 2. Kajian ini merujuk kepada DSKP murid tingkatan 2 bahagian aspek seni bahasa. Kajian ini akan memberi fokus kepada memahami dan mengapresiasi karya sastera dengan memberikan respons peribadi. Menerusi aspek ini murid akan memahami dan mengapresiasi karya puisi dengan memberikan penekanan kepada aspek maksud tema,persoalan, nilai dan pengajaran dengan betul. Selain itu, dalam aspek seni bahasa juga murid mestilah mampu mempersembahkan pelbagai prosa, puisi dan karya kreatif yang lain. Sekiranya mereka mampu menguasai pencapaian yang cemerlang mengikut standard yang telah ditetapkan oleh Kementerian Pelajaran Malaysia(KPM) maka. objektif pengajaran dan pembelajaran dikira sudah tercapai.Nordiana Hamzah (2016), telah menjalankan kajian untuk melihat proses pembelajaran menggunakan kaedah mengalami dan menghayati dalam kalangan guru praktikum yang mengajar Kesusasteraan Melayu sebagai peserta kajian. Kajian yang dijalankan ini bagi melihat tahap keprihatinan guru sebagai peserta kajian menggunakan kaedah mengalami dan menghayati dalam proses pengajaran dan pembelajaran. Responden kajian ini merupakan tiga orang guru pelatih yang mengajar Kesusasteraan Melayu. Dapatan kajian mereka telah menunjukkan bahawa ketiga-tiga orang guru pelatih menggunakan empati dalam pengajaran dan pembelajaran mereka. Secara keseluruhannya pengajaran guru dapat mengembangkan perkembangan sosial murid-murid dan dapat membantu menyelesaikan masalah dalam kalangan murid. Kajian lepas berkaitan dengan penggunaan kaedah mengalami dan menghayati ini bukan sahaja dalam Bahasa Melayu malah juga dalam bidang lain. Kajian yang dijalankan oleh Doratya Gerry dan Chemaline Osup (2020), bertujuan untuk mengenal pasti keberkesanan kaedah menghayati dalam pengajaran dan pembelajaran ensera (cerita rakyat Iban). Kajian ini diperoleh seramai empat orang guru yang merupakan responden kajian di sebuah sekolah di negeri Sarawak. Dapatan kajian mendapati bahawa pendekatan dan kaedah menghayati mampu mengasah bakat murid dalam bidang seni lakonan termasuklah perwatakan, gaya bahasa, nilai keindahan dan unsur budaya yang terdapat dalam ensera itu sendiri. Murid-murid juga dapat menunjukkan penghayatan ensera melalui lakonan di dalam bilik darjah bersama guru mereka. Murid dapat berkongsi pendapat yang positif dari aspek ilmu pengetahuan, pengalaman sedia ada, hasil murid dapat menghayati dan berminat untuk mengalami dan menghayati pengajaran dan pembelajaran bahasa Iban dengan lebih baik melalui kajian yang dilakukan.

Menurut Tom F.H. Smits dan Paul Janssenswille (2019), penglibatan pendidikan secara keseluruhan di Flanders, iaitu wilayah persekutuan terbesar dan majoritinya adalah penduduk di Belgium dan murid yang mempunyai latar belakang daripada negara lain (pendatang) tidak dikecualikan dalam bidang pendidikan dan murid tersebut mempunyai latar belakang yang baik semasa berada di peringkat rendah mahupun

menengah dalam menuntut ilmu. Terdapat beberapa masalah yang menjadi halangan di sekolah tersebut tetapi guru dapat mengatasinya dengan budaya mereka sendiri. Pada umumnya guru mempunyai masalah dengan murid etnik lain. Mereka sukar untuk mendekatkan diri mereka dengan murid tersebut. Sebaliknya murid dari negara Flanders dan murid etnik lain (bukan berasal daripada Flanders) dapat berkomunikasi dengan baik kerana mereka mempunyai peluang dalam bekerjasama melaksanakan tugas yang diberikan di dalam kelas dan sikap suka mengenali satu sama lain diterapkan dalam diri mereka. Untuk mengatasi masalah guru-guru di luar negara ini, Tom F.H. Smits dan Paul Janssenswille (2019) berpendapat bahawa pedagogi guru dalam sistem pendidikan barat perlu dipertingkatkan lagi dari aspek bahasa, pendekatan yang digunakan beraras tinggi tetapi memudahkan murid etnik lain memahami pengajaran tersebut, mempelbagai cara pengajaran dan membuang rasa "pilih kasih" di antara murid Flanders dengan murid etnik lain. Di samping itu, sikap dan pendekatan kepada kepelbagaian etnik dalam bilik darjah harus menekankan pendekatan yang sesuai seperti pendekatan pengajaran dan tatabahasa yang betul. Secara relevan untuk mengintegrasikan konteks kesusasteraan tematik dalam pendidikan negara barat mengenai kepelbagaian pengajaran guru dalam bidang pendidikan kaedah amat ditekankan ketika mengajar di dalam kelas agar strategi ketika sesi pengajaran terlaksana dengan berkesan. Kepelbagaian dikaitkan dengan tiga domain iaitu latar belakang etnik, jantina dan kelas sosial. Dalam pedagogi dan pendidikan, konsep kepelbagaian biasanya berorientasikan kepada pelbagai sosiologi supaya murid faham tentang budaya dan etnik lain. Dengan itu murid saling dapat berkongsi pengetahuan mengenai budaya dan etnik yang ada pada diri mereka dan memudahkan guruguru dalam menerapkan dunia sastera pada para muridnya.

2.0 Metodologi Kajian

Penyelidikan kualitatif dapat dibincangkan dengan lebih terperinci melalui corak data yang diterima dan melalui proses pengumpulan data. Menurut Taylor dan Bodgan (1984) tulisan tentang tingkah laku manusia atau kata kata lisan atau tulisan melalui tingkah laku yang boleh dilihat melalui data kualitatif berbentuk deskriftif. Pengkaji menggunakan reka bentuk kajian kualitatif sebagai pendekatan. Pendekatan kualitatif dipilih kerana proses penyelidikan lebih menjurus kepada pengumpulan maklumat tentang tahap penguasaan puisi murid berkeperluan khas (MBPK) masalah pendengaran semasa sesi pengajaran dan pembelajaran puisi sajak. Kesemua elemen akan dinilai berlandaskan proses perlaksanaan kaedah pendekatan mengalami dan menghayati menerusi penilaian markah ujian pra dan pasca murid.

Rajah 1. Model pendekatan mengajar Puisi Bahasa Melayu mengalami-menghayati daripada Mahzan Arsyad (2008).

Rajah 1 menjelaskan satu model amalan terbaik sebagai PdPc pengajaran puisi bahasa Melayu mengalami dan menghayati di dalam bilik darjah. Guru membimbing berlandaskan pengalaman, pengecaman, daripada karya untuk murid dapat pengalaman sendiri untuk mendapatkan emosi melalui model ini. Model ini mempunyai ciriciri seperti pengalaman lalu murid yang tersendiri dan mempunyai nilai budaya dan warisan murid itu sendiri untuk di terjemahkan. Seterusnya penikmatan dan penghayatan amat dititikberatkan dalam pengajaran sastera. Ketiga-tiga ciri ini dapat memberi kesan kepada murid untuk menguasai setiap jalan cerita yang terdapat dalam sesebuah karya. Keseluruhan penghayatan akan tercapai apabila teknik penyoalan dan bahan bantu mengajar serta memberi peluang murid membaca dan menghayati karya puisi dapat membantu guru untuk tercapainya objektif pengajaran yang di tetapkan.

2.1 Lokasi, populasi dan sampel Kajian

Sekolah yang terlibat dalam kajian ini ialah SMK Pendidikan Khas Persekutuan Pulau Pinang. Sekolah ini terletak di Tanjung Tokong, Tanjung Bungah yang merupakan sebuah sekolah di bandar Tanjung Bungah Pulau Pinang. Sekolah ini dipilih kerana sekolah ini mempunyai asrama dan merupakan pilihan murid-murid masalah pendengaran mengambilkan SPM dan STPM yang dikumpulkan satu Malaysia dibawah Bahagian Pendidikan Khas Kementerian Pendidikan Malaysia. Ghazali Darusalam dan Sufean Hussin (2018) menjelaskan persampelan bertujuan ialah pemilihan responden berdasarkan pertimbangan pengkaji untuk memilih sampel yang paling berguna dan sesuai serta memenuhi keperluan tujuan kajian. Oleh sebab murid berkeperluan khas(MBPK) masalah pendengaran yang berada di tingkatan 2A tidak begitu ramai. Pengkaji telah memilih ke semua murid berkeperluan khas(MBPK) masalah pendengaran tingkatan 2A Tambahan pula, kesemua murid berkeperluan khas (MBPK) masalah pendengaran dapat memberi maklumat dengan mudah, mempunyai pengetahuan, mudah dihubungi dan berpengalaman. Populasi kajian ini adalah murid berkeperluan khas (MBPK) masalah pendengaran Tingkatan 2 di SMK Pendidikan Khas Persekutuan Pulau Pinang. Jumlah murid tingkatan 2A di sekolah ini ialah seramai 4 orang. Responden terdiri daripada 4 orang murid yang mempunyai tahap pendengaran yang berbeza. Dua orang murid mampu mendengar sedikit dan dua orang murid lagi tidak boleh mendengar langsung. Tiga orang murid ini sememangnya menguasai Bahasa Melayu manakala satu orang lagi sukar untuk menguasai Bahasa Melayu. Murid kelas 2A ini terdiri daripada 2 orang murid perempuan dan 2 orang murid lelaki.

Jadual 1: Taburan Responden Berdasarkan Jantina dan Tahap Pencapaian

Jantina / Tahap	**Tinggi**	**Sederhana**	**Rendah**	**Jumlah**
Lelaki	1	0	1	2
Perempuan	2	0	0	2
Jumlah	3	0	1	**4**

Jadual 1 merupakan taburan responden berdasarkan jantina dan tahap pencapaian bagi murid murid berkeperluan khas(MBPK) masalah pendengaran tingkatan 2 A. Pemilihan tahap pencapaian ini melalui pencapaian peratusan murid lulus dalam semua mata muridan teras dan elektif di tingkatan dua. Merujuk kepada jadual di atas, seorang murid lelaki iaitu 1 orang daripada tahap pencapaian tinggi, 0 daripada tahap sederhana dan 0 orang daripada tahap rendah. Manakala responden murid perempuan pula lebih ramai iaitu seramai 2 orang iaitu 2 orang daripada tahap pencapaian tinggi, 0 daripada tahap pencapaian sederhana dan 0 orang daripada tahap pencapaian rendah. Berdasarkan sampel ini responden kajian terdiri daripada dua lelaki dandua perempuan.

2.2 Instrumen kajian

2.2.1 Pemerhatian

Kajian kepustakaan dijalankan di perpustakaan Universiti Putra Malaysia. Hal ini dikatakan demikian kerana pengkaji ingin merujuk buku, jurnal serta tesis yang berkaitan dengan tajuk kajian. Antara bahan yang telah dirujuk ialah kandungan pedagogi guru bahasa Melayu, kaedah konstruktivisme, teknik pengajaran dalam sastera, cabaran guru mengajar sastera bahasa Melayu. Seterusnya, pemerhatian dibuat bagi merujuk kamus untuk istilahistilah yang digunakan di dalam kajian ini.

Pemerhatian berdasarkan kajian kepustakaan ini turut dijalankan bagi merujuk artikel jurnal yang terdapat pada laman sesawang dalam ruang maklumat yang terdapat di perpustakaan UPM dan universiti lain. Setiap rujukan yang dibaca dan dirujuk mengikut kesesuaian tajuk dimanfaatkan ke dalam bahagian sorotan literatur. Dengan itu, pengkaji mendapat banyak maklumat pendedahan awal terhadap cara-cara penulisan pada setiap bab, idea-idea daripada pengkaji lepas, meninjau kekurangan yang terdapat dalam kajian, serta idea untuk memulakan penulisan seterusnya. Pemerhatian terhadap pengajaran dan pembelajaran juga turut dilakukan oleh pengkaji kepada responden yang di kaji.

2.2.2 Analisis data

Analisis data akan dilakukan berdasarkan analisis dokumen dan pemerhatian. analisis dokumen pula pengkaji akan menganalisis ujian pra yang diberi sebelum menjalankan aktiviti dan ujian pasca setelah menjalankan aktiviti. Penghasilan dapat dilihat selepas ujian pasca dianalisis dan di laksanakan. Ghazali Darusalam dan Sufean Hussin (2018) mendefinisikan penganalisisan data kajian dibuat berdasarkan jenis data. Dapat di tafsikrkan kajian kualitatif perlu dianalisis secara naratif, proses analisis data kualitatif yang diperoleh melalui pemerhatian, dianalisis secara "*vertical"* iaitu dari atas ke bawah, bermula daripada melihat menyusun, menyaring, memilih, mengkelas dan mentranskripsi tema-tema seterusnya memilih kategori untuk mendapatkan kandungan teks secara bertulis dan mendalam yang difikirkan telah dapat menjawab persoalan dan objektif kajian. Penggunaan data analisis dilaksanakan selepas semua pengumpulan data selesai di ambil. Pengkaji menjalankan penyelidikan menggunakan kaedah analisis data dan pemerhatian. Gambaran awal penyelidikan dapat di lihat melalui pengumpulan data dan maklumat yang diperoleh oleh pengkaji untuk mengkaji lebih mendalam yang diperlukan daripada bahan-bahan melalui pemerhatian dibuat. Data-data tersebut di analisis oleh pengkaji secara terperinci berdasarkan bukti-bukti yang pengkaji dapat melalui pemerhatian dan analisis data. Penelitian semula dari segi rakaman temu bual dan senarai segak yang digunakan. Pengkaji akan menganalisis semua data yang dikumpul sebelum membuat penelitian dan penulisan secara bertulis untuk lebih mudah difahami.

2.3 Pelaksanaan Kajian

Pelaksanaan kajian pada peringkat awal dimulakan dengan melaksanakan pembelajaran hanya berpusatkan pada guru. Guru hanya akan menyampaikan silibus murid dan dan murid hanya mendengar perkongsian dari guru. Kemudian guru akan merancang satu sesi pembelajaran yang menggunakan pendekatan kaedah mengalami dan menghayati. Guru juga mengadakan satu aktiviti berbentuk pertandingan untuk membantu murid supaya dapat menghayati makna di sebalik puisi yang telah diajarkan serta dapat menyerap amalan nilainilai murni yang terdapat dalam puisi yang mereka deklamasikan. Seterusnya, guru akan melaksanakan ujian pasca untuk menilai sejauh mana keberkesanan kaedah mengalami dan menghayati yang telah diterapkan oleh guru dalam diri murid-murid.

3.0 Dapatan Kajian

3.1 Dapatan Kajian Analisis Skor Markah Soalan Komsas

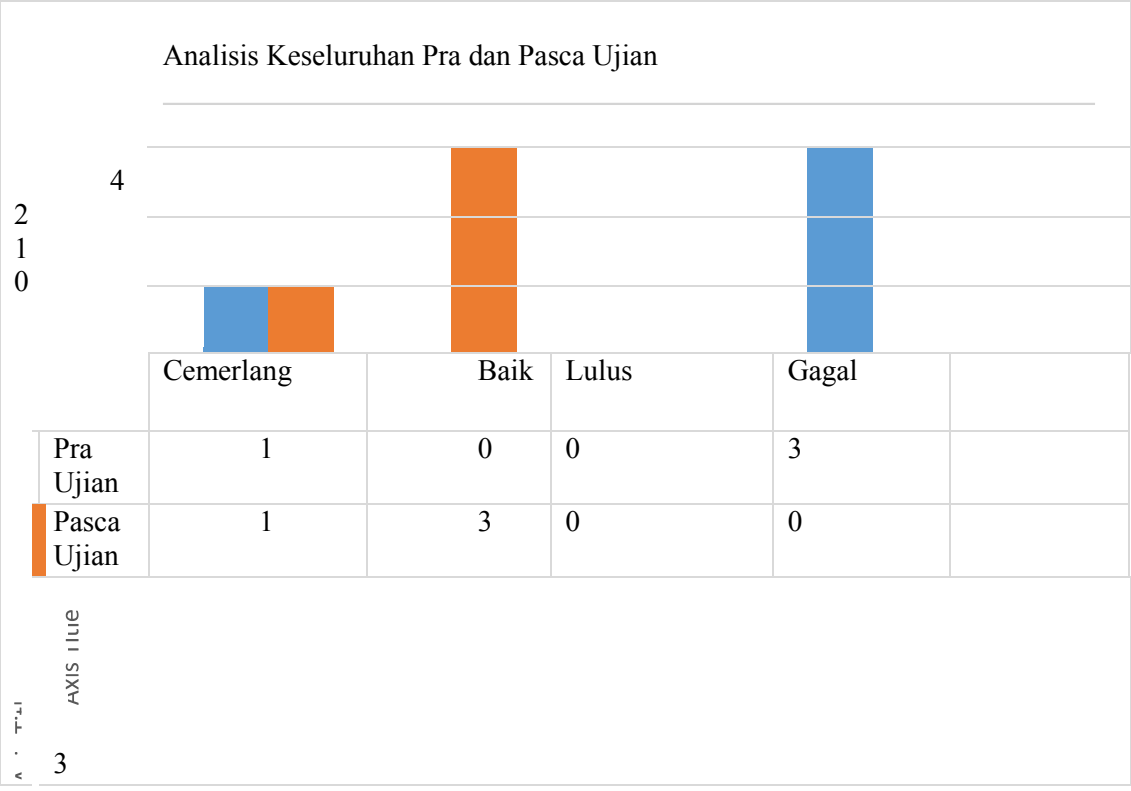
Jadual 2. Penanda aras skor markah mengikut peringkat Analisis Skor

PERINGKAT	MARKAH
Cemerlang Baik	18-20 15-17
Lulus Gagal	10-14 1-4

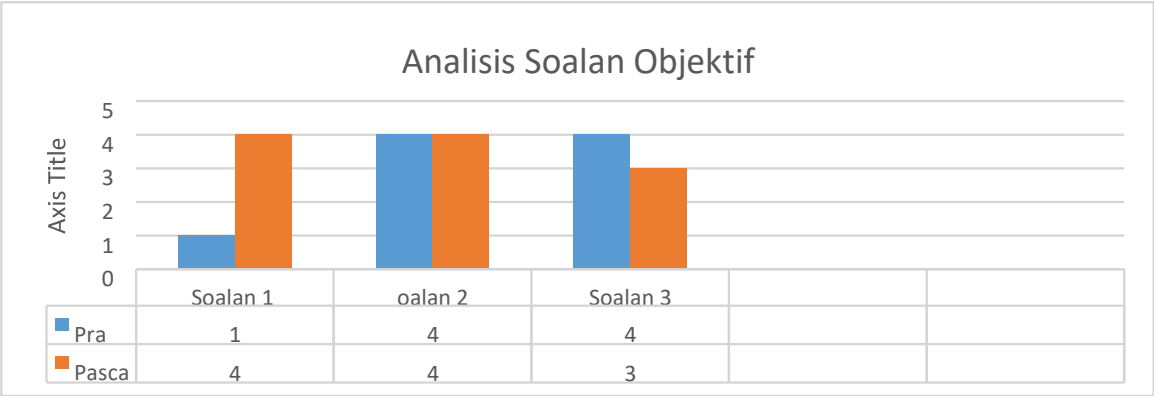
3.2 Markah Ujian Pra Dan Pasca

Jadual 3. Analisis skor ujian pra dan pasca murid Tingkatan 2A

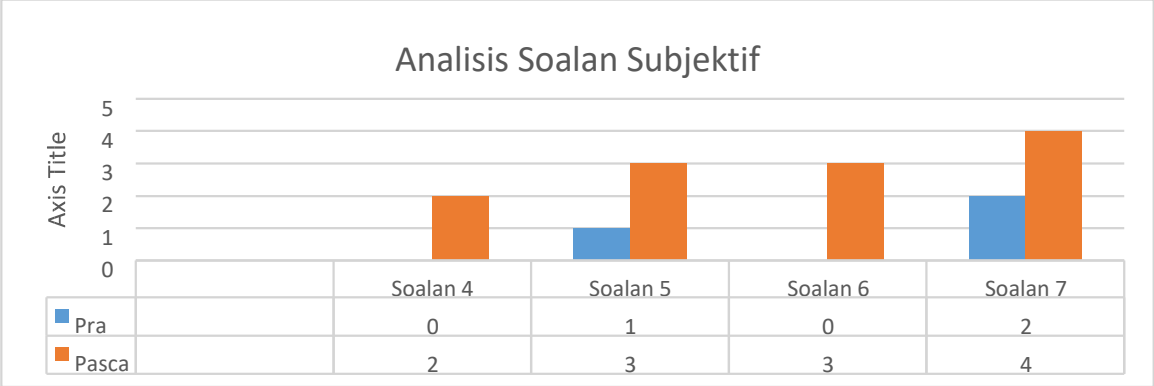
Bilangan	Kriteria	Analisis Pra ujian	Analisis Pasca Ujian
1	Cemerlang/Baik/Lulus/Gagal	Baik-1 orang Gagal-3 orang	Cemerlang- 1 orang Baik- 3 orang Lulus-0 orang
2	Bahagian A Soalan 1	Betul- 1 orang Salah- 3 orang	Betul- 4 orang Salah -0 orang
3	Bahagian A Soalan 2	Betul- 4 orang Salah- 0 orang	Betul- 4 orang Salah – 0 orang
4	Bahagian A Soalan 3	Betul- 4 orang Salah- 0 orang	Betul- 3 orang Salah- 1 orang
5	Bahagian B Soalan 4	Betul- 0 orang Salah – 4 orang	Betul-2 orang Salah – 2 0rang
6	Bahagian B Soalan 5	Betul- 1 orang Salah- 3 orang	Betul- 3 orang Salah- 1 orang
7	Bahagian B Soalan 6	Betul- 0 orang Salah- 4 orang	Betul- 3 orang Salah- 1 orang
8	Bahagian B Soalan 7	Betul- 2 orang Salah- 2 orang	Betul- 4 orang Salah- 0 orang
9	Menggunakan pendekatan mengalami dan menghayati	0 orang	4 orang
	Menguasai KOMSAS	1 Orang	4 orang



Rajah 2. Graf analisis keseluruhan Pra dan Pasca Ujian



Rajah 3. Graf analisis perbandingan jumlah murid yang menjawab dengan betul soalan objektif



Rajah 4: Graf analisis perbandingan murid yang menjawab soalan dengan betul dalam ujian pra dan pasca

3.3 Dapatan dan perbincangan

Berdasarkan jadual dan graf kita dapat lihat berlaku peningkatan jumlah murid yang menjawab dengan betul selepas diperkenalkan dengan pendekatan kaedah mengalami dan menghayati. Jika kita lihat terlebih dahulu di bahagian analisis keseluruhan semasa ujian pra seramai 3 orang murid berada di tahap skor gagal kerana mendapat kutipan markah antara 1-4 markah. Selepas diberikan pengenalan dengan pendekatan mengalami dan menghayati murid tingkatan 2A dapat menjawab soalan dengan baik dan seramai 3 orang berada di tahap yang baik dengan mendapat skor antara baik antara 15-17 markah.

Seterusnya, pengkaji juga telah membuat perbandingan jumlah murid menjawab dengan betul setiap soalan. Bermula dengan soalan objektif terdapat peningkatan dalam soalan 1 . Seterusnya, soalan 2 murid mendapat skor yang sama manakala soalan 3, ujian pasca menurun sedikit dari ujian pra. Hal ini berlaku kerana berlaku perubahan soalan menyebabkan mereka terkeliru dan melakukan kesilapan. Namun begitu, kita dapat lihat kesemua murid dapat menjawab soalan dengan betul dan berlaku peningkatan antara ujian pra dan pasca. Tambahan lagi, pengkaji juga turut melaksanakan analisis terhadap soalan subjektif. Jika kita lihat pada graf analisis perbandingan ujian pra dan pasca kita dapat lihat kesemua soalan murid dapat menjawab soalan KOMSAS dengan baik. Hal ini berlaku selepas mereka diperkenalkan dengan kaedah mengalami dan menghayati. Mereka dapat menguasai dan memahami makna di sebalik setiap puisi menerusi pendekatan mengalami dan menghayati. Justeru, analisis ini membuktikan bahawa kaedah mengalami dan menghayati sememangnya membantu murid tingkatan 2A menjawab soalan KOMSAS dengan baik.

4.0 Rumusan

Secara keseluruhannya setelah melaksanakan kajian ini, pengkaji mendapati bahawa pendekatan mengalami dan menghayati memberi impak yang positif kepada murid untuk menguasai puisi dengan baik sekaligus dapat mendeklamasikan sajak dengan penuh penghayatan. Namun begitu, setiap teknik pasti ada kelebihan dan kekurangannya. Antara kelebihan teknik ini ialah guru dapat menarik minat murid untuk mendalami puisi. Selain itu, guru juga dapat membantu murid untuk mengingat dan meahami makna di sebalik puisi. Kekurangan teknik ini pula ialah guru akan mengalami kekangan masa untuk melaksanakan aktiviti yang

berkaitan dengan pendekatan mengalami dan menghayati. Antara penambahbaikan yang boleh dilakukan ialah guru boelh mempelbagaikan lagi aktiviti yang mampu merangsang minda murid untuk mengingat segala fakta dan menghayati puisi dengan sendiri. Diharapkan kajian ini dapat disebarkan secara meluas dalam kalangan masyarakat. Tujuan penulisan ini adalah untuk berkongsi dan menyebarluaskan lagi pendekatan yang dilaksanakan untuk membantu para guru dan murid-murid lain diluar sana. Antara cadangan kitaran untuk menyebarkan penulisan ini ialah bermula dengan menghantar penulisan ini kepada Kementerian Pendidkan Malaysia kemudian disebarkan kepada semua guru. Guru akan menyebarkan pendekatan ini kepada murid-murid mereka dan secara tidak langsung pendekatan ini akan tersebar kepada ibu bapa dan golongan masyarakat.

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Penerapan Kemahiran Berfikir Aras Tinggi Menerusi Teknik Penjanaan Idea Pengajaran Mengarang dalam Kalangan Guru Bahasa Melayu Tingkatan Empat di Daerah Gombak

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ABSTRAK

Pengajaran mengarang karangan menuntut guru supaya membiasakan amalan pengajaran dan mengaplikasikan teknik penjanaan idea Kemahiran Berfikir Aras Tinggi (KBAT). Pengkaji mendapati bahawa guru-guru kerap menggunakan aras penjanaan idea yang rendah sahaja semasa pengajaran mengarang karangan dan membiasakan murid menjana idea pemikiran rendah dalam pembelajaran. Justeru, tujuan kajian ini adalah untuk meneroka proses pengaplikasian teknik penjanaan idea KBAT terhadap pengajaran mengarang dalam kalangan guru Bahasa Melayu Tingkatan Empat di daerah Gombak. Hal ini demikian kerana teknik penjanaan idea KBAT penting bagi merangsang murid untuk berfikir dalam menganalisis sesuatu topik atau maklumat khususnya dalam proses mengarang karangan. Kajian ini akan menggunakan reka bentuk penyelidikan kualitatif iaitu seramai dua orang peserta kajian yang dipilih dengan menggunakan teknik pensampelan bertujuan. Teknik pengumpulan data daripada kedua-dua orang guru ini akan dilaksanakan dengan menggunakan teknik temu bual secara mendalam, teknik pemerhatian dan penganalisisan dokumen. Bagi mencapai objektif dalam kajian ini, terdapat dua soalan kajian yang akan ditangani oleh pengkaji dalam kajian ini berdasarkan objektif iaitu (i) Apakah pemahaman guru tentang pengaplikasian teknik penjanaan idea KBAT terhadap pengajaran mengarang karangan deksriptif dalam kalangan guru tingkatan empat di daerah Gombak? (ii) Bagaimanakah pelaksanaan tatacara pengaplikasian teknik penjanaan idea KBAT terhadap pengajaran mengarang karangan dalam kalangan guru tingkatan empat di daerah Gombak? Bagi menjawab kedua-dua soalan kajian ini, pengkaji akan menganalisis data secara manual bagi data hasil temu bual, pemerhatian dan analisis dokumen.

Kata Kunci: Penerapan; Kemahiran Berfikir Aras Tinggi; Teknik Penjanaan Idea; Pengajaran Mengarang; Guru Bahasa Melayu; Daerah Gombak.

1.0 Pengenalan

Pembelajaran Abad Ke-21 (PAK21) telah dilaksanakan oleh Kementerian Pendidikan Malaysia (KPM) yang bermula pada tahun 2014 lagi seperti yang dihasratkan KPM dalam Pelan Pembangunan Pendidikan Malaysia (PPPM) 2013-2025. Pelaksanaan aspek kemahiran berfikir aras tinggi (Selanjutnya KBAT) amat penting dalam usaha merealisasikan budaya berfikir (Mohamad Nurul Azmi Mat Nor dan rakan-rakan, 2022). KBAT merupakan kesinambungan daripada aktiviti kemahiran berfikir secara kritis bagi melahirkan murid dan generasi yang bijak berfikir. Elemen KBAT yang terdapat dalam kurikulum bagi melahirkan murid yang menguasai kemahiran berfikir pada abad ke-21 adalah bertujuan untuk melatih murid untuk menyuarakan idea fikiran dan maklumat dengan yakin dan kritis secara lisan dan bertulis. Melalui aspek penjanaan idea KBAT, guru-guru perlu mendalami ilmu berkaitan cara-cara untuk menjana idea murid mereka dengan menggunakan elemen KBAT. Dalam pengajaran mengarang karangan khususnya guru perlu membiasakan amalan dan mengaplikasi teknik penjanaan idea KBAT. Hal ini amat penting kerana pengajaran penulisan karangan memerlukan murid untuk menjana idea berdasarkan kehendak soalan dan sesuatu isu.

Kajian ini akan memberi fokus terhadap pengaplikasian teknik penjanaan idea KBAT dalam pengajaran mengarang kalangan guru Tingkatan Empat di Daerah Gombak. Mod karangan yang dikaji hanya bertumpu kepada karangan perbincangan sahaja, malah skop kajian juga akan meneliti kepada pengaplikasian teknik penjanaan idea yang digunakan oleh peserta kajian semasa PdPc penulisan karangan perbincangan. Kajian

ini akan mengunakan kaedah kualitatif yang akan memberi fokus kepada gambaran keseluruhan proses pengaplikasian teknik penjanaan idea KBAT yang dilakukan oleh guru Bahasa Melayu Tingkatan Empat di lapangan kajian. Lokasi kajian yang dipilih melibatkan sekolah menengah yang terdapat di Daerah Gombak. Pengkaji memilih dua orang guru Bahasa Melayu sebagai peserta dalam kajian ini iaitu antaranya mengajar bahasa Melayu tingkatan empat yang perkhidmatannya melebihi lima tahun dan ke atas. Kedua-dua peserta kajian dalam kajian ini diberi nama Peserta Kajian (PK) bagi menjaga etika dan identiti sebenar guru.

Objektif kajian ini adalah :

(i) Meneroka pemahaman guru tentang pengaplikasian teknik penjanaan idea KBAT terhadap pengajaran mengarang karangan dalam kalangan guru Tingkatan Empat di Daerah Gombak.

(ii) Mengenal pasti tatacara pengaplikasian teknik penjanaan idea KBAT terhadap pengajaran mengarang karangan dalam kalangan guru Tingkatan Empat di Daerah Gombak.

Dalam konteks kajian ini, guru dikatakan jarang mengetengahkan murid untuk menjawab soalan kemahiran berfikir. Hal ini dikatakan demikian kerana, murid-murid di sekolah tidak bersedia untuk berfikir secara KBAT. Menurut kajian Siti Sarah Muhammad Raflee dan Lilia Halim (2021), salah satu isu terhadap pengaplikasian KBAT dalam PdPc adalah faktor ketidaksediaan murid dalam menggunakan kepelbagaian kemahiran berfikir dalam menyelesaikan sebarang permasalahan berkaitan pelajaran di dalam bilik darjah dan kebiasaannya murid akan meninggalkan segala persoalan yang melibatkan KBAT apabila mereka disoal dan diminta oleh guru untuk menyelesaikan soalan KBAT tersebut. Selain isu yang melibatkan kemahiran berfikir dalam kelas, isu guru dalam pengajaran penerapan KBAT juga dilihat sebagai satu masalah. Hal ini dikatakan demikian kerana, proses pengajaran kemahiran yang lebih kritis dan kreatif serta bersifat analitik sukar untuk guru tentukan secara khusus sesuatu kemahiran yang diajar di dalam kelas. Kemahiran-kemahiran ini dikatakan bertindan fungsinya semasa proses PdPc berlangsung di dalam kelas. Hal ini berlaku kerana kemahiran-kemahiran ini saling bertindanan fungsinya semasa PdPc berlangsung (Marzni Mohamed Mokhtar, 2018). Chew Fon Peng dan Zul Hazmi Hamad (2018), sebahagian guru apabila mengajar mengarang karangan dikenal pasti kebanyakanya masih tidak menyoal murid dalam bentuk penyoalan aras yang sesuai. Selain itu, sebahagian guru juga didapati hanya bergantung kepada buku teks dan menjawab soalan-soalan yang disediakan sahaja. Hal ini dikatakan demikian kerana, terdapat segelintir murid agak pasif untuk mengulas pandangan apabila tiada soalan lanjut daripada guru mengenai isi karangan yang perlu mereka karang. Perkara seperti inilah yang akan membuat murid tidak sentiasa menjana idea dalam pembelajaran kerana mereka telah terbiasa dengan amalan seperti itu. Selain itu, guru juga dikatakan tidak menguasai dan tidak langsung menggunakan soalan aras tinggi dan hanya menggunakan soalan pada aras yang rendah sahaja. Hal ini akan menyebabkan murid-murid berasa tidak tercabar dari segi kemahiran berfikir mereka dan kurang memberi respon apabila ditanya serta penglibatan mereka akan menjadi pasif sewaktu proses PdPc di dalam bilik darjah.

Kajian Nik Rozialnida Nik Lah dan Sahlan Surat (2023), menjalankan kajian Meneroka Kefahaman Guru Mengenai KBAT dan Amalan Penyoalan Guru pada Tiga Fasa Pembelajaran mendapati bahawa pengetahuan KBAT para peserta adalah terbatas. Peserta kajian dalam kajian ini amat memerlukan maklumat dan kursus berkaitan KBAT bagi menambah pengetahuan dan kefahaman KBAT dalam usaha melaksanakan KBAT dalam pembelajaran di bilik darjah dengan sepenuhnya. Walaupun terdapat keterbatasan, mereka dapat mengaplikasikannya dalam pembelajaran. Kajian Avralinetine Epin dan Nurfaradilla Nasri (2021), dalam kajiannya telah menggunakan Modul Celik Karangan (MCK). Hasil kajian kualitatif dan kuantitatif ini mendapati modul yang digunakan dapat memberi peningkatan dalam proses penulisan karangan murid terutamanya dalam penulisan karangan fakta. Menurut kajian Mohd Zikri Iksan Mohamad Zabhi et.al (2019) yang melakukan kajian menggunakan peta pemikiran dalam penulisan karangan bahasa Melayu. Seramai empat orang murid tingkatan tiga merupakan peserta kajian dalam kajian ini. Hasil kajian mendapati bahawa berlaku dalam penulisan bahagian karangan dan ulasan murid dengan tercapainya peningkatan skor. Hal ini kerana penggunaan peta pemikiran daripada peta bulatan yang digunakan oleh guru dalam penghasilan karangan yang berkesan. Kajian berkaitan tatacara pengaplikasian teknik penyoalan KBAT dapat dilihat melalui kajian Chew Fong Peng dan Zahar Hamad (2018), memfokuskan tahap penguasaan murid dalam aspek KBAT dengan melihat perbezaan amalan penyoalan KBAT dengan latar belakang responden murid.

Hasil kajian mendapati tidak ada perbezaan yang signifikan antara amalan penyoalan KBAT guru dengan latar belakang responden murid.

2.0 Metodologi Kajian

Kajian ini adalah merupakan kajian kualitatif berbentuk pendekatan kajian kes. Menurut Othman Lebar (2023), kajian kualitatif dalam situasi yang sebenar merupakan penglibatan pengkaji sendiri di lapangan kajian. Teknik pemerhatian, temu bual dan analisis dokumen digunakan dalam kajian ini sebagai alat untuk mengumpul data kajian. Dua orang peserta kajian telah dipilih dan ditemu bual dalam mendapatkan data yang diperlukan oleh pengkaji. Bagi kaedah pemerhatian pula, pengkaji melaksanakan pemerhatian bagi memerhati secara langsung untuk memenuhi objektif kajian yang juga bertindak sebagai data sokongan dalam kajian ini. Seterusnya, pengkaji juga mengumpulkan data kajian melalui analisis dokumen dalam kajian ini. Dokumen yang akan digunakan termasuklah bahan pengajaran guru seperti Rancangan Pengajaran Harian (RPH), Dokumen Standard Kurikulum dan Pentaksiran (DSKP) tingkatan 4-5 dan buku latihan. Dalam konteks kajian ini, pengkaji hanya memilih dua orang peserta kajian sebagai sampel bagi mendapatkan data dalam menjawab kedua-dua objektif kajian Jadual 1 menunjukkan sampel kajian dalam kajian ini.

Jadual 1. Peserta Kajian

Guru	**Umur**	**Jantina**	**Gred**	**Pendidikan**	**Pengalaman Mengajar Mata Pelajaran Bahasa Melayu**	**Tingkatan**
PK01	50	Perempuan	DG52	Ijazah Sarjana Muda Bahasa Melayu	25 Tahun	Tingkatan 4 dan 5
PK02	43	Perempuan	DG48	Ijazah Sarjana Muda Sastera/ Bahasa Melayu	21 Tahun	Tingkatan 4 dan 5

Prosedur pengumpulan data dalam kajian ini merangkumi kaedah pemerhatian, temu bual dan menganalisis dokumen. Proses menemu bual peserta kajian dilaksanakan dalam kajian ini bagi mendapatkan maklumat secara rinci mengikut garis panduan yang ditetapkan. Bagi memulakan sesi temu bual, sampel kajian ditanya berkaitan tajuk. Semasa sesi temu bual pengkaji tidak boleh memotong percakapan mereka dan pengkaji juga perlu berikan perhatian dan tidak mencatat terlalu banyak maklumat kerana dikhuatiri tercicir maklumat yang diberikan. Bagi proses pemerhatian pula, pengkaji akan dapat memerhati tingkah laku pengajaran sampel kajian di dalam bilik darjah dengan menggunakan teknik penjanaan idea KBAT. Pengkaji menggunakan kaedah pemerhatian berstruktur iaitu pengkaji memerhatikan responden dalam keadaan persekitaran yang terkawal seperti pengajaran guru di dalam bilik darjah. Senarai semak disediakan untuk membantu proses berjalan lancar. Melalui aktiviti pemerhatian ini, pengkaji menyediakan senarai semak berdasarkan kod-kod perlakuan sampel kajian yang akan dikaji. Seterusnya pengkaji menggunakan kaedah menganalisis dokumen dalam kajian ini. Dokumen yang dianalisis mewakili bahan bercetak seperti rancangan pengajaran guru, Dokumen Standard Kurikulum dan Pentaksiran (DSKP) Tingkatan 4 dan 5, buku teks bahasa Melayu tingkatan lima dan hasil kerja murid.

Bagi menjawab kedua-dua soalan kajian ini, pengkaji menganalisis data daripada hasil pemerhatian, temu bual dan analisis dokumen secara manual. Terdapat tiga tahap dalam memproses data iaitu reduksi, koding dan membuat verifikasi. Proses reduksi merujuk kepada satu peringkat membuat pemilihan dengan memotong ayat atau maklumat yang tidak penting kepada soalan kajian. Menurut Meriam (2009) dalam Halimah Jamil (2019), proses koding adalah proses menganalisis tema-tema tertentu yang telah dibuat verifikasi daripada persoalan kajian. Peringkat terakhir adalah membuat verifikasi dengan meminta bantuan daripada rakan-rakan penyemak untuk pengesahan kod yang telah dijumpai. Jadual 2 merupakan kaedah menganalisis data mengikut persoalan dalam kajian ini.

Jadual 2: Kaedah Penganalisisan Data

Persoalan kajian	Statistik
1. Apakah pemahaman guru tentang pengaplikasian teknik penjanaan idea KBAT terhadap pengajaran mengarang karangan?	Kaedah temu bual
2. Bagaimanakah tatacara pengaplikasian teknik penjanaan idea KBAT terhadap pengajaran mengarang karangan guru Bahasa Melayu?	Kaedah pemerhatian dan analisis dokumen

3.0 Dapatan Dan Perbincangan

Pengkaji membentangkan hasil yang diperolehi daripada data kajian yang dikumpulkan melalui data pemerhatian, data temu bual dan analisis dokumen. Dapatan ini adalah bagi menjawab kedua-dua objektif dan persoalan kajian iaitu pemahaman guru dan tatacara pelaksanaan menggunakan teknik penjanaan idea terhadap pengajaran mengarang karangan guru Bahasa Melayu.

3.1 Pemahaman Guru Menggunakan Teknik Penjanaan Idea

Bagi mencapai objektif pertama yang berkaitan dengan pemahaman guru menggunakan teknik penjanaan idea, pengkaji membentuk dua tema iaitu proses mengarang karangan bahagian isi dan matlamat teknik penjanaan idea dilaksanakan.

3.1.1 Proses Penulisan Karangan Bahagian Isi

Berdasarkan DSKP, pengajaran penulisan karangan memerlukan pelbagai teknik dan cara bagi menghasilkan penulisan yang baik. Berdasarkan temu bual, PK01 menyatakan bahawa teknik penulisan karangan bahagian isi sangat penting bagi memastikan penulisan murid mempunyai pertautan dan berkesinambungan. Menurut PK01, "...nak ajar karangan mesti kena ada teknik. Teknik ni penting untuk murid ikut supaya dia terbiasa dengan peraturan menulis karangan dan mereka selalu ingat ..."

Pengkaji bertanyakan lebih lanjut berkenaan '*peraturan menulis karangan'*. Beliau menerangkan bahawa karangan mempunyai peraturan dari ayat pendahuluan hingga ayat penutup. "*dari ayat pendahuluan sebenarnya ada teknik atau peraturannya, bahagian isi ada peraturannya dan bahagian penutup karangan mesti ada peraturannya yang murid perlu ikut dan guru kena ajar."* Dalam hal ini menunjukkan sememangnya dalam penulisan karangan terdapat peraturan atau teknik untuk diikuti dan dipatuhi oleh murid-murid semasa menulis karangan. Kenyataan yang diberikan oleh PK01 disokong pula dengan PK02 dengan menyatakan bahawa penulisan karangan perlu diajar melalui pelbagai jenis teknik. Menurut PK02, "... saya menggunakan pelbagai teknik dalam penulisan karangan bahagian isi. Murid akan ikut dari ayat topik, ayat huraian seterusnya sampai ayat penegasan. Kadang-kadang dia ikut kadang dia akan *skip* salah satu ayat."

Bagi menjelaskan lagi kajian, pengkaji bertanya mengenai contoh-contoh teknik penjanaan idea penulisan karangan bahagian yang diajar oleh peserta kajian. Bagi PK01, beliau menyatakan bahawa terdapat banyak teknik yang terdapat dalam penulisan karangan bahagian isi dan beliau menggunakan teknik TOHUCOKEP. "*Saya ajar budak saya dengan teknik TOHUCOKEP dan dia orang kena patuh kalu tidak kena denda."* Pengkaji bertanya berkenaan TOHUCOKEP dan PK01 mengulas *"TO bagi topik, HU bagi huraian, CO bagi contoh, KE bagi kesan dan P bagi penegasan."* Kenyataan yang diberikan oleh PK02 pula,

(iii) "...banyak teknik yang saya guna ikut pada tahap murid. Kalau kelas atas saya guna IMBAKUP. Contohnya I untuk isi, M untuk mengapa, Ba untuk bagaimana, K untuk kesan ..kesan ni untuk menyokong isi, U untuk ungkapan menarik dan akhir sekali P untuk penegasan.. kalau tahap rendah pula saya biasa guna teknik isi tempat kosong dan salin ayat je."

Penjelasan daripada PK01 dan PK02 jelas menunjukkan bahawa sememangnya mengarang sesebuah karangan memerlukan teknik yang betul dan mengikut tahap murid dan apabila ditanya tentang ATAHACAKAP PK01 menyatakan teknik yang sama tetapi perkataan yang berbeza sahaja. Merujuk PK01,

(iv) "Sebenarnya ATAHACAKAP ni sama je dia ambil kata awal bagi ayat tu saja kan. Tapi sebenarnya merujuk pada benda yang sama. Apabila saya ajar murid saya ATAHACAKAP, kaedah yang sama saja dengan TOHUCOKEP. Dua-dua kaedah ni bagus senang murid ingat."

Penjelasan daripada PK02 juga menyatakan pendapat yang sama sahaja iaitu "Teknik sama cuma nama sahaja yang berbeza. Menurut beliau lagi "*teknik ni mudah murid ingat dan hafal sama juga TOHUCOKEP tu."* Oleh itu jelaskan bahawa kedua-dua peserta memahami apa yang dikatakan dengan teknik ATAHACAKAP ini.

3.1.2 Matlamat Teknik Penjanaan Idea Dilaksanakan

Melalui hasil temu bual dengan kedua-dua peserta kajian, hasil kajian telah menunjukkan bahawa mereka mengetahui dan memahami matlamat pelaksanaan teknik penjanaan idea iaitu bermatlamat untuk mendapatkan idea untuk mengarang dan mendapatkan hasil karangan yang mempunyai pertautan dan koheren mengikut isi yang diberikan. Pengkaji bertanyakan sebab guru menggunakan teknik penjanaan idea ini semasa mengajar penulisan karangan khususnya karangan bahagian isi. PK01 berpendapat bahawa teknik ini mudah untuk murid ikut dan mereka boleh tulis dengan baik ikut langkah yang guru ajarkan. Menurut PK0, "Saya suka ajar murid saya teknik penjanaan idea ini masa tulis karangan bahagian isi. Saya perlu ajar teknik ni supaya murid saya tak ketandusan idea semasa menulis karangan. Kalau ada teknik ni dia orang akan ikut *step by step* yang kita ajar tu.".

Pengkaji menanyakan lebih lanjut berkenaan ikut *step by step,* PK02 menjelaskan bahawa "*murid saya ikut je teknik tu. Kadang-kadang ada yang lebih contohnya ayat huraian ada dua atau tiga dalam satu perenggan tu."* Bagi PK02 pula beliau menyatakan bahawa, "Saya rasa saya perlu ajar teknik penjanaan idea sebab kalau tak ajar murid akan melencong dan takde arah tujuan masa tulis karangan tu. Pernah saya biarkan je dia orang tulis karangan tanpa teknik ni.. memang ada je yang tak ikut teknik dan akhirnya karangan jadi tak cantik."

Apabila ditanya berkenaan masalah dalam penerapan teknik ini dalam pengajaran, rata-rata kedua-dua peserta menyatakan perkara yang hampir sama. Hal ini dapat dilihat daripada PK01 iaitu beliau menyatakan bahawa murid tahap atas tiada masalah manakala murid dari tahap rendah bermasalah untuk mengikuti teknik yang diajarkan ini. Menurut PK01, "...takde masalah pun dalam menerapkan teknik ni kepada mereka. Mereka juga selesa dah dengan teknik ni. Mereka pun dah hafal dan takde masalah tapi kalau kelas hujung kena ajar dan suruh dia ikut dan tulis guna ayat yang ringkas. Yang penting ayat tu gramatis."

Pengkaji bertanya lebih lanjut sebab PK01 menyatakan tentang "*Mereka juga selesa dah dengan teknik ni*". PK01 menyatakan bahawa murid-murid beliau sebelum teknik ATAHACAKAP banyak yang menulis sendiri tetapi teknik ini merupakan satu pegangan untuk mereka menulis. Bagi PK02 pula beliau menyatakan bahawa, "Murid saya tiada masalah dengan teknik ni. Dia orang senang untuk diajar. Tapi tulah kelas atas ok la.. kalau kelas bawah dia orang tak ikut sangat. Dia main tulis je yang cikgu suruh. Tu pun kena ajar satu-satu dah. Tapi takde la seteruk sebelum ajar teknik ni. Nampak ada peningkatan sikit la dia orang tu.".

Secara rumusannya, keseluruhan dapatan kajian yang diperoleh dalam konteks kajian ini bagi menjawab objektif pertama telah membuktikan bahawa kedua-dua peserta memahami penerapan teknik penjanaan idea dalam penulisan karangan.

3.2 Tatacara Pelaksanaan Menggunakan Teknik Penjanaan Idea Terhadap Pengajaran Mengarang Karangan

Pengkaji seterusnya telah membuat pemerhatian dan menganalisis dokumen pengajaran PK01 dan PK02. PK01 dalam kajian ini menyatakan bahawa dengan menjalankan pelbagai aktiviti soal jawab, sumbang saran dan main peranan dapat menggalakkan proses penerapan teknik penjanaan idea ini. Semasa melaksanakan PdPc, beliau berpendapat bahawa buku teks KSSM menjadi sumber utama untuk proses pengajaran. Kebanyakan aktiviti yang dijalankan mengikut tema dalam buku teks ***"buku teks tu dah banyak bahan dah dan mudah untuk cikgu dan murid rujuk."*** Manakala PK02 pula memberitahu bahawa buku teks dan DSKP sentiasa dirujuk dan pengajaran dilaksanakan berdasarkan tema yang telah ditetapkan.

Sepanjang pemerhatian pengkaji terhadap PK01 semasa melaksanakan PdPc di dalam kelas, pengkaji sering memerhatikan PK01 dalam mengemukakan hujah berkenaan tajuk berdasarkan teknik penjanaan idea. PK01 memberi penerangan yang menyeluruh bagi setiap ayat yang diberikan dan teknik sumbang saran idea digunakan dalam proses ini. Seterusnya pengkaji mendapati proses PdPc berjalan dengan proses pembelajaran secara berkumpulan. Pengkaji melihat PK01 dan PK02 mengaplikasikan teknik penjanaan idea ATAHACAKAP secara berkumpulan. Bagi PK01, murid secara berkumpulan dibahagikan mengikut ayat yang diberikan iaitu seorang murid mewakili AT, AH, AC, AK dan AP. Proses pembelajaran berakhir dengan pembentangan kumpulan dan peneguhan perbincangan daripada PK01.

Aktiviti pengajaran daripada PK02 pula, beliau melaksanakan proses perbincangan berkumpulan dengan menulis karangan di atas kertas warna yang kemudiannya ditampal di papan putih mengikut jenis ayat ATAHACAKAP. PK02 terus memberikan penerangan kepada murid berkenaan ayat yang salah supaya murid dapat membuat pembetulan di situ juga. Murid kemudiannya menyalin di dalam buku karangan.

4.0 Perbincangan

Secara keseluruhannya, berdasarkan analisis data objektif kajian (i), pemahaman guru menggunakan teknik penjanaan idea terhadap pengajaran mengarang karangan. Pengkaji telah membincangkan berdasarkan dua tema yang dibangunkan iaitu proses penulisan karangan bahagian isi dan matlamat teknik penjanaan idea dilaksanakan. Berdasarkan tema proses penulisan karangan bahagian isi, kedua-dua orang peserta kajian memahami teknik penjanaan idea dan kedua-duanya berjaya menerapkan dalam pengajaran penulisan karangan di dalam kelas. Bagi tema kedua pula pendapat yang sama menunjukkan iaitu matlamat teknik penjanaan idea yang menunjukkan kedua-dua mereka iaitu PK01 dan PK02 menggunakan teknik ini adalah untuk memudahkan penulisan karangan murid-murid mereka agar tidak ketandusan idea dan karangan menjadi berkesan dan lebih terarah.

Seterusnya bagi objektif (ii) yang merujuk kepada data pemerhatian pula, kedua-dua peserta kajian telah membuktikan bahawa mereka memahami teknik dan tatacara untuk menerapkan teknik penjanaan idea ini dalam proses PdPc pengajaran mengarang karangan. Pengkaji mendapati peserta PK01 dan PK02 menerapkan teknik ini dengan melaksanakan aktiviti berkumpulan dan berhasil di penghujung pengajaran dengan memberi peneguhan aktiviti dan proses penulisan karangan ditulis di rumah sebagai latihan kerja rumah. Secara keseluruhan berdasarkan pemerhatian pengkaji, kedua-dua peserta kajian telah mencapai objektif pengajaran berdasarkan Rancangan Pelajaran Harian (RPH) yang telah dirancang dengan teliti dan murid-murid juga memberi kerjasama yang baik semasa PdPc dijalankan. Dokumen seperti latihan kerja murid juga telah disemak oleh pengkaji dan pengkaji mendapati terdapat sedikit perubahan sebelum dan selepas teknik penjanaan idea yang diterapkan dalam pengajaran penulisan karangan.

5.0 Kesimpulan

Secara keseluruhannya, objektif kajian dalam kajian ini adalah bagi meneroka pemahaman menggunakan teknik penjanaan idea terhadap pengajaran mengarang karangan guru Bahasa Melayu. Guru-guru bukan sahaja dapat menggunakan teknik penjanaan idea, malah mereka juga dapat mengenal pasti cara untuk menerapkannya dalam pengajaran penulisan karangan. Justeru, melalui ilmu ini guru-guru juga dapat mempelbagaikan kaedah pengajaran bukan sahaja penulisan karangan, malah untuk aspek pengajaran yang lain juga seperti rumusan dan pemahaman Komponen Sastera (KOMSAS). Terdapat beberapa kajian terdahulu berkait kaedah penulisan karangan sedikit sebanyak memberi input positif ke atas kajian melalui perbincangan daripada kajian terdahulu. Walaupun kajian lepas telah menjelaskan pelbagai isu penulisan karangan di dalam bilik darjah namun, masih terdapat ruang untuk diteruskan kajian agar ilmu ini terus ditingkatkan dalam dunia pendidikan pada hari ini. Kesimpulannya, pengkaji dalam kajian ini telah menjelaskan pelaksanaan kajian secara kualitatif. Melalui proses pengumpulan data, pengkaji mematuhi setiap prosedur yang telah ditetapkan dalam melaksanakan sesuatu kajian. Hal ini supaya hasil data yang dikutip diperoleh mengikut objektif kajian yang digariskan. Selain itu, peserta kajian, prosedur pengumpulan data dan teknik menganalisis data juga telah dihuraikan dalam kajian ini.

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Reka bentuk Modul Motivasi, Sikap dan Minat (MOSIMI) Murid Pintar Cerdas dalam Pembelajaran Fungsi Kuadratik Menggunakan Pendekatan Model ADDIE dan Teori Konstruktivisme

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Abstrak

Kajian ini bertujuan meneroka pendekatan Penyelidikan Reka Bentuk dan Pembangunan (DDR) dalam proses pembangunan modul motivasi, sikap dan minat (MOSIMI) dalam kalangan murid pintar cerdas. Pembangunan modul MOSIMI bertujuan untuk meningkatkan motivasi, sikap dan minat murid pintar cerdas bagi mata pelajaran Matematik Tambahan, khususnya topik fungsi kuadratik melalui penggunaan teknologi digital. Berdasarkan dapatan kajian fasa analisis keperluan terdapat tiga isu utama yang dialami oleh sebilangan murid pintar cerdas iaitu, motivasi, sikap dan minat terhadap mata pelajaran Matematik Tambahan. Adalah penting untuk menangani jurang motivasi, sikap dan minat dalam kalangan murid yang pintar cerdas dengan membangunkan modul intervensi untuk menangani isu ini. Reka bentuk dan pembangunan modul MOSIMI ini menggunakan pendekatan model ADDIE yang terdiri daripada lima fasa iaitu analisis, reka bentuk, pembangunan, pelaksanaan dan penilaian. Selain itu, teori Kontruktivisme yang menekankan pembelajaran berpusatkan murid akan mendasari modul kerana mempunyai strategi pelaksanaan yang jelas dan boleh memberikan input yang baik kepada modul. Hasil kajian ini akan dapat membangunkan modul MOSIMI yang relevan dengan persetujuan pakar serta mempunyai kesahan dan kebolehpercayaan yang tinggi. Malahan, dalam setiap fasa terdapat proses untuk mengubah suai modul untuk mencapai objektif kajian yang telah ditetapkan. Keputusan fasa penilaian modul ini akan membuktikan keberkesanan modul MOSIMI dalam proses peningkatan motivasi, sikap dan minat murid pintar cerdas terhadap Matematik Tambahan.

Kata kunci: Model ADDIE; teori Konstruktivisme; Motivasi; Sikap; Minat

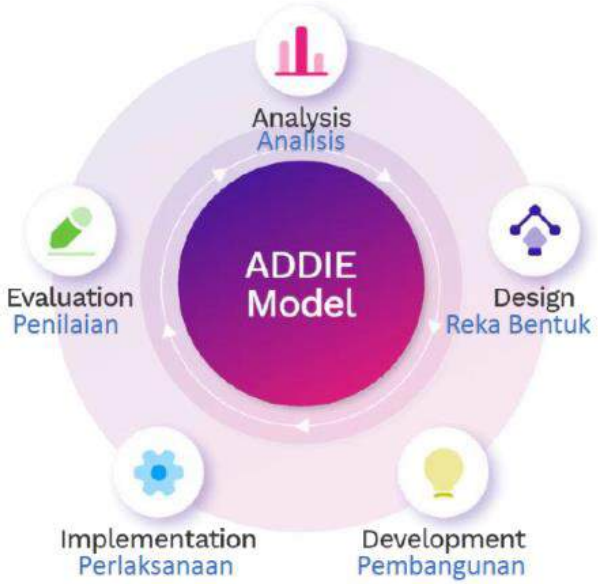
1.0 Pengenalan

Pembelajaran matematik merupakan komponen penting dalam sistem pendidikan, terutama dalam membentuk pemikiran logik dan kritis murid. Salah satu topik yang menonjol dalam kurikulum Matematik dan Matematik Tambahan di tingkatan 4 ialah fungsi kuadratik (Abdullah et al., 2020). Sebagai topik yang fundamental, fungsi kuadratik mempunyai implikasi yang luas dalam pelbagai bidang seperti sains, teknologi, kejuruteraan, dan matematik (STEM). Fungsi kuadratik sering dianggap sukar oleh murid, terutamanya kerana sifatnya yang memerlukan pemahaman konsep yang mendalam dan aplikasi yang kompleks (Jupri Basari & Siew, 2022b). Namun, dengan menggunakan perisian GeoGebra ciri-ciri titik maksimum atau minimum bagi fungsi kuadratik dapat ditentukan dengan mudah (Norazlina Subani et al., 2021). Kajian literatur menunjukkan bahawa penggunaan teknologi digital dapat meningkatkan motivasi, sikap, dan minat murid dalam pembelajaran memainkan peranan penting dalam pencapaian akademik mereka. Murid yang mempunyai motivasi tinggi, sikap positif, dan minat yang mendalam cenderung untuk lebih berjaya dalam pembelajaran matematik (Ling & Kutty, 2022).

Namun, pendekatan pengajaran konvensional sering kali gagal untuk menarik minat murid pintar yang memerlukan pendekatan yang lebih kreatif dan interaktif (Sylviana Mantihal & Siti Mistima, 2020). Justeru terdapat keperluan untuk membangunkan modul pengajaran yang dapat meningkatkan motivasi, sikap, dan minat (MOSIMI) murid pintar dalam pembelajaran fungsi kuadratik. Dalam konteks pendigitalan pendidikan, teknologi digital memainkan peranan yang semakin penting dalam proses pengajaran dan pembelajaran. Penggunaan teknologi seperti perisian matematik, aplikasi interaktif, dan video pembelajaran boleh membantu murid memahami konsep yang kompleks dengan lebih mudah melalui pendekatan yang lebih visual dan praktikal (Kementerian Pendidikan Malaysia, 2023). Namun demikian, kajian mengenai keberkesanan modul pengajaran yang menggunakan gabungan Model ADDIE, Teori Konstruktivisme, dan teknologi digital dalam konteks pembelajaran fungsi kuadratik masih terhad.

2.0 Model ADDIE

Kajian menghasilkan modul MOSIMI ini merupakan satu proses yang sistematik menggunakan model ADDIE (*Analysis, Design, Development, Implementation, Evaluation*) dalam untuk membantu murid pintar cerdas. Kajian terdahulu telah menunjukkan bahawa ramai pengkaji telah menggunakan kerangka model ADDIE bagi mendasari kajian mereka (Idris et al., 2022; Mazida et al., 2023; Narayanasamy & M. Jaafar, 2024; Nurul Farahanim & Aisyah, 2023). Model ADDIE ini merupakan salah satu pendekatan yang boleh membimbing proses reka bentuk dan pembangunan modul yang berstruktur (Richey & Klein, 2007). Rajah 1 menunjukkan Model ADDIE sebagai satu kerangka kerja yang popular dalam reka bentuk pengajaran yang terdiri daripada lima fasa: Analisis, Reka Bentuk, Pembangunan, Pelaksanaan, dan Penilaian.



Rajah 1: Model ADDIE

Kajian terdahulu telah menunjukkan keberkesanan penggunaan Model ADDIE dalam pelbagai konteks pembelajaran, termasuk dalam pendidikan matematik (Abd Razak et al., 2020; Nasution et al., 2023; Venkatesh et al., 2021). Setiap fasa ini memainkan peranan penting dalam memastikan modul pengajaran yang dibangunkan adalah berkesan dan memenuhi keperluan murid. Dalam bidang pendidikan pintar cerdas, terdapat keperluan menghasilkan modul yang tersusun yang dapat meningkatkan motivasi, sikap dan minat murid pintar cerdas dalam Matematik Tambahan. Pendidikan pintar cerdas memerlukan proses penilaian yang boleh diukur untuk meningkatkan pencapaian (Ismail et al., 2021). Model ADDIE dipilih dalam kajian ini kerana ia dikenali sebagai model yang baik dan telah digunakan secara meluas dalam pendidikan (Narayanasamy & M. Jaafar, 2024). Ia juga fleksibel untuk dilaksanakan dan mempunyai pelbagai teknik yang boleh digunakan dalam proses penilaian. Justeru, kajian ini membangunkan modul MOSIMI murid pintar dalam pembelajaran fungsi kuadratik menggunakan pendekatan Model ADDIE. Penemuan dari kajian ini diharapkan dapat menyumbang kepada peningkatan kualiti pengajaran dan membantu murid pintar cerdas mencapai prestasi akademik yang lebih baik.

3.0 Teori Konstruktivisme

Selain Model ADDIE, penerapan Teori Konstruktivisme dalam reka bentuk modul boleh membantu murid dalam membina pengetahuan melalui pengalaman pembelajaran yang bermakna dan kontekstual (Syarifuddin & Atweh, 2022). Selain itu, murid membina pemahaman mereka secara aktif melalui penerokaan secara langsung (Piaget, 1972). Ini bermakna murid boleh memupuk pemahaman berdasarkan pengalaman mereka sendiri dan berfikir secara kritis dan kreatif dalam menyelesaikan masalah matematik (Peni & Dewi, 2023). Penggunaan pendekatan teori konstruktivisme terbukti dapat meningkatkan pemahaman konsep matematik dengan lebih mendalam walaupun guru hanya berperanan sebagai pemudah cara dan murid memainkan peranan utama dalam aktiviti pembelajaran secara aktif dalam kumpulan.

Kajian oleh Timotheou et al., (2023) menunjukkan bahawa teknologi digital dapat meningkatkan motivasi dan minat murid terhadap pembelajaran matematik. Teknologi digital telah membuka peluang baru dalam pendidikan dengan menyediakan aplikasi interaktif yang dapat meningkatkan pengalaman pembelajaran (Nurfalah et al., 2021). Penggunaannya telah terbukti membantu murid dalam memahami konsep matematik yang kompleks dengan cara yang lebih visual dan praktikal.

4.0 Implikasi

Kertas konsep ini mempunyai implikasi penting bagi pembelajaran Matematik Tambahan dalam kalangan murid pintar cerdas di sekolah. Modul MOSIMI yang berasaskan Model ADDIE, Teori Konstruktivisme, dan teknologi digital boleh dijadikan model bagi pembangunan modul pengajaran dalam topik-topik lain dalam Matematik dan Matematik Tambahan. Kajian ini juga mencadangkan agar guru terus mengintegrasikan teknologi digital dalam pengajaran mereka untuk meningkatkan kualiti pembelajaran. Penyelidikan lanjut diperlukan untuk menilai keberkesanan modul MOSIMI dalam konteks dan populasi yang berbeza untuk memastikan generalisasi penemuan dalam kalangan murid pintar cerdas. Secara keseluruhan, kajian ini menyokong kepentingan penggunaan modul yang berpusatkan murid dan integrasi teknologi digital dalam pengajaran Matematik Tambahan. Penemuan dari kajian ini diharapkan dapat menyumbang kepada peningkatan kualiti pengajaran dan pembelajaran Matematik Tambahan serta membantu murid mencapai prestasi akademik yang lebih baik.

5.0 Kajian Motivasi, Sikap, dan Minat

Kajian lepas menunjukkan bahawa murid yang mempunyai motivasi yang tinggi cenderung untuk lebih berjaya dalam pembelajaran Matematik Tambahan. Motivasi intrinsik, yang datang dari minat dan keseronokan dalam mempelajari sesuatu, serta motivasi ekstrinsik, yang dipengaruhi oleh ganjaran luaran, kedua-duanya mempunyai kesan yang signifikan terhadap pencapaian murid (Durak et al., 2019; Yaman & Taşdelen, 2022; Yıldız & Yaman, 2024). Sikap murid terhadap Matematik Tambahan juga merupakan penentu penting kejayaan mereka. Sikap positif terhadap Matematik Tambahan boleh meningkatkan minat murid dan mendorong mereka untuk lebih berusaha dalam pembelajaran (Wakhata et al., 2023). Sebaliknya, sikap negatif boleh menghalang kemajuan dan menyebabkan murid menghadapi kesulitan dalam memahami konsep Matematik Tambahan yang kompleks. (Sylviana Mantihal & Siti Mistima Maat, 2020).

Gabungan penggunaan Model ADDIE, Teori Konstruktivisme, dan teknologi digital dalam reka bentuk modul MOSIMI menawarkan pendekatan yang holistik dan efektif dalam pembelajaran Matematik Tambahan. Pendekatan ini tidak hanya memfokuskan kepada pembangunan bahan pengajaran yang berkualiti, tetapi juga memastikan bahawa murid terlibat secara aktif dalam proses pembelajaran dan mendapat pengalaman yang bermakna. Secara keseluruhan, kajian ini bertujuan membangunkan dan menilai keberkesanan modul motivasi, sikap dan minat (MOSIMI) murid pintar dalam pembelajaran fungsi kuadratik menggunakan pendekatan Model ADDIE, Teori Konstruktivisme, dan teknologi digital. Penemuan dari kajian ini diharapkan dapat menyumbang kepada peningkatan kualiti pengajaran dan membantu murid pintar cerdas mencapai prestasi akademik yang lebih baik.

6.0 Kesimpulan

Kajian ini menekankan kepentingan motivasi, sikap dan minat terhadap Matematik Tambahan dalam kalangan murid pintar cerdas. Pembelajaran Matematik Tambahan secara aktif dan berpusatkan murid dapat mempengaruhi pencapaian murid pintar cerdas dengan menganalisis perbezaan hubungan antara faktor motivasi, sikap, dan minat murid dan cadangan yang dibuat. Kajian ini bertujuan membangunkan dan menilai keberkesanan modul pembelajaran fungsi kuadratik. Selain itu, kajian ini juga diharap dapat meningkatkan kesedaran semua pihak tentang kepentingan motivasi, sikap dan minat murid terhadap pencapaian Matematik Tambahan.

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Hubungan antara Trait Personaliti Kehematan, Keterbukaan, Ekstraversi dan Kesetujuan dengan Efikasi Swadiri Kerjaya dalam kalangan Pelajar Lepasan SPM di Negeri Perak

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Abstrak

Dalam perancangan kerjaya yang baik, setiap individu harus faham dan peka mengenai perbezaan yang wujud antara individu lain. Kajian ini bertujuan untuk menentukan tahap personaliti dan efikasi swadiri membuat keputusan kerjaya pelajar lepasan SPM, mengenal pasti perbezaan personaliti dan efikasi-kendiri membuat keputusan kerjaya berdasarkan jantina dan mengenal pasti perbezaan personaliti dan efikasi swadiri membuat keputusan kerjaya berdasarkan kelas. Graduan universiti mendapati ramai di antara graduan yang menganggur disebabkan mereka ingin bekerja mengikut bidang yang mereka pelajari. Pencapaian ini perlu bermula dari memilih jurusan atau aliran selaras dengan kerjaya yang ingin diceburi. Reka bentuk kajian adalah kajian tinjauan menggunakan pendekatan kuantitatif. Penyelidik membuat pemilihan ini setelah mempertimbangkan objektif kajian penyelidikan yang telah dirangka dalam kajian ini.Kajian ini dijalankan secara tinjauan dan maklumat diperoleh melalui soal selidik yang melibatkan 163 orang pelajar lepasan SPM tahun 2023 di negeri Perak yang sedang menunggu keputusan kemasukan ke institusi pengajian tinggi awam dan swasta.Soal selidik yang digunakan ialah alat ukuran Career Decesion Making Self- Efficacy Short Form (CDMSE-SF) untuk mengukur tahap efikasi swadiri pelajar dan Personaliti Big Five Inventory (BFI) untuk mengukur personaliti. Analisis statistik yang digunakan iaitu statistik deskriptif termasuk frekuensi, peratusan dan min bagi menjawab soalan kajian dan statistik inferensi iaitu Korelasi Pearson dan Ujian-t untuk menguji hipotesis kajian tersebut. Personaliti seseorang pelajar dapat menentukan ciri-ciri mereka dalam membuat keputusan kerjaya. Manakala efikasi swadiri pula dapat menetukan keupayaan diri mereka dalam membuat perancangan dan menyusun matlamat kehidupan. Oleh itu, kajian ini dapat diperluaskan kepada skop yang lebih besar terutama pelajar diperingkat universiti.

Kata kunci: Perancangan kerjaya; Personaliti; Efikasi-swadiri; Efikasi-kendiri; Graduan universiti

1.0 Pengenalan

Kajian mengenai hubungan antara trait personaliti dan efikasi swadiri dalam kalangan pelajar lepasan Sijil Pelajaran Malaysia (SPM) adalah penting untuk memahami bagaimana ciri-ciri peribadi dapat mempengaruhi keyakinan diri dan kemampuan untuk menghadapi cabaran akademik dan sosial selepas tamat persekolahan. Trait personaliti seperti kehematan,keterbukaan,ekstraversi dan kesetujuan diri yang tinggi biasanya dikaitkan dengan efikasi swadiri yang lebih tinggi.Sebagai contoh, pelajar yang mempunyai tahap kesedaran diri yang tinggi cenderung lebih teratur dan bertanggungjawab, yang membantu mereka merasa lebih yakin dalam kemampuan mereka untuk menguruskan masa dan tugas dengan efektif.Dimana personaliti dapat menentukan tahap cara tingkahlaku dalam menentukan aspek kehidupan terutama dalam mempengaruhi kerjaya. Hail ini dapat terangkan oleh (Mutambanengwe, 2014). yang mengatakan bahawa kerjaya salah satu cabang dalam perubahan terhadap diri sendiri, nilai yang menggambarkan peribadi seseorang dengan kerjaya.Menurut kajian oleh (Mohamad Rafizi et al,2022),yang turut mengatakan bahawa individu yang telah menamatkan proses pengajian diperingkat tertinggi sudah tentu mempunyai hasrat dan cita-cita untuk mengecapi dalam kerjaya yang lebih tinggi.Menyedari bahawa tahap personaliti kerjaya individu memainkan peranan yang kompleks dalam proses pembangunan kerjaya mereka, bukannya sekadar memadankan mereka dengan pekerjaan. Khususnya, bukti empirikal terkini menunjukkan bahawa gaya personaliti kerjaya tertentu secara rutin dikaitkan dengan hasil perkembangan tertentu, tanpa mengira variasi dalam persekitaran vokasional di mana individu bekerja atau belajar (Liu et al., 2017; Stoll et al., 2017). Namun demikian, terdapat kajian yang mengatakan bahawa tahap personaliti kerjaya masih lagi ditahap yang terbatas bagi mengikut kesesuaian dalam kesedaran kerjaya diperingkat masih rendah (Nye et al., 2018).

Melalui kajian tersebut terdapat permasalahan yang berlaku melalui tahap trait personaliti dalam kalangan setiap individu hal ini dapat dijelaskan melalui kajian oleh (Nawi,2018), yang menjelaskan bahawa tanpa dalam trait personaliti, individu tidak dapat membuat keputusan dalam kerjaya.Hal ini dapat menyedari bahawa personaliti kehematan,keterbukaan,ekstraversi dan kesetujuan memainkan peranan dalam menentukan pemilihan selepas tamatnya pengajian diperingkat SPM, supaya pelajar boleh mengenalpasti tahap personaliti dengan kesesuaian bidang pengajian tersebut. Dalam pada itu, efikasi swadiri dalam kalangan pelajar turut dibincangkan dalam kajian ini dimana terdapat juga trait personaliti dan juga efikasi swadiri kerjaya yang turut menjadikan perbincangan. Efikasi swadiri dalam kalangan pelajar masih lagi rendah dan sederhana, terutama bagi kesediaan dalam kerjaya pelajar selepas tamtanya pengajian. Antara yang faktor disebabkan oleh pencapaian akademik,minat dan tahap personaliti pelajar tersebut. (Mohd Izwan et al., 2020).Dalam kajian ini trait personaliti dan juga efikasi swadiri pelajar lepasan SPM memainkan peranan terutama dalam pemilihan bidang pengkhususan untuk serasi dengan bidang pekerjaan pada masa kini.Di mana sangat penting untuk pembangunan kerjaya individu tersebut, supaya dalam dapat memberikan keberkesanan diri dengan masa depan.

Dalam kajian-kajian lepas yang dijalankan masih lagi kurang secara menyeluruh untuk dikaji. Kebanyakan kajian yang telah dibuat dalam konteks tertentu sahaja dan sebahagian kajian yang dibuat diperingkat universiti. Justeru itu kajian ini, lebih tertumpu diruang lingkup bagi pelajar sekolah yang dikategorikan sebagai lepasan SPM. Dan kajian lanjutan ini dijalankan untuk melihat hubungan antara trait personaliti kehematan,keterbukaan,ektraversi dan kesetujuan dengan efikasi swadiri dalam kalangan pelajar lepasan SPM di negeri Perak. Kajian ini akan melihat kepada hubungan pembolehubah serta sejauh mana tahap isu yang perlu diterokai mengikut objektif adan persoalan kajian nanti.Selain dapat memahami dan memupuk trait personaliti yang positif dalam kalangan pelajar lepasan SPM boleh menjadi strategi penting dalam meningkatkan efikasi swadiri serta menyediakan mereka untuk cabaran masa depan, seperti menyambung pelajaran ke peringkat yang lebih tinggi atau memasuki alam pekerjaan.

2.0 Teori dan Sintesis Literatur

Dalam kajian lepas menunjukkan bahawa terdapat jurang yang berkaitan dengan hubungan personaliti dalam kalangan pelajar. Menurut kajian yang dibuat oleh (Anis,Savugathali et al 2016), mengatakan bahawa cabaran pelajar pada masa kini yang sukar mendapatkan kerja berkait rapat dengan personaliti mereka dan juga efikasi-kendiri. Manakala kajian yang dibuat oleh (Stephen A,Fiona C et. al 2016) menunjukkan bahawa ciri-ciri berkaitan dengan pemilihan mereka tidak dikaitkan dengan ciri persekitaran pekerjaan yang dominan, dan apabila terdapat variasi kepakaran dalam pekerjaan yang berkaitan secara konseptual. (iaitu apabila kepakaran berbeza dengan cara yang mungkin menarik secara berbeza kepada orang dengan ciri-ciri personaliti tertentu.Dalam konteks ini menunjukkan bahawa ciri-ciri trait personaliti memainkan peranan penting dalam aspek pemilihan kerjaya.seperti yang diulaskan oleh dua pengkaji (Anis,Savugathali et al 2016), dan (Stephen A,Fiona C et. al 2016). Dalam pada itu, dari sudut pekerjaan tahap personaliti dan juga efikasi turut memainkan peranan dalam sektor pekerjaan yang perlu ada setiap individu. Hal ini dapat dibuktikan melalui kajian oleh (Nor Ashikin Jamaludin, Ana Haziqah A Rashid* et al., 2021), yang mengatakan bahawa hubungan jenis personaliti dengan pemilihan faktor penting dalam kemahiran yang perlu diterapkan bekerja dalam sektor pekerjaan,dan pada peringat awal perlu garabkan diperingkat sekolah atau peringat institusi bagi menentukan bidang pengkhususan dengan yang bersesuaian dengan pekerjaan.

Dapat dijelaskan bahawa pentingnya personaliti dengan pemilihan kerjaya pelajar diperingkat awal, supaya mempunyai kemahiran,kepandaian dan kepakaran dalam pelbagai sektor bidang yang diceburi.Dalam pada itu,kesediaan seseorang individu turut dibincangkan dalam kajian yang mempengaruhi dalam konteks tingkahlaku dalam menyesuaikan diri dengan persekitaran kerjaya. Menurut daripada kajian oleh (Ramlee et al., 2023) Penyesuaian diri terhadap kerjaya seorang pelajar perlu diutamakan bagi mendepani cabaran ekonomi global yang memenuhi pasaran kerjaya. Dalam konteks ini penyesuaian dalam pemilihan kerjaya seorang pelajar perlu diterapkan melalui kemahiran dan latihan yang komprehensif dalam usaha membantu kalangan pelajar supaya lebih menjurus kepada bidang pengajian seterusnya dalam bekerja dalam dunia pekerjaan.

3.0 Implikasi

Hasil kajian ini nanti akan dapat membantu dalam meningkatkan kesedaran dalam kalangan pelajar prauniversity, masyarakat, terutama dalam kalangan pendidik dan ibu bapa, tentang pentingnya memahami perbezaan personaliti dalam membantu pelajar membuat keputusan kerjaya. Dengan mengetahui hubungan antara personaliti dan efikasi swadiri kerjaya, pihak sekolah dan komuniti dapat memberikan sokongan yang lebih baik kepada pelajar daripada pelbagai latar belakang sosioekonomi untuk mencapai matlamat kerjaya mereka.

4.0 Kajian Lanjutan

Kajian lanjutan yang akan datang, adalah peneylidikan akan menilai skop hubungan yang sama wujud di kalangan pelajar dari negeri lain atau dalam kumpulan usia yang berbeza, seperti pelajar universiti.Supaya dengan kajian ini boleh menjadi asas untuk penyelidikan lanjut mengenai faktor lain yang mungkin mempengaruhi efikasi swadiri kerjaya, seperti pengaruh keluarga, rakan sebaya, atau latar belakang sosio-ekonomi

5.0 Konklusi

Dengan melalui kajian ini akan menekankan kepentingan memahami personaliti individu dalam konteks pembangunan kerjaya. Mereka yang terlibat dalam bimbingan dan kaunseling kerjaya harus mempertimbangkan ciri-ciri personaliti pelajar untuk memberikan bimbingan yang lebih tepat dan berkesan. Dengan cara ini, program intervensi kerjaya dapat disesuaikan untuk membantu pelajar mengenal pasti kekuatan mereka dan membangun keyakinan terhadap keupayaan mereka untuk mencapai matlamat kerjaya. Akhir sekali, kajian ini memberikan asas untuk penyelidikan lanjut dalam memahami lebih mendalam hubungan antara personaliti dan efikasi swadiri kerjaya. Kajian masa depan boleh meneroka faktor-faktor lain yang mungkin mempengaruhi efikasi swadiri kerjaya serta memperluaskan kajian ini kepada populasi pelajar yang lebih pelbagai di negeri-negeri lain atau peringkat pendidikan yang berbeza.

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Kesejahteraan Guru: Menelusuri Peranan Modal Psikologi dan Sokongan Organisasi Terhadap Guru

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Abstrak

Kertas konsep ini mencadangkan model yang komprehensif dengan pengintegrasian modal psikologi dan sokongan organisasi dalam meningkatkan kesejahteraan guru.Berasal dari kajian psikologi positif dan gelagat organisasi dalam latar pendidikan,gabungan modal psikologi dan sokongan organisasi , kerangka kerja yang dicadangkan mampu meningkatkan kesejahteraan guru secara amnya.Kertas ini didahului dengan isu kesejahteraan guru yang semakin mendapat tempat pada masa ini dan seterusnya cadangan intervensi yang boleh dilakukan melalui modal psikologi dan sokongan organisasi.

Kata kunci: Kesejahteraan; Modal psikologi; Sokongan organisasi; Guru

1.0 Pengenalan

Kesejahteraan melibatkan kesihatan semua aspek tubuh badan dan minda serta merangkumi aspek fizikal. sosial , emosi dan keperluan kehidupan telah dipenuhi(Hasnain, 2023).Kesejahteraan memainkan peranan yang penting dalam kehidupan setiap individu dan bagi guru pula kesejahteraan amat penting dalam menjalankan tugas seharian. Kesejahteraan guru didefinisiakan sebagai tindakbalas kogitif , emosi , kesihatan dan sosial yang berkait dengan pekerjaan mereka (Viac & Fraser, 2020, p. 18).

Namun dengan era globalisasi dan kepesatan teknologi ini, tugas guru semakin mencabar dan menghadapi pelbagai tekanan Kebelakangan ini, kajian berkenaan kesejahteraan guru semakin mendapat tempat dalam penyelidikan kerana kesejahteraan guru penting dalam membina negara bangsa (Zakaria et al., 2021), dan pada masa sekarang guru terdedah kepada tekanan daripada komuniti dan pemegang taruh yang mana membawa kepada lesu upaya(Cui & Ma, 2023).Selain itu,sistem pembelajaran yang moden ini membawa kepada beberapa kesan yang ketara seperti kekurangan guru, kadar pusing ganti yang tinggi dan semakin berkurangnya minat kepada profesion perguruan (AssViac, C. and P. Fraser , 2020). Guru yang memohon bersara awal juga semakin meningkat di Malaysia dan dikaitkan juga dengan sokongan pentadbir dan juga bebanan kerja yang harus ditanggung oleh guru (Mustapha et al., 2023).

Kesejahteraan guru adalah aspek kritikal yang perlu diberi perhatian yang mana ianya mempengaruhi iklim sekolah yang positif , kepuasan kerja serta pencapaian murid.(Zhou et al., 2024),Kajian kesejahteraan guru yang dijalankan pada guru sekolah menengah di Seremban oleh Unit Psikologi Jabatan Pendidikan Negeri Sembilan berada pada tahap tinggi dan sederhana. Ini menunjukkan bahawa guru- guru mendapat sokongan yang mantap dari organisasi iaitu dari pengetua dan pentadbir sekolah.

Kertas konsep ini adalah untuk melihat modal psikologi dan sokongan organisasi dalam meningkatkan kesejahteraan di Negeri Sembilan melalui teori sokongan organisasi dan juga teori Broad and Build , Emosi Positif dan membentuk satu intervensi kesejahteraan guru.

2.0 Tinjauan Teori dan Sintesis Literatur

Modal psikologi adalah perkembangan positif psikologi individu dan terdiri dari empat komponen utama (Luthans et al 2004) iaitu harapan, efikasi , daya tahan dan optimism.Modal psikologi ini berasaskan kepada gelagat organisasi positif atau POB yang mana pelopor Psycap iaitu Luthans percaya bahawa kekuatan sumber manusia adalah berasaskan kepada psikologis positif individu. (Peterson S. & Luthans F., 2003).Banyak kajian yang dijalankan menunjukkan modal psikologi mempunyai hubungan positif dengan

organisasi seperti kepuasan kerja dan juga prestasi individu.(Zhang et al., 2021)(Soares Marques et al., 2021)(LupŞa & VÎrgĂ, 2020). Kajian menunjukkan bahawa modal psikologi atau psycap meningkatkan persepsi guru terhadap organisasi iaitu sekolah yang mana ianya mewujudkan persekitaran kerja yang positif(Javid & Rehman, 2018) , manakala Gan & Cheng(2021) dalam kajiannya berkenaan guru prasekolah di China mendapati bahawa modal psikologi boleh membantu guru untuk mewujudkan persepsi kerja yang positif serta meningkatkan kesejahteraan guru.

Sokongan sosial organisasi pula merupakan persepsi pekerja bagaimana organisasi menghargai mereka serta bagaimana organisasi menjaga kesejahteraan mereka (Eisenberger et al., (1986) , Ngang & Tengku, (2015).Manakala menurut dalam konteks pendidikan,sokongan organisasi yang diterima oleh guru adalah dari pentadbir sekolah, rakan sejawat serta warga sekolah.Impak yang dapat dilihat melalui sokongan organisasi yang diterima oleh guru adalah wujudnya sifat positif dalam diri yang membawa kepada komitmen yang tinggi kepada organisasi (Ahmad et al,2021), peningkatan prestasi guru(Tahir et al., 2019) dan juga meningkatkan penglibatan guru dalam pengajaran dan pembelajaran(Saeed & Hussain Ch, 2021). Sokongan organisasi ini mengurangkan tekanan yang terjadi dalam kalangan guru.(Masoom, M.R. 2021).

Kajian ini disokong oleh teori Broad and Build Theory oleh Frederickson dan Teori Pertukaran Sosial Blau (1964).Mengikut teori pertukaran sosial Blau, kelakuan sosial adalah dipengaruhi oleh proses pertukaran iaitu tujuannya adalah untuk memaksimakan keuntungan dan menimakan kos.Konsep teras adalah timbal balik, pilihan yang rasional,perundingan serta akuan sosial.Dalam konteks kajian ini iaitu dalam bidang pendidikan guru telah menyumbangkan tenaga, kepakaran serta masa manakala timbal balik yang diharapkan adalah gaji, penghargaan dan sumber dari pihak organisasi iaitu sekolah.Teori Broad and Build membantu guru untuk untuk terus kekal positif dan dengan ini dapat membantu meningkatkan kesejahteraan guru dan mutu penyampaian guru dalam pembelajaran dapat ditingkatkan. Manakala pihak pentadbir atau pejabat pendidikan daerah serta jabatan boleh menganjurkan bengkel latihan serta seminar dalam membangunkan emosi kendiri guru yang positif.

3.0 Implikasi

Implikasi dari sudut teori dapat dilihat melalui kertas seminar ini yang mana ianya mendalami teori Broad and Build oleh Frederickson dan Teori Pertukaran Sosial Blau.Modal psikologi bertindak sebagai pemangkin emosi positif dalam diri guru dan sokongan organisasi adalah sumber luaran yang membantu guru menangani tekanan . Gabungan keduanya ini dapat menjadikan guru lebih sejahtera di tempat kerja dengan adanya persekitaran yang menyokong antara satu sama lain. Dapatan ini juga menguatkan kerangka kerja yang berkaitan sokongan organisasi dan kesejahteraan guru dalam institusi pendidikan khasnya.Implikasi praktikal adalah untuk pentadbir sekolah dan juga kepimpinan institusi pendidikan seperti Pejabat Pendidikan Daerah serta Jabatan Pelajaran yang mana mereka boleh membangunkan program atau seminar yang berkaitan meningkatkan kesejahteraan guru,Kepuasan kerja guru juga meningkat melalui sokonagn organisasi yang kuat dan berterusan dari guru besar dan pentadbir sekolah yang lain. Manakala sokongan dari pentadbir jufga mampu meningkatkan modal psikologi guru dan kepuasan kerja;

4.0 Kajian Masa Depan

Kajian ini mencadangkan rangkakerja yang komprehensif berkaitan dengan modal psikologi dan sokongan organisasi dalam meningkatkan kesejahteraan diri guru.Pengintegrasian modal psikologi dan sokongan organisasi dapat memberikan model yang dinamik terhadap kesejahteraan guru berbanding dengan kajian kesejahteraan guru sahaja.Intervensi dalam kesejahteraaan guru dapat dijalankan melalui pengembangan modal psikologi melalui latihan dan seminar serta melalui sokongan dari pihak pentadbir.Kajian masa depan untuk melihat modal psikologi ini boleh dibangunkan dalam diri murid pula , terutama murid sekolah menengah,Modal psikologi dalam diri murid ini mampu menangani lesu upaya akademik atau *academic burnout* terutama dalam kelas- kelas peperiksaan seperti murid-murid yang akan menghadapi Sijil Pelajaran Malaysia dan Sijil Tinggi Pelajaran Malaysia.

Penghargaan

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Penghargaan Kendiri sebagai Mediator antara Penglibatan Sukan dan Daya Tahan Psikologi dalam kalangan Murid Sekolah Berasrama Penuh di Malaysia

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Abstrak

Isu kesihatan mental semakin membimbangkan, dengan kadar kemurungan dalam kalangan penduduk Malaysia berusia 15 tahun ke atas meningkat dua kali ganda antara tahun 2019 hingga 2023. Bagi murid sekolah menengah, khususnya di sekolah berasrama penuh (SBP), cabaran yang dihadapi dalam persekitaran akademik dan sosial yang baharu menuntut mereka mempunyai daya tahan psikologi yang tinggi untuk mengatasi kesukaran dan tekanan harian. Antara faktor berpotensi yang menyumbang kepada daya tahan psikologi adalah melalui penglibatan sukan dan penghargaan kendiri. Kajian ini bertujuan untuk menentukan peranan penghargaan kendiri sebagai mediator antara penglibatan sukan dan daya tahan psikologi dalam kalangan murid SBP di Malaysia. Kajian ini menggunakan reka bentuk kajian kolerasi dan melibatkan seramai 295 murid SBP di Malaysia yang dipilih melalui kaedah pensampelan rawak berstrata. Analisis data dijalankan menggunakan IBM SPSS Statistik 27 dan IBM SPSS Amos 29. Dapatan kajian menunjukkan bahawa penghargaan kendiri berperanan sebagai mediator separa antara penglibatan sukan dan daya tahan psikologi, dengan kedua-dua faktor ini menyumbang sebanyak 52 peratus kepada daya tahan psikologi. Kesimpulannya, dapatan ini menekankan kepentingan penglibatan aktif dalam sukan serta pengukuhan penghargaan kendiri dalam kalangan murid SBP sebagai langkah strategik untuk meningkatkan daya tahan psikologi mereka dalam menghadapi pelbagai cabaran persekitaran dan tekanan hidup.

Kata kunci: Penglibatan sukan; penghargaan kendiri; daya tahan psikologi

1.0 Pengenalan

Sejak kebelakangan ini, terdapat peningkatan kebimbangan terhadap kesejahteraan mental dalam kalangan remaja, terutamanya murid sekolah menengah. Menurut Tinjauan Kebangsaan Kesihatan dan Morbiditi (NHMS) 2023, sebanyak 4.6 peratus rakyat Malaysia berusia 15 tahun ke atas dilaporkan mengalami kemurungan, angka yang menunjukkan peningkatan dua kali ganda berbanding tahu 2019. NHMS turut melaporkan bahawa satu daripada enam kanak-kanak berumur lima hingga 15 tahun mengalami masalah mental. Dalam konteks murid sekolah berasrama penuh (SBP) di Malaysia, mereka terdedah kepada cabaran seperti kerinduan pada rumah, kesukaran menyesuaikan diri dengan persekitaran baharu, gangguan tidur dan tekanan akademik yang boleh mempengaruhi kesejahteraan keseluruhan mereka (Mudzkiyyah et al., 2022; Reardon et al., 2023). Kajian oleh Mudzkiyyah et al., (2022) mendapati bahawa antara isu sosial murid di sekolah berasrama penuh adalah buli dalam bentuk fizikal dan mental seperti mengasingkan diri, mengugut dan menyebarkan khabar angin, memberikan kesan buruk terhadap kesejahteraan mental mereka. Semua faktor ini boleh menimbulkan kesan negatif terhadap kesihatan mental dalam menghadapi cabaran kehidupan di asrama. Oleh itu, daya tahan psikologi menjadi komponen penting yang membantu murid dalam menghadapi dan mengatasi cabaran-cabaran ini (Barnová & Tamášová, 2018).

Daya tahan psikologi berperanan sebagai mekanisme penting untuk menempuh cabaran hidup agar individu dapat menjalankan tanggungjawab walaupun berdepan dengan situasi yang mencabar (Cui & Zhang, 2022; Kozhan et al., 2024). Kajian terdahulu menunjukkan bahawa individu dengan daya tahan yang kuat lebih sihat dari segi psikologi dan kurang mengalami emosi negatif (Bozdağ, 2020; Cui & Zhang, 2022). Malah, mereka cenderung melihat masalah sebagai peluang untuk membangunkan diri (Sari & Surat, 2020) dan membolehkan individu mengubah keadaan negatif kepada peluang pencapaian dan membangunkan keyakinan diri (Usán Supervía et al., 2022). Pembentukan daya tahan psikologi juga dapat meningkatkan tingkah laku positif dan menyumbang kepada sikap yang lebih konstruktif dalam menghadapi kehidupan

(Samsudin et al., 2021). Kebanyakan individu berpotensi untuk lebih berdaya tahan sekiranya mereka disokong oleh persekitaran yang kondusif dan membantu meningkatkan keupayaan mereka dalam menangani cabaran (Husain et al., 2024). Menurut Model Daya Tahan Kumpfer, faktor persekitaran sekolah memainkan peranan penting dalam membentuk daya tahan individu (Kumpfer, 1999).

Dalam konteks persekitaran sekolah, penglibatan dalam aktiviti sukan merupakan salah satu intervensi yang berperanan sebagai faktor perlindungan yang menyumbang kepada peningkatan daya tahan psikologi (Y. Li & Guo, 2023; Xu et al., 2021; Zach et al., 2021). Menyedari kepentingan ini, Kementerian Pendidikan Malaysia (KPM) telah melaksanakan beberapa dasar yang bertujuan untuk mewujudkan persekitaran pembelajaran yang lebih bermakna melalui penglibatan dalam kurikulum dan kokurikulum bagi menyokong pembangunan daya tahan murid. Salah satu inisiatif utama adalah pengenalan Dasar 1 Murid 1 Sukan (Dasar 1M1S), yang memastikan semua murid mempunyai peluang untuk terlibat dalam aktiviti sukan. Melalui sukan, murid dapat meningkatkan kesihatan fizikal, membina penghargaan kendiri, kemahiran sosial dan keyakinan diri (Holt et al., 2020; Ya'cob & Zawi, 2022).

Penglibatan dalam aktiviti sukan terbukti memberikan kesan positif terhadap daya tahan psikologi. Kajian sistematik oleh Eather et al., (2023) mendapati bahawa penglibatan dalam sukan dikaitkan dengan peningkatan penghargaan kendiri, kepuasan hidup, serta pengurangan tahap kemurungan, kebimbangan, dan tekanan. Ini kerana sukan menawarkan peluang untuk membina hubungan sosial yang kuat, mengembangkan rasa kepunyaan, dan meningkatkan rasa kawalan dalam hidup (Murphy et al., 2022). Ya'cob dan Zawi, (2022) turut menyokong dapatan ini apabila mereka mendapati bahawa keterlibatan dalam aktiviti fizikal memainkan peranan penting dalam meningkatkan penghargaan kendiri murid, terutama dalam kalangan remaja yang sedang mengalami perubahan fizikal dan emosi. Sementara itu, kajian oleh Yiyi et al., (2024) mendapati bahawa penyertaan sukan mempunyai hubungan negatif yang signifikan dengan kejadian buli dalam kalangan pelajar kolej. Ini menunjukkan bahawa semakin tinggi tahap penglibatan pelajar dalam sukan, semakin rendah risiko mereka terlibat dalam atau menjadi mangsa buli. Kajian ini juga menunjukkan bahawa peningkatan penglibatan dalam sukan berkait rapat dengan peningkatan daya tahan psikologi, yang secara tidak langsung mengurangkan kebarangkalian pelajar mengalami atau terlibat dalam kejadian buli.
Selain itu, penghargaan kendiri berperanan penting sebagai mediator dalam hubungan antara aktiviti fizikal dan pencapaian akademik (Kayani et al., 2018), indeks jisim badan (Wang & Zhou, 2024), kepuasan hidup (Yildirim & Özgökçe, 2023), di mana ia bertindak sebagai mekanisme dalaman yang menghubungkan pengalaman fizikal dengan kesejahteraan mental individu. Kajian terdahulu telah menunjukkan bahawa penghargaan kendiri dapat meningkatkan keyakinan diri serta keupayaan untuk menangani tekanan dan cabaran, menjadikannya komponen penting dalam proses pembentukan daya tahan psikologi (Kayani et al., 2018; Qurban et al., 2018). Melalui peningkatan penghargaan kendiri yang diperoleh daripada penglibatan sukan, individu bukan sahaja dapat mencapai prestasi akademik yang lebih baik, tetapi juga mampu mengekalkan kesejahteraan mental yang lebih tinggi dalam menghadapi situasi sukar (Cao et al., 2023). Dalam konteks kajian ini, penghargaan kendiri dilihat sebagai faktor utama yang memperkukuh daya tahan psikologi murid, sekali gus menekankan kepentingannya dalam pembangunan murid yang lebih berdaya tahan dan seimbang secara emosi.

Oleh itu, kajian ini bertujuan untuk meneliti peranan penghargaan kendiri sebagai mediator dalam hubungan antara penglibatan sukan dan daya tahan psikologi dalam kalangan murid SBP di Malaysia. Kajian ini dapat memberikan pandangan berharga tentang bagaimana aktiviti sukan boleh membina daya tahan psikologi melalui peningkatan penghargaan kendiri, yang mempengaruhi ketahanan murid dalam kalangan murid SBP. Ini akan menyumbang kepada usaha membentuk generasi akan datang yang lebih sihat, seimbang, dan berdaya tahan. Berdasarkan tinjauan literatur serta objektif kajian, empat hipotesis telah dibangunkan untuk mengkaji hubungan antara penglibatan sukan, penghargaan kendiri, dan daya tahan psikologi dalam kalangan murid SBP di Malaysia. Hipotesis yang dicadangkan adalah seperti berikut – **H1:** Penglibatan sukan memberi kesan positif yang signifikan terhadap penghargaan kendiri dalam kalangan murid SBP, **H2:** Penghargaan kendiri memberi kesan positif yang signifikan terhadap daya tahan psikologi dalam kalangan murid SBP, **H3:** Penglibatan sukan memberi kesan positif yang signifikan terhadap daya tahan psikologi dalam kalangan murid SBP dan **H4:** Penghargaan kendiri berperanan sebagai mediator yang signifikan dalam hubungan antara penglibatan sukan dan daya tahan psikologi dalam kalangan murid SBP.

2.0 Metodologi

2.1 Reka bentuk dan persampelan kajian

Reka bentuk kajian ini menggunakan kajian kolerasi. Kajian ini dijalankan di sekolah berasrama penuh (SBP) kerana keseragaman sistem peraturan di semua SBP yang menyediakan persekitaran persekolahan yang teratur, kondusif dan akses kepada kemudahan sukan yang setara. Populasi kajian terdiri daripada murid tingkatan empat di SBP seluruh Malaysia yang melibatkan seramai 8,943 murid, berdasarkan Enrolmen Sekolah Menengah bagi tahun 2022. Pemilihan murid tingkatan empat adalah strategik kerana tahap kematangan mereka di usia ini dapat memastikan pemahaman yang lebih baik terhadap soal selidik serta mengurangkan risiko pengaruh pemboleh ubah luaran seperti perbezaan tahap kematangan pemikiran.

Bagi mendapatkan sampel yang mewakili setiap negeri dengan tepat, persampelan rawak berstrata digunakan. Berdasarkan formula Cochran, bilangan sampel yang diperlukan ialah 259 orang murid. Walau bagaimanapun, bagi mengelakkan isu soal selidik yang tidak lengkap, sebanyak 340 soal selidik telah diedarkan. Setelah melalui proses penyuntingan dan penilaian, hanya 295 soal selidik yang lengkap diterima untuk dianalisis. Jumlah ini mencukupi untuk analisis seterusnya memandangkan ia memenuhi syarat saiz sampel yang disarankan oleh Hair et al., (2018), iaitu sekurang-kurangnya 200 atau lebih adalah mencukupi untuk analisis SEM. Jumlah data yang diterima dalam kajian ini (kurang 15 peratus data hilang) berada pada tahap yang memadai untuk proses analisis seterusnya (Hair et al., 2018).

2.2 Kaedah pengumpulan data

Soal selidik tinjauan digunakan sebagai instrumen kajian. Data dianalisis menggunakan IBM-SPSS-Statistik 27 dan IBM-SPSS-AMOS 29. Tinjauan menggunakan skala selang antara 1 (sangat tidak setuju) hingga 10 (sangat setuju) bagi membolehkan pengukuran data yang lebih tepat dan memenuhi keperluan analisis statistik parametrik (Awang et al., 2023; Piaw, 2014). Dalam kajian ini, Skala Daya Tahan oleh Wagnild (2016) digunakan untuk mengukur daya tahan psikologi, yang terdiri daripada 25 item. Penghargaan kendiri diukur menggunakan instrumen yang dibangunkan oleh Rosenberg (1965), yang merangkumi 10 item. Manakala item untuk mengukur penglibatan sukan telah disesuaikan daripada tinjuan literatur, menghasilkan 15 item. Sebelum menjalankan kajian sebenar, pakar telah dirujuk untuk menyemak kesesuaian dan ketepatan item yang diubah suai. Penilaian mereka meliputi kesahan kandungan, kesahan muka, dan skala pengukuran. Berdasarkan maklum balas mereka, pelarasan yang relevan telah dibuat untuk menambah baik instrumen.

Bagi memastikan instrumen ini sah dan boleh dipercayai, kajian rintis telah dijalankan ke atas 150 murid SBP. Data daripada kajian rintis tersebut dianalisis menggunakan analisis faktor penerokaan – Exploratory Factor Analysis (EFA) untuk mengenal pasti item yang paling relevan bagi setiap konstruk. Melalui EFA, menghasilkan instrumen akhir yang mengandungi sepuluh item untuk mengukur daya tahan psikologi, enam item untuk mengukur penghargaan kendiri dan sembilan item untuk mengukur penglibatan sukan. Analisis komponen pula menunjukkan tiga komponen utama untuk konstruk daya tahan psikologi iaitu ketabahan, keseimbangan dan kebermaknaan.

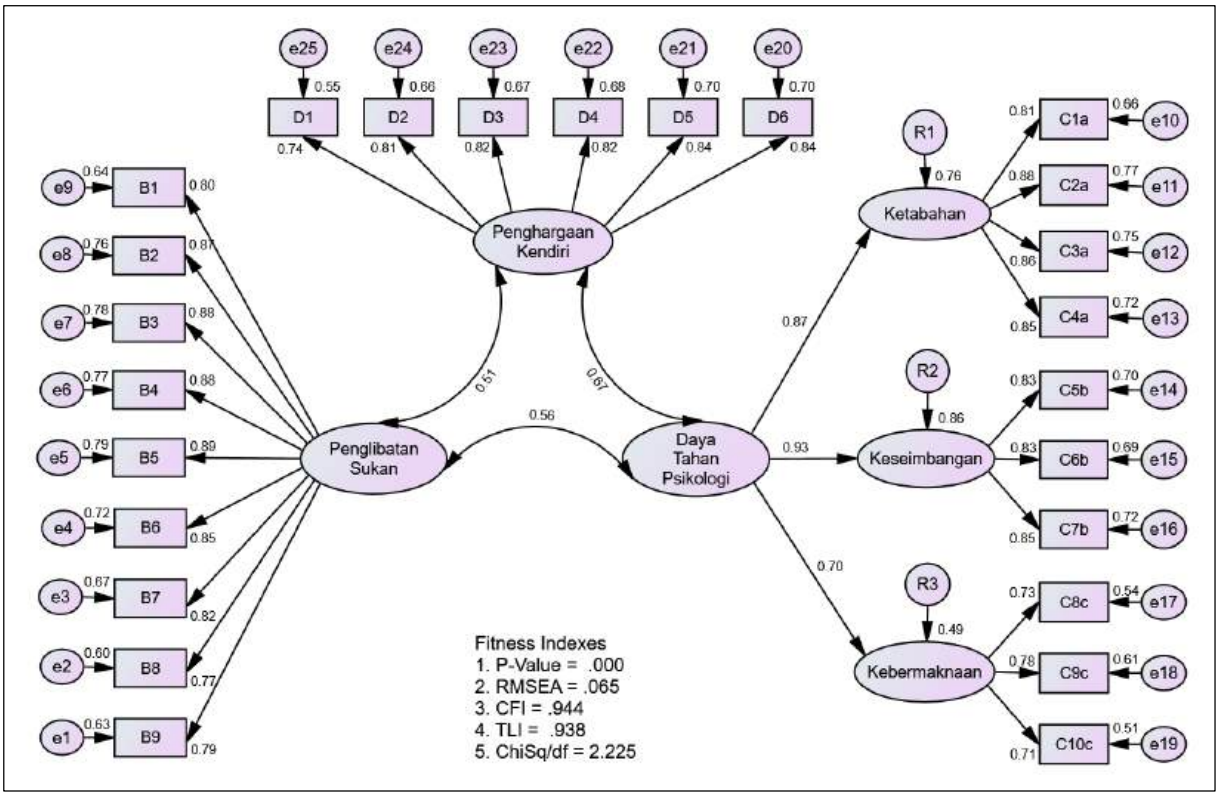
Ujian kebolehpercayaan Alpha Cronbach dijalankan selepas EFA bagi mengukur ketekalan dalaman instrumen, menunjukkan kebolehpercayaan yang tinggi dengan nilai melebihi 0.7 (Hair et al., 2018; Wang & Zhou, 2024). Nilai Alpha Cronbach bagi daya tahan psikologi (0.85), penghargaan kendiri (0.922) dan penglibatan sukan (0.922) dianggap sebagai nilai minimum yang boleh dipercayai.
Seterusnya, analisis faktor pengesahan – Confirmatory Factor Analysis (CFA) telah dijalankan untuk menilai kesesuaian, unidimensi, kesahan, dan kebolehpercayaan model pengukuran. Analisis model berstruktur selanjutnya dijalankan untuk menguji hipotesis dan menilai kesan mediator.

3.0 Dapatan Kajian

Daripada jumlah keseluruhan 295 orang responden, 169 (57.3%) terdiri daripada murid perempuan, manakala 126 (42.7%) adalah murid lelaki. Responden terdiri daripada murid SBP di 14 negeri di Malaysia.

3.1 Analisis faktor penerokaan (CFA)

Dalam kajian ini, penilaian CFA adalah berdasarkan ujian unidimensionaliti, kesahan yang terdiri daripada kesahan konstruk, konvergen dan diskriminan serta kebolehpercayaan model pengukuran. CFA dijalankan untuk mengesahkan model pengukuran konstruk sepadan dengan data yang diperoleh. Rajah 1 menunjukkan model pengukuran konstruk yang mengandungi tiga konstruk iaitu penglibatan sukan (konstruk eksogenous), penghargaan kendiri (konstruk mediator) dan daya tahan psikologi (konstruk endogenous) berserta dapatan CFA kajian yang menunjukkan nilai indeks kesepadanan, nilai R^2 setiap item, pemberat faktor dan nilai kolerasi antara konstruk.



Rajah 1. Dapatan CFA kajian

Berdasarkan dapatan CFA, unidimensionaliti dapat dicapai kerana pemberat faktor setiap item mencapai nilai yang diperlukan iaitu melebihi 0.6. Nilai kolerasi antara konstruk juga didapati berada di bawah 0.85, mengesahkan ketiadaan multikolineariti.

Bagi menilai kesahan konstruk, tiga kategori indeks yang dipilih telah memenuhi tahap yang diperlukan iaitu RMSEA = 0.065 (< 0.08), CFI = 0.944 (> 0.9) dan Chisq/df = 2.225 (< 3.0). Oleh itu, dapatan menunjukkan bahawa kesahan konstruk telah dapat dipenuhi dengan baik.
Seterusnya, kesahan konvergen ditentukan berdasarkan average variance extracted (AVE) dengan nilai minimum 0.5 untuk memastikan kesahan ini dicapai. Jadual 1 menunjukkan analisis kesahan konvergen telah mencapai keperluan dengan nilai AVE didapati melebihi 0.5 bagi semua konstruk.

Jadual 1. AVE, kebolehpercayaan komposit (CR) dan rumusan indeks kesahan diskriminan

Konstruk	AVE (Minimum 0.5)	CR (Minimum 0.6)	Penglibatan Sukan	Daya Tahan Psikologi	Penghargaan Kendiri
Penglibatan Sukan	0.706	0.956	**0.84**		
Daya Tahan Psikologi	0.664	0.952	0.56	**0.81**	
Penghargaan Kendiri	0.660	0.921	0.51	0.67	**0.81**

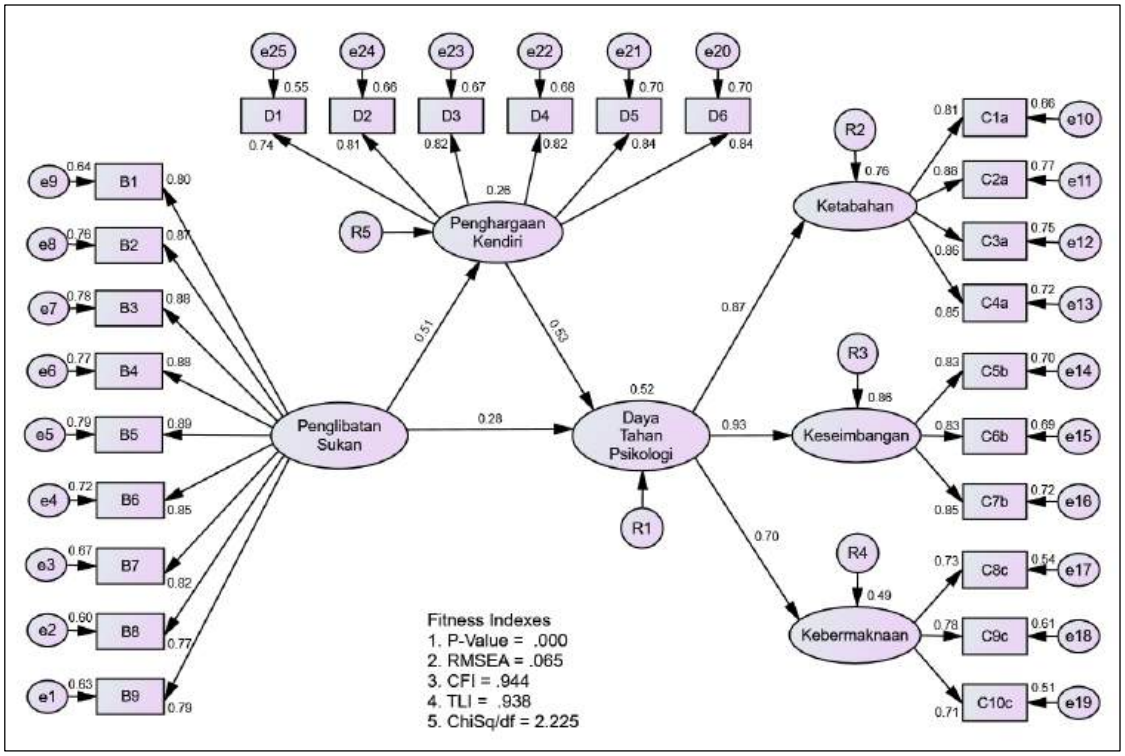
Kesahan diskriminan dinilai dengan menggunakan rumusan indeks kesahan diskriminan (Jadual 1). Kesahan ini dicapai apabila kesemua nilai diagonal (nombor ditebalkan) adalah lebih tinggi daripada nilai kolerasi antara konstruk dalam baris dan lajur masing-masing. Hasil analisis menunjukkan nilai diagonal adalah antara 0.81 hingga 0.84, dan lebih tinggi daripada nilai kolerasi antara konstruk iaitu antara 0.51 hingga 0.67. Ini mengesahkan bahawa kesahan diskriminan telah dicapai bagi semua konstruk yang diuji.

Akhir sekali, kebolehpercayaan model pengukuran dinilai melalui kebolehpercayaan komposit – composite reliability (CR). Kebolehpercayaan komposit dicapai apabila nilai CR bagi setiap konstruk melebihi 0.6. Berdasarkan Jadual 1, nilai CR bagi setiap konstruk didapati melebihi 0.6, menunjukkan bahawa kebolehpercayaan komposit telah dipenuhi dengan baik.

Sebelum menjalankan permodelan persamaan berstruktur (SEM), kenormalan taburan data perlu dipastikan. Ini dilakukan dengan meneliti nilai skewness bagi setiap item. Dapatan analisis menunjukkan bahawa nilai skewness berada dalam julat -0.446 hingga -1.091. Nilai skewness yang diterima bagi memenuhi syarat kenormalan taburan data adalah antara -1 hingga +1 (Awang et al., 2023; Hair et al., 2018; Wei et al., 2021). Oleh itu, data dalam kajian ini didapati bertaburan secara normal dan memenuhi syarat untuk analisis statistik parametrik.

3.2 Permodelan persamaan berstruktur (SEM)

Analisis SEM dijalankan untuk menguji hipotesis kajian selepas penilaian CFA berjaya memenuhi syarat kesahan dan kebolehpercayaan model pengukuran. Pekali regresi piawai model berstruktur kajian yang disahkan melalui CFA ditunjukkan dalam Rajah 2, yang memaparkan hubungan antara konstruk serta kesan langsung dan tidak langsung yang diuji dalam kajian.



Rajah 2. Pekali regresi piawai model berstruktur

Rumusan dapatan R^2 pekali regresi piawai antara konstruk eksogenous kepada endogenous ditunjukkan dalam Jadual 2.

Jadual 2. Nilai R^2 dan rumusan dapatan

Konstruk eksogenous	Konstruk endogenous	R^2	Rumusan
Penglibatan sukan	Penghargaan kendiri	0.26	Penglibatan sukan menyumbang sebanyak 26% kepada penghargaan kendiri murid SBP
Penglibatan sukan, penghargaan kendiri	Daya tahan psikologi	0.52	Penglibatan sukan dan penghargaan kendiri menyumbang sebanyak 52% kepada daya tahan psikologi murid SBP

Jadual 3 menunjukkan pekali regresi setiap laluan dan aras kesignifikanan berdasarkan nilai-P.

Jadual 3. Rumusan aras kesignifikanan

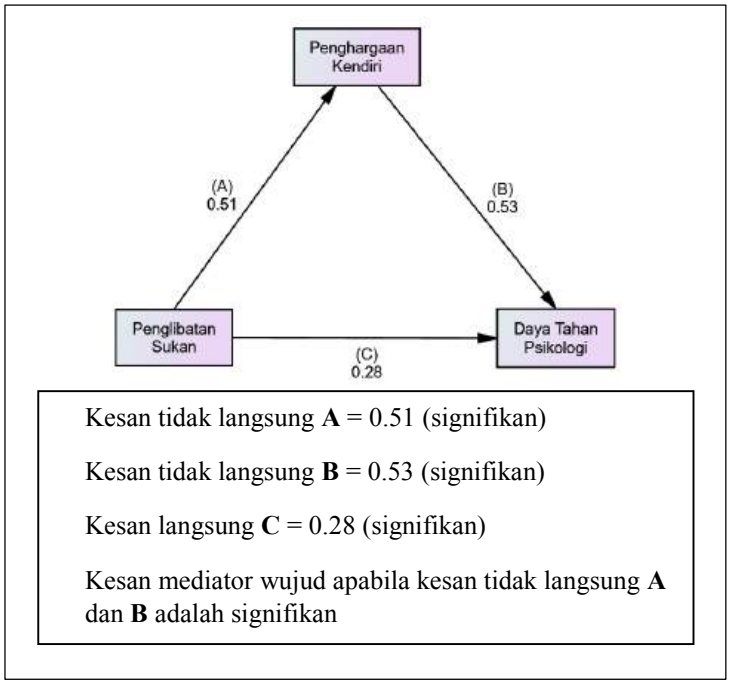
			Standardized Estimate	Estimate	S.E.	C.R.	P	Keputusan
Penghargaan kendiri	<--	Penglibatan sukan	.511	.482	.058	8.294	***	Signifikan
Daya tahan psikologi	<--	Penglibatan sukan	.284	.245	.053	4.619	***	Signifikan
Daya tahan psikologi	<--	Penghargaan kendiri	.529	.484	.063	7.681	***	Signifikan

Rumusan dapatan pengujian hipotesis kesan langsung kajian ini ditunjukkan dalam Jadual 4.

Jadual 4. Dapatan pengujian hipotesis kesan langsung

Hipotesis	Pernyataan	Nilai-P	Keputusan
H1	Penglibatan sukan memberi kesan positif yang signifikan terhadap penghargaan kendiri dalam kalangan murid SBP.	0.001	Disokong
H2	Penghargaan kendiri memberi kesan positif yang signifikan terhadap daya tahan psikologi dalam kalangan murid SBP.	0.001	Disokong
H3	Penglibatan sukan memberi kesan positif yang signifikan terhadap daya tahan psikologi dalam kalangan murid SBP.	0.001	Disokong

Seterusnya, Rajah 4 menunjukkan prosedur untuk menguji kesan penghargaan kendiri sebagai mediator kajian dengan menggunakan prosedur seperti yang dicadangkan oleh (Awang et al., 2023; Wei et al., 2021).



Rajah 3. Dapatan pengujian mediator

3.3 Pengesahan dapatan melalui bootstrapping

Kaedah bootstrapping dijalankan menggunakan teknik persampelan semula bagi mengesahkan pengujian peranan mediator dalam model kajian ini. Maximum Likelihood Estimator (MLE) digunakan bersama 1000 sampel bootstrap dan tahap keyakinan 95% dengan nilai pembetulan bias bagi memastikan ketepatan dalam anggaran kesan mediator. Hasil analisis kaedah bootstrapping untuk pengujian mediator ditunjukkan dalam Jadual 5.

Jadual 5. Rumusan kesignifikanan kesan tidak langsung dan kesan langsung melalui bootstrapping

	Kesan tidak langsung (a x b)	Kesan langsung (c)
Hasil bootstrapping	.271	.285
Nilai-P bootstrapping	.002	.002
Keputusan hipotesis	Signifikan	Signifikan
Jenis mediator	Mediator separa, kerana kesan langsung C didapati signfikan	

Hasil bootstrapping menunjukkan pengujian mediator adalah konsisten dengan menggunakan kaedah konvensional. Oleh itu, dapat disimpulkan bahawa penghargaan kendiri berperanan sebagai mediator yang signifikan dalam hubungan antara penglibatan sukan dan daya tahan psikologi dalam kalangan murid SBP adalah disokong **(H4)**.

4.0 Perbincangan

Kajian ini menunjukkan bahawa penglibatan sukan memberi kesan positif yang signifikan terhadap penghargaan kendiri dalam kalangan murid SBP. Dapatan ini selari dengan kajian oleh Hohyuns et al., (2021) dan Ya'cob & Zawi, (2022) yang mendapati bahawa murid yang terlibat dalam sukan mempamerkan tahap penghargaan kendiri yang lebih tinggi berbanding rakan sebaya yang tidak mengambil bahagian dalam sukan. Individu dengan penghargaan kendiri yang tinggi mempunyai nilai positif dan keyakinan diri yang tinggi dan menyumbang kepadaa pengiktirafan diri yang lebih mendalam (Feng et al., 2024). Peningkatan penghargaan kendiri turut berkait rapat dengan faktor seperti penguasaan kemahiran baharu dan perasaan pencapaian dalam sukan, yang memperkukuh konsep kendiri secara positif (Bang et al., 2020). Oleh itu, dapatan ini menunjukkan bahawa penglibatan sukan berupaya mengembangkan konsep kendiri murid serta memberi kesan yang jelas kepada penghargaan kendiri mereka.

Dapatan kajian ini juga menunjukkan bahawa penghargaan kendiri yang tinggi memainkan peranan pelindung terhadap tekanan, yang memberi kesan terhadap daya tahan psikologi murid SBP. Dengan penghargaan kendiri yang tinggi, murid lebih berdaya tahan untuk mengurus tekanan diri dan mengawal emosi, termasuk kebimbangan terhadap pencapaian akademik mereka (Sittar et al., 2023). Mereka juga mampu untuk menyesuaikan diri dengan cabaran serta mengekalkan pandangan yang positif walaupun berdepan dengan tekanan (Yiyi et al., 2024). Penilaian positif terhadap diri ini turut memupuk kecekapan diri dan menyumbang kepada daya tahan psikologi dalam menghadapi pelbagai cabaran.

Selain itu, penglibatan dalam aktiviti sukan di sekolah berperanan penting dalam membangunkan daya tahan psikologi murid SBP. Aktiviti sukan menyediakan platform untuk murid membina kerjasama dalam pasukan, komunikasi dan kemahiran interpersonal yang kritikal (Guo & Liang, 2023; Kim et al., 2023). Menurut Li et al., (2024), rasa kekitaan dan sokongan sosial yang diperoleh melalui aktiviti sukan membantu murid menghadapi tekanan dengan sikap yang lebih positif. Di samping itu, kajian oleh Bozdağ, (2020) menunjukkan bahawa murid yang terlibat dalam sukan belajar menangani pelbagai masalah dan mengatur strategi semasa bersaing, dapat meningkatkan daya tahan psikologi secara keseluruhan. Oleh itu, penglibatan murid dalam sukan di sekolah berupaya membentuk daya tahan psikologi melalui proses penyesuaian diri secara positif, sekali gus menyediakan mereka untuk menghadapi cabaran dengan lebih berkesan.

Selanjutnya, kajian ini memberikan Gambaran mendalam tentang peranan penghargaan kendiri sebagai mediator antara penglibatan sukan dan daya tahan psikologi murid SBP. Penglibatan sukan berperanan sebagai faktor persekitaran yang menyediakan pelbagai peluang bagi aktiviti fizikal, interaksi sosial, serta pencapaian peribadi yang boleh mempengaruhi hasil psikologi positif murid (Husain et al., 2024). Dalam konteks ini, penghargaan kendiri, muncul sebagai faktor dalaman yang menghubungkan kesan positif penglibatan sukan dengan daya tahan psikologi murid serta memperkukuhkan daya tindak mereka terhadap cabaran hidup. Kajian oleh Wang dan Zhou, (2024) mengukuhkan dapatan ini dengan menekankan bahawa penghargaan kendiri memainkan peranan penting sebagai mediator dalam meningkatkan motivasi, sekaligus mengekalkan kesihatan dan kesejahteraan keseluruhan individu. Selain itu, Lin et al., (2022) juga memberi penekanan bahawa penghargaan kendiri adalah elemen kritikal dalam hubungan antara aktiviti fizikal dan penyesuaian interpersonal dalam kalangan remaja. Berdasarkan bukti ini, peningkatan penghargaan kendiri melalui penglibatan dalam sukan dapat dilihat sebagai satu pendekatan yang berkesan untuk mendorong perkembangan diri dan memperkukuhkan daya tahan psikologi murid. Justeru, kajian ini menambah kepada bukti bahawa penghargaan kendiri dapat memperkukuh kesan positif penglibatan sukan sebagai medium untuk mempertingkatkan kesejahteraan mental dan daya tahan psikologi dalam kalangan murid SBP.

5.0 Kesimpulan

Penglibatan sukan dan penghargaan kendiri menyumbang sebanyak 52% kepada daya tahan psikologi dalam kalangan murid SBP di Malaysia. Penghargaan kendiri juga berperanan sebagai mediator separa dalam kajian ini, yang menghubungkan penglibatan sukan dengan daya tahan psikologi. Murid yang mempunyai penghargaan kendiri yang lebih tinggi menunjukkan kebolehan penyesuaian diri yang lebih baik dalam menghadapi cabaran. Tambahan pula, aspek kerjasama dan sokongan sosial yang diperoleh daripada aktiviti sukan turut mengukuhkan kemahiran interpersonal serta daya tahan murid dalam menangani cabaran

psikologi. Keseluruhannya, kajian ini mengesahkan bahawa penglibatan sukan bukan sahaja meningkatkan penghargaan kendiri tetapi juga bertindak sebagai mekanisme penting dalam membangunkan daya tahan psikologi, sekaligus menyumbang kepada kesejahteraan mental dan emosi murid SBP.

Oleh itu, program intervensi psikologi yang menggunakan sukan sebagai medium boleh dirangka dan dilaksanakan di sekolah. Program ini boleh menyokong pelajar yang menghadapi cabaran psikologi, membantu mereka mengembangkan daya tahan melalui pendekatan berfokuskan sukan. Kajian ini juga menyediakan garis panduan praktikal yang boleh digunakan oleh sekolah, guru, jurulatih, dan penggubal dasar untuk mengukuhkan peranan sukan dalam perkembangan psikologi pelajar. Dengan mengaplikasikan dapatan kajian ini secara praktikal, sekolah dapat mewujudkan persekitaran yang lebih kondusif untuk pembangunan holistik pelajar khususnya dalam aspek ketahanan psikologi.

Penghargaan

Penulis mengucapkan setinggi-tinggi terima kasih kepada semua pihak yang terlibat dalam kajian ini.

Sokongan kewangan dan tajaan

Dibiayai sendiri tanpa pembiayaan atau penajaan luar.

Konflik kepentingan

Tiada konflik kepentingan sepanjang kajian ini dijalankan.

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Pendekatan Pelbagai Disiplin Ilmu dalam Pengajaran Mata Pelajaran Tauhid di Sekolah Agama Swasta

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Abstrak

Kajian Semakan Literatur Sistematik (SLR) ini menyiasat pendekatan pelbagai disiplin dalam pengajaran matapelajaran Tauhid di sekolah agama swasta. Analisis ini melibatkan pengumpulan dan penilaian literatur dari pelbagai sumber akademik yang berkaitan dengan integrasi pelbagai bidang ilmu seperti sains, sejarah, dan seni dalam pengajaran Tauhid. Kajian ini bertujuan untuk memahami bagaimana pendekatan ini dapat memperkayakan pengalaman pembelajaran pelajar dan meningkatkan pemahaman mereka terhadap konsep Tauhid. Hasil analisis menunjukkan bahawa pendekatan pelbagai disiplin ini mampu mengaitkan konsep agama dengan konteks kehidupan sebenar, seterusnya meningkatkan minat dan keterlibatan pelajar. Penemuan ini memberikan saranan penting untuk pembentukan kurikulum di sekolah agama swasta, dengan cadangan untuk memperluas penggunaan pendekatan pelbagai disiplin bagi meningkatkan kualiti pengajaran dan pembelajaran Tauhid.

Kata kunci: Semakan literatur sistematik; Pendekatan pelbagai disiplin; Pengajaran mata pelajaran Tauhid; Konsep Tauhid; Sekolah agama swasta

1.0 Pengenalan

COVID-19 dan Revolusi Perindustrian Keempat (IR 4.0) telah mengubah persekitaran pendidikan untuk menjadi lebih mampan dan berdaya maju. (An et al, 2023). Dua gelombang ini telah menyebabkan perubahan penting yang turut mengubah pendekatan, kaedah, dan teknik yang digunakan dalam bidang pendidikan (Teo et al., 2021).

Impak dari dua gelombang ini telah mencetus revolusi teknologi digital untuk kali keduanya dalam sejarah dunia moden dan transformasi baru pembelajaran dalam talian secara pantas dalam Pendidikan Islam,. Pandemik ini telah menggalakkan pelajar untuk menggunakan sumber pendidikan dalam talian untuk terus mengikuti pengajian mereka semasa tempoh berkurung dan langkah penjarakan sosial (Ayub et al, 2022). Selain itu, kecerdasan buatan (AI) dan data agam telah digunakan untuk meningkatkan pendidikan Islam dengan menawarkan pengalaman pembelajaran yang diperibadikan, menarik, dan dinamik untuk meningkatkan hasil pendidikan (Iris, 2024). Kesan lain dari pandemik dan Revolusi Perindustrian Keempat ini ialah ia telah mengubah fokus latihan perguruan ke arah pembangunan kerjaya secara profesional, membolehkan pendidik memperoleh kemahiran penting dalam menggunakan teknologi moden dan melaksanakan strategi pengajaran yang kreatif dengan cekap (Tee et al., 2024)

Di sebalik manfaatnya, terdapat halangan apabila melibatkan pendanaan dan pembiayaan latihan guru, terutama di sekolah swasta (Fouad, 2021). Perubahan Kurikulum juga mungkin mencetuskan polemik dari segi kesediaan menerima perubahan dengan memasukkan subjek dan topik baharu yang mencerminkan perubahan yang dibawa oleh IR 4.0, memastikan pelajar bersedia untuk pasaran kerja masa hadapan. Pelbagai faktor yang dinyatakan di atas menyumbang kepada pendekatan pelbagai disiplin ilmu yang biasa diamalkan dalam bidang pendidikan, khususnya dalam Pendidikan Islam dan secara khususnya dalam matapelajaran Tauhid, untuk meningkatkan prestasi pelajar (Kementerian Pendidikan Malaysia, 2023).

Secara umumnya, pendekatan pelbagai disiplin dalam pengajaran mata pelajaran Tauhid menawarkan beberapa manfaat yang signifikan. Namun begitu, pendekatan pelbagai disiplin dalam pengajaran Tauhid juga menghadapi beberapa cabaran (Lin et al., 2024).

2.0 Metodologi

Bagi mengkaji manfaat dan cabaran pendekatan pelbagai disiplin ilmu dalam pengajaran ilmu tauhid, satu semakan literatur telah dijalankan untuk meneroka kelebihan dan kesukaran menggunakan pendekatan pelbagai disiplin dalam pengajaran Tauhid di sekolah swasta, berdasarkan tajuk "Pendekatan Pelbagai Disiplin Dalam Pengajaran Mata Pelajaran Tauhid di Sekolah Swasta." Selain itu, analisis semakan literatur menggunakan teknik analisis kandungan berdasarkan kerangka Kerangka Semakan Literatur Sistematik (SLR).

Analisis berbentuk analisis kandungan bermula dengan menyelidik kajian akademik yang berkaitan tentang: a) kaedah interdisiplin dalam pendidikan b) kaedah pengajaran Islam dan Tauhid c) gabungan sains dan agama d) pendekatan saintifik Islam dan Barat e) pendidikan di institusi agama f) halangan/kekurangan dalam penyatuan interdisiplin g) kelebihan/manfaat penyatuan interdisiplin. Penyelidikan ini menggunakan kata kunci dalam Bahasa Inggeris di pangkalan data yang mempunyai kesahihan tinggi, seperti *Scopus, World Scientific, Springer Nature, dan Science Direct,* yang hanya mencari literatur berkaitan dalam Bahasa Inggeris yang telah disemak oleh pakar dan boleh dipercayai.

Kata kunci seperti "multi-disciplinary-approach-education-pedagogy-Islamic teaching-Tauhid/Tauhied/Tauheid/Tauhed/Tauheed-/Tawheed/Tawhed/Tawhid-Integration-Science-Islam-Western-Integration-Interdisciplinary-Weakness-Strength-Opportunities-Advantages-Challenges-Benefit" digunakan dalam pencarian. Penyelidikan melibatkan tempoh masa dari 2019 hingga 2024. Mengikut model Systematic Literature Review (SLR), pencarian kata kunci melalui langkah-langkah) identifikasi (indentification) b) pengesanan (screening) c) Kesahan (eligibity) d) pengesahan (inclusion) (Abu-Salih & Alotaibi, 2024). Pencarian merangkumi pelbagai jenis dokumen, seperti artikel, artikel ulasan, buku, kertas persidangan, dan kertas seminar.

Carian kata kunci menghasilkan 131 rekod dari tahun 2019 hingga 2024 mengenai topik "pendekatan pelbagai disiplin dalam pengajaran Islam." Terdapat 5 artikel yang ditemui di SCOPUS, dengan hanya 4 artikel yang berkaitan dari tahun 2019, 2022, 2023, dan 2024. World Scientific mempunyai 60 artikel, tetapi hanya 4 yang berkaitan dari tahun 2020 dan 2022. Springer Nature mempunyai 12 artikel, dengan hanya 1 artikel yang berkaitan pada tahun 2023. Science Direct tidak mempunyai sebarang artikel yang ditemui, manakala Taylor & Francis Online menemui 111 artikel.

Carian kata kunci menghasilkan 543 rekod yang merangkumi tahun 2019 hingga 2024 mengenai topik "manfaat pendekatan pelbagai disiplin dalam pengajaran Islam." (World Scientific - 6 jurnal dari tahun 2020, 2022; tiada jurnal berkaitan ditemui) (SCOPUS - tiada jurnal ditemui menggunakan kata kunci "benefit of multidisciplinary approach in Islamic teaching") (Springer Nature - 6 artikel; hanya 1 artikel berkaitan pada tahun 2023 dengan kata kunci "benefit multidisciplinary approach in Islamic teaching") (Science Direct - 315 artikel ditemui; hanya 8 artikel berkaitan) (Taylor & Francis Online - 89 artikel berkaitan ditemui).

129 rekod hasil carian dengan kata kunci *"challenges of multidisciplinary approach in islamic teaching"* (World Scientific-15 jurnal dengan carian kata kunci *"challenges of multidisciplinary approach in islamic teaching"*, tiada jurnal berkaitan ditemui) (SCOPUS- 2 jurnal ditemui dengan carian kata kunci *"challenges of multidisciplinary approach in islamic teaching"*, hanya 1 jurnal berkaitan) (Springer Nature - hanya 1 artikel berkaitan pada tahun 2023 dengan kata kunci *"benefit multidisciplinary approach in islamic teaching"*) (Science Direct – 9 artikel berkaitan yang ditemui) (Taylor & Francis Online – 102 artikel berkaitan yang ditemui).

383 rekod hasil carian dengan kata kunci *"intergration Islam and Western"* (World Scientific-3 jurnal dengan carian kata kunci, 0 jurnal berkaitan ditemui) (SCOPUS- 0 jurnal ditemui) (Springer Nature - hanya 1 artikel berkaitan) (Science Direct –1 rekod, 0 artikel berkaitan yang ditemui) (Science Direct –379 rekod, 9 artikel berkaitan yang ditemui) (Taylor & Francis Online – 0 artikel yang ditemui) hanya 10 artikel berkaitan ditemui.

Hasil akhir menunjukkan bahawa daripada 1186 rekod, 341 rekod dianggap relevan berdasarkan kata kunci tajuk kajian, yang dikumpulkan dari platform Scopus, World Scientific, Springer Nature, dan Science Direct. Jumlah ini dicapai setelah melalui empat peringkat menggunakan kerangka Semakan Literatur Sistematik (SLR).

3.0 Dapatan Kajian

Dapatan kajian hasil analisis kandungan dari 341 rekod yang ditemui dalam platform data secara umum membuktikan pendekatan pelbagai disiplin mampu memberi manfaat yang lebih luas kepada masyarakat dan boleh diaplikasi kepada bidang pendidikan Islam terutama matapelajaran Tauhid yang mencakupi aspek yang luas dalam sisi pengamalan agama individu Muslim.

Sekumpulan penyelidik di Parana, Brazil, mengkaji 32 murid berusia tujuh tahun di sebuah sekolah awam menggunakan strategi "Situasi Pembelajaran yang Berpotensi Bermakna" yang mempunyai kaitan dengan pendekatan pelbagai disiplin ilmu. Dapatan kajian menunjukkan bahawa pendekatan ini dapat meningkatkan situasi pembelajaran yang bermakna dalam pendidikan sains, membantu murid menyesuaikan diri dengan transformasi sosial, teknologi, dan sains dengan keyakinan dan kreativiti. (Fernandes et al, 2024).

Satu penyelidikan telah dijalankan untuk meneroka implikasi etika teknologi rahim tiruan dari perspektif Al-Quran bagi mencari pendekatan seimbang yang mengintegrasikan Islam dan sains sambil menangani isu moral berkaitan teknologi ini. Penyelidikan ini yang juga berlatar belakangkan pendekatan pelbagai disiplin ilmu, memberi sumbangan besar kepada bidang akademik Islam dengan menggabungkan kemajuan terkini dalam teknologi sains reproduktif dengan prinsip etika berdasarkan ajaran Tauhid. (AlJahsh, 2024).

Penyelidikan mengenai jenayah siber yang melibatkan pemalsuan produk halal dalam talian menunjukkan bahawa menggunakan pelbagai strategi dari bidang yang boleh ditafsirkan menggunakan pendekatan pelbagai disiplin ilmu yang berbeza dapat membantu mengurangkan ancaman pemalsuan. Sebab untuk menangani jenayah ini timbul daripada mengikuti moral Islam dalam setiap aspek kehidupan seorang Muslim, yang berasal dari ajaran Tauhid (Azizah, 2021).

Satu kajian tentang model pembangunan kurikulum yang menggunakan graf pengetahuan menunjukkan bahawa ia berpotensi meningkatkan pemahaman pendidikan dengan menggabungkan komponen Sains, Teknologi, Kejuruteraan, Seni dan Matematik (STEAM) dan menyokong struktur pengajaran pelbagai disiplin ilmu (Feng et al., 2024).

4.0 Penutup

Dalam konteks pembelajaran matapelajaran Tauhid, pendekatan pelbagai disiplin ilmu disemai, dan dijelmakan dalam bentuk pemaduan antara ilmu –ilmu Islam dan disiplin-disiplin ilmu moden yang lain. Ini bermakna, pendekatan pelbagai disiplin ilmu boleh dirumuskan sebagai suatu anjakan paradigma baru bagi mengabungjalinkan ilmu pengetahuan menerusi kerjasama dan interaksi antara pelbagai disiplin ilmu. Oleh itu, pembelajaran matapelajaran Tauhid mesti menerima perubahan semasa , iaitu tidak cenderung untuk memisahkan diri daripada disiplin lain (dokotomi ilmu). Hal ini menunjukkan bahawa pendidikan Islam bukan sahaja berbicara tentang kajian teologi, tetapi juga boleh berperanan sebagai petunjuk yang lengkap dalam kehidupan bermasyarakat.(Soliha & Faridi, 2024).

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Pembentukan Karakter Murid Melalui Penggunaan Buku Teks Pendidikan Moral Tingkatan Empat Dalam Proses PdPc

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Abstrak

Buku teks berperanan penting dalam menerapkan nilai-nilai murni seperti hormat, kejujuran, tanggungjawab, dan empati kepada murid melalui kandungan, ilustrasi, dan aktiviti yang dirancang secara teliti. Sebagai bahan rujukan utama dalam PdPc, buku teks membantu guru merancang pengajaran yang kontekstual dan relevan dengan kehidupan murid, sejajar dengan matlamat kurikulum Pendidikan Moral untuk membina insan berakhlak mulia. Buku teks juga berfungsi sebagai medium utama dalam PdPc untuk menggalakkan murid memahami konsep moral, mengamalkan penaakulan, serta bertindak secara rasional dalam situasi sebenar. Penggunaan Buku Teks Pendidikan Moral Tingkatan Empat (BTPMT4) dalam PdPc berperanan besar dalam pembentukan karakter murid dengan menyampaikan prinsip moral, mengasah pemikiran kritis melalui dilema moral, serta menyokong perkembangan holistik melibatkan pemikiran, emosi, dan tingkah laku. Aktiviti interaktif seperti perbincangan kumpulan dan main peranan memperkukuh kepimpinan murid dan kecerdasan emosi, membantu mereka memahami perasaan orang lain dan menunjukkan empati. Elemen visual dan situasi moral dalam buku teks turut mendorong murid mencontohi sikap positif dalam kehidupan nyata. Buku Teks Pendidikan Moral Tingkatan Empat (BTPMT4) berperanan sebagai sumber utama pembelajaran moral dan pembentukan karakter murid. Ia mengandungi nilai-nilai murni seperti kejujuran dan tanggungjawab yang diaplikasikan melalui aktiviti individu dan kolaboratif, merangsang pemikiran kritis, dan membantu membuat pertimbangan moral. Kandungan menarik dengan visual yang jelas memudahkan pemahaman, menjadikan PdPc lebih bermakna. Buku ini juga membantu guru merancang pengajaran berfokus untuk melahirkan murid berakhlak mulia dan bertanggungjawab, menjadikannya panduan praktikal dalam membentuk karakter unggul.

Kata Kunci: Buku Teks, Pendidikan Moral, Pembelajaran dan Pemudahcaraan, Karakter

1.0 Pengenalan

Buku Teks Pendidikan Moral Tingkatan Empat berperanan penting dalam membentuk generasi beretika dan bertanggungjawab. Ia menjadi rujukan utama dalam PdPc, membantu guru merancang aktiviti pembelajaran yang menyemai nilai seperti integriti, kejujuran, dan tanggungjawab (Ahmad & Sulaiman, 2020). Buku ini juga mengintegrasikan nilai moral dengan situasi kehidupan sebenar, mendedahkan murid kepada dilema moral untuk meningkatkan pemahaman konsep moral dan etika (Lim, 2020).

Kajian menunjukkan penggunaan Buku Teks Pendidikan Moral Tingkatan Empat dapat membentuk karakter murid melalui pendekatan seperti pembelajaran berasaskan projek dan aktiviti kumpulan yang menggalakkan kerjasama (Rahim & Anuar, 2019). Buku teks ini merangsang pemikiran kritikal murid melalui aktiviti dan soalan, membolehkan mereka mengaplikasikan nilai moral dalam dunia sebenar (Hassan & Zainuddin, 2018). Dengan bimbingan guru yang tepat, buku teks ini menjadi bahan penting dalam membina murid berkarakter tinggi dan bersedia menghadapi cabaran masa depan (Mustafa & Kamaruddin, 2021).

2.0 Sorotan Kajian

2.1 Peranan Buku Teks dalam Pembentukan Karakter Murid

Buku teks memainkan peranan penting dalam pembentukan karakter murid melalui penyampaian nilai-nilai moral, etika dan sosial yang terkandung dalam kandungannya. Buku teks dirancang untuk menyampaikan pengetahuan yang tidak hanya berbentuk fakta, tetapi juga elemen yang membina pemikiran kritis, nilai positif, dan kesedaran moral dalam kalangan murid (Rahman & Ismail, 2018). Dalam konteks Pendidikan Moral Tingkatan Empat, buku teks digunakan untuk membantu murid memahami konsep moral melalui

situasi kehidupan sebenar, ilustrasi yang relevan dan aktiviti yang merangsang refleksi terhadap nilai dan tindakan mereka.

Justeru, buku teks bukan sekadar sumber pembelajaran, tetapi bahan yang penting dalam pembentukan karakter murid. Kandungan dan aktiviti yang terdapat dalam buku teks dapat membantu membina asas moral yang kukuh dalam kalangan murid, dengan syarat penggunaan buku teks ini disokong oleh pedagogi yang sesuai dan efektif.

2.2 Konsep Pemikiran, Emosi dan Tingkah Laku Moral dalam Pendidikan Moral

Pendidikan Moral bertujuan membentuk individu yang memahami, menghayati, dan mengamalkan nilai moral melalui pemikiran, emosi, dan tingkah laku moral yang saling melengkapi. Pemikiran moral menyediakan asas rasional untuk menilai tindakan, emosi moral mendorong tindakan etika, dan tingkah laku moral menerapkan nilai dalam kehidupan (Rahman & Ismail, 2018). Pendidikan yang efektif mengintegrasikan ketiga elemen ini melalui aktiviti seperti perbincangan dilema moral, kajian kes, dan refleksi kritis, membentuk murid yang seimbang dari segi intelek, emosi, dan tingkah laku (Rahim & Anuar, 2019).

2.3 Keberkesanan Gabungan Visual dan Aktiviti dalam Buku Teks

Gabungan elemen visual dan aktiviti dalam buku teks terbukti meningkatkan keberkesanan pembelajaran, terutama dalam Pendidikan Moral, dengan merangsang minat dan membantu murid memahami serta mengaplikasikan nilai moral secara praktikal (Noor & Sulaiman, 2020). Visual menarik menyediakan asas kognitif, manakala aktiviti memberi peluang kepada murid untuk menerapkan pengetahuan secara aktif (Rahman & Ismail, 2021). Sebagai contoh, visual dilema moral disertai soalan perbincangan membolehkan murid menganalisis situasi dan memberi pandangan berasaskan nilai moral. Kajian menunjukkan pendekatan ini meningkatkan pemahaman moral murid sebanyak 40%, menjadikannya strategi pembelajaran yang berkesan dan bermakna (Hashim, Rahman & Tan, 2023).

3.0 Implikasi Kajian

Penggunaan Buku Teks Pendidikan Moral Tingkatan Empat (BTPMT4) dalam PdPc memberi kesan mendalam terhadap pembentukan karakter murid dengan menyediakan pengetahuan moral, merangsang pemikiran kritis, dan mengasah emosi serta tingkah laku positif. Buku ini mengintegrasikan dilema moral dan senario kehidupan sebenar untuk melatih murid membuat keputusan bijaksana, mempertimbangkan kesejahteraan masyarakat, dan menghayati nilai-nilai moral seperti tanggungjawab dan akhlak mulia (Rahman, 2014). Selain menyokong perkembangan holistik murid sejajar dengan objektif kurikulum Pendidikan Moral, BTPMT4 juga mendorong murid menjadi suri teladan yang mempengaruhi rakan sebaya ke arah tingkah laku positif, seterusnya berperanan sebagai agen perubahan dalam masyarakat (Ahmad & Sulaiman, 2020). Pendekatan ini memastikan murid bukan sahaja membina karakter sendiri tetapi juga menyumbang kepada pembentukan generasi muda yang beretika dan bertanggungjawab.

4.0 Cadangan Kajian

Penggunaan Buku Teks Pendidikan Moral Tingkatan Empat (BTPMT4) dalam PdPc memainkan peranan penting dalam membentuk karakter murid yang unggul melalui pendekatan holistik. Dengan panduan berstruktur, guru dapat memanfaatkan elemen buku teks seperti dilema moral, aktiviti kolaboratif, dan latihan untuk merangsang pemikiran kritis, emosi moral, dan tingkah laku positif. Elemen visual yang menarik dan aktiviti interaktif seperti projek komuniti membantu mengasah kemahiran sosial serta mencetuskan empati dan tanggungjawab. Cadangan untuk meningkatkan kandungan buku teks dan integrasi teknologi dalam modul pengajaran juga memberikan panduan kepada guru untuk pengajaran yang menyeluruh, melibatkan aspek pemikiran, emosi, dan tingkah laku moral murid. Pendekatan ini bukan sahaja memastikan murid cemerlang akademik, tetapi juga melahirkan individu bermoral, berintegriti, dan bertanggungjawab, selaras dengan matlamat Pendidikan Moral.

Justeru, melalui gabungan panduan untuk guru, peningkatan kandungan buku teks dan modul pengajaran yang inovatif, murid dapat membentuk karakter yang unggul. Mereka akan memiliki integriti,

pemikiran kritis, empati dan tanggungjawab sosial yang tinggi, sesuai dengan matlamat Pendidikan Moral untuk melahirkan individu yang berakhlak mulia dan mempunyai karakter yang unggul.

5.0 Kesimpulan

Buku Teks Pendidikan Moral Tingkatan Empat (BTPMT4) berfungsi sebagai sumber utama memahami konsep moral dan membentuk karakter murid melalui kandungan nilai seperti kejujuran, tanggungjawab, dan hormat-menghormati. Buku ini menyediakan aktiviti dan latihan yang merangsang pemikiran kritikal, membolehkan murid mengaplikasikan konsep moral dalam situasi sebenar secara individu atau kolaboratif, serta menggalakkan perbincangan mendalam. Struktur sistematik dengan visual dan ilustrasi menarik memudahkan pengajaran guru dan pemahaman murid, menjadikan buku teks ini medium penting untuk melahirkan murid bermoral tinggi, bertanggungjawab, dan berakhlak mulia dalam masyarakat.

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Pengaruh Budaya Organisasi Terhadap Tingkah Laku Kerja Tidak Produktif Di Institusi Pengajian Tinggi Malaysia

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Abstrak

Kajian ini bertujuan untuk meneroka pengaruh budaya organisasi terhadap tingkah laku kerja tidak produktif (Counterproductive Work Behavior, CWB) di institusi pengajian tinggi Malaysia. Budaya organisasi merangkumi nilai, kepercayaan, dan norma yang mengarahkan tingkah laku pekerja dalam sesebuah organisasi. Kajian ini menggunakan pendekatan kualitatif dengan menganalisis kesusasteraan sedia ada serta kajian empirikal terdahulu untuk mengenal pasti elemen-elemen budaya organisasi yang berkaitan dengan peningkatan atau pengurangan tingkah laku kerja tidak produktif ini. Hasil kajian ini dijangka dapat memberikan panduan kepada pengurusan institusi pengajian tinggi dalam merangka strategi budaya organisasi yang dapat mengurangkan tingkah laku kerja tidak produktif, seterusnya meningkatkan prestasi organisasi secara keseluruhan.

Keywords: budaya organisasi, tingkah laku kerja tidak produktif, universiti awam.

1.0 Pengenalan

Budaya organisasi merupakan elemen penting dalam pembentukan tingkah laku, sikap, dan nilai pekerja dalam sesebuah organisasi. Ia berfungsi sebagai kerangka yang menetapkan jangkaan mengenai norma dan kelakuan yang diterima oleh pekerja dalam menjalankan tugas mereka (Akpa et al., 2021). Di institusi pengajian tinggi, budaya organisasi bukan sahaja mempengaruhi keberkesanan operasi pentadbiran dan pengajaran, tetapi juga menentukan sejauh mana kakitangan dapat mengekalkan prestasi dan produktiviti mereka dalam persekitaran yang kompetitif (Tahiraj & Krek, 2021). Namun demikian, apabila budaya organisasi tidak diselaraskan dengan keperluan atau harapan pekerja, tingkah laku kerja tidak produktif atau *Counterproductive Work Behavior* (CWB) boleh muncul sebagai cabaran yang signifikan. Tingkah laku ini merujuk kepada tindakan yang merosakkan pencapaian matlamat organisasi, seperti penyalahgunaan masa kerja, kecurangan, atau tingkah laku agresif (Robinson & Bennett, 1995).

Institusi pengajian tinggi di Malaysia berfungsi sebagai pusat pembangunan modal insan, di mana kakitangan akademik dan pentadbiran memainkan peranan penting dalam menjayakan agenda pendidikan negara. Sehubungan itu, memahami pengaruh budaya organisasi terhadap tingkah laku kakitangan menjadi kritikal dalam memastikan prestasi institusi kekal kompetitif. Walau bagaimanapun, kajian mengenai hubungan antara budaya organisasi dan CWB di kalangan kakitangan institusi pengajian tinggi di Malaysia masih terhad. Justeru, memberi penumpuan kepada pengaruh elemen-elemen budaya organisasi, seperti nilai, norma, dan sistem ganjaran, terhadap kelakuan kerja tidak produktif di institusi pengajian tinggi di Malaysia sangat penting dan signifikan. Dengan pemahaman yang lebih mendalam tentang peranan budaya organisasi, pengurusan institusi dapat merancang strategi yang lebih efektif untuk meningkatkan kesejahteraan pekerja dan meminimumkan risiko CWB dalam organisasi.

2.0 Hubungan antara budaya organisasi dan tingkah laku kerja tidak produktif

Hubungan antara budaya organisasi dan CWB merupakan satu interaksi yang kompleks yang dipengaruhi oleh pelbagai faktor, termasuk keadilan organisasi, pengenalan diri pekerja, dan sokongan yang dirasai. Dalam sorotan kajian-kajian lepas mengenai hubungan antara budaya organisasi dan tingkah laku kerja tidak produktif banyak menjelaskan tentang kepentingan memahami bagaimana elemen-elemen budaya dalam sesebuah organisasi boleh mempengaruhi tahap produktiviti pekerja. Budaya organisasi, yang merangkumi nilai-nilai asas, kepercayaan, dan norma yang dikongsi dalam kalangan anggota organisasi, berfungsi sebagai kerangka sosial yang membentuk sikap dan tingkah laku pekerja (Denison & Mishra, 1995; Tadesse Bogale & Debela, 2024). Pelbagai kajian telah menunjukkan bahawa budaya organisasi yang

kukuh boleh memainkan peranan penting dalam mengurangkan tingkah laku negatif (Thokozani SBM, 2017), seperti kecurian, kelewatan, dan konflik interpersonal (Bujang et al., 2024). Sebaliknya, budaya organisasi yang lemah atau tidak berfungsi dengan baik boleh menyumbang kepada peningkatan tingkah laku kerja tidak produktif, yang akhirnya menjejaskan prestasi keseluruhan organisasi (Bujang et al., 2024; Tadesse Bogale & Debela, 2024).

Salah satu aspek penting budaya organisasi yang mempengaruhi CWB adalah persepsi terhadap keadilan organisasi. Kajian menunjukkan bahawa kekurangan persepsi terhadap keadilan organisasi merupakan penunjuk utama kepada tingkah laku tidak produktif. Pekerja yang merasakan layanan tidak adil lebih cenderung untuk terlibat dalam tingkah laku yang merugikan organisasi, kerana mereka mungkin berasa terasing atau tidak dilayan dengan adil, yang membawa kepada pengasingan kerja dan seterusnya tingkah laku negatif (Amzulescu & Butucescu, 2021; Adugna et al., 2022; Yogasari & Budiasih, 2019). Kepimpinan transformasi telah dikenalpasti sebagai faktor mitigasi yang berpotensi, kerana ia boleh memupuk rasa keadilan dalam tempat kerja, sekali gus mengurangkan kemungkinan CWB (Yogasari & Budiasih, 2019).

Selain itu, konsep pengenalan diri dengan organisasi memainkan peranan penting dalam dinamik ini. Kajian menunjukkan bahawa tahap pengenalan diri yang tinggi dengan organisasi dapat melindungi daripada CWB, terutama apabila pengenalan ambivalen adalah rendah (Ciampa et al., 2019). Apabila pekerja sangat mengenali diri mereka dengan organisasi, mereka kurang cenderung untuk terlibat dalam tingkah laku yang bertentangan dengan matlamat organisasi. Sebaliknya, apabila pengenalan diri adalah lemah atau ambivalen, pekerja mungkin merasa terputus hubungan, yang membawa kepada peningkatan kejadian CWB sebagai bentuk pembalasan terhadap ketidakadilan yang dirasai atau ketidakpuasan dengan persekitaran kerja mereka (Ciampa et al., 2019; Lee et al., 2015).

Persepsi terhadap sokongan organisasi juga memberi pengaruh yang besar kepada CWB. Kajian mencadangkan bahawa apabila pekerja merasa disokong oleh organisasi, mereka kurang cenderung untuk terlibat dalam tingkah laku tidak produktif (Estifo et al., 2019). Sokongan ini boleh dilihat melalui pelbagai amalan sumber manusia yang mengutamakan kesejahteraan dan penglibatan pekerja, yang seterusnya membentuk budaya organisasi positif yang menghalang CWB. Sebaliknya, kekurangan sokongan boleh menyebabkan perasaan ketidakpastian pekerjaan dan tekanan, yang dikaitkan dengan kadar CWB yang lebih tinggi (Kim et al., 2023; Yao, 2021).

Selain itu, peranan faktor tekanan kerja juga tidak boleh diabaikan. Faktor seperti beban kerja, konflik interpersonal, dan kekangan organisasi telah dikenal pasti sebagai pencetus kepada CWB. Pekerja yang mengalami tahap tekanan yang tinggi lebih cenderung untuk terlibat dalam tingkah laku yang merugikan organisasi (Yao, 2021). Hubungan ini menekankan pentingnya budaya organisasi yang menyokong, yang secara aktif berusaha untuk mengurangkan tekanan dan meningkatkan kesejahteraan pekerja.

3.0 Landasan Teori

Dalam memahami hubungan atau pengaruh budaya organisasi terhadap tingkah laku kerja tidak produktif, pemahaman terhadap landasan teori yang mampu menjelaskan tentang fenomena ini adalah penting agar penjelasan mengenai hubungan ini dapat dibuat secara berstruktur, sistematik, dan berdasarkan asas yang kukuh. Salah satu teori yang selalu digunakan dalam kajian-kajian lepas dalam memahami fenomena ini adalah Teori Pertukaran Sosial (Social exchange theory (SET).

Secara umumnya, Teori Pertukaran Sosial memberi pemahaman yang mendalam tentang bagaimana pertukaran sosial berlaku dalam organisasi dan masyarakat, serta memberi panduan untuk memahami tingkah laku individu dan hubungan antara individu dalam konteks sosial (Cropanzano et al., 2017). Teori Pertukaran Sosial menekankan kepentingan timbal balik dalam interaksi sosial yang mana seseorang individu akan merasa bermotivasi untuk mengekalkan hubungan di mana terdapatnya keseimbangan antara memberi dan menerima. Teori ini juga mengakui peranan kepercayaan dan persefahaman bersama dalam memupuk hubungan yang berjaya, serta potensi wujudnya konflik dan ketegangan apabila jangkaan tidak dipenuhi (Cropanzano & Mitchell, 2005; Meira & Hancer, 2021). Salah satu aspek utama dalam pertukaran sosial adalah konsep peranan hubungan timbal balik yang mengatur norma dan jangkaan serta membimbing sesebuah interaksi sosial. Walaupun bagaimanapun, teori ini juga

mengakui peranan aspek-aspek lain seperti altruisme, keuntungan kumpulan, dan persaingan juga mempengaruhi dinamika sesebuah pertukaran atau hubungan. Memahami peranan kesemua aspek ini adalah penting untuk meramalkan dan menjelaskan tingkah laku dalam hubungan pertukaran sosial (Cropanzano et al., 2017; Shore et al., 2009).

Dalam bahasa yang lebih mudah, teori ini melibatkan pertukaran sumber antara dua pihak atau lebih melalui proses timbal balik, di mana satu pihak cenderung membalas perbuatan baik atau buruk pihak lain bergantung kepada respons yang diterima (Cropanzano et al., 2017). Kualiti pertukaran ini dipengaruhi oleh hubungan antara pelaku dan sasaran yang mana sekiranya hubungan yang diterima adalah baik, maka kebarangkalian tindakan timbal balas yang diberikan juga adalah baik dan begitu juga sebaliknya. Teori pertukaran sosial menyediakan kerangka untuk memahami pelbagai fenomena sosial, termasuk tingkah laku di tempat kerja, proses hubungan, dan proses membuat keputusan (Cropanzano & Mitchell, 2005; Shore et al., 2009).

4.0 Implikasi

Implikasi kertas konsep ini akan memberikan sumbangan dalam pengurusan organisasi, khususnya dalam konteks institusi pengajian tinggi (IPT) di Malaysia dengan menyediakan panduan strategik untuk membangun budaya organisasi yang lebih kondusif. Pemahaman yang mendalam tentang bagaimana elemen-elemen budaya organisasi tertentu mempengaruhi tingkah laku kerja tidak produktif (CWB) dapat membantu pihak pengurusan mengenal pasti punca masalah dan melaksanakan pendekatan pencegahan yang bersifat proaktif. Misalnya, penekanan terhadap budaya yang menggalakkan komunikasi terbuka, kepercayaan, dan penghargaan terhadap pekerja dapat meminimumkan tingkah laku negatif dalam kalangan kakitangan.

Selain itu, kajian ini berpotensi memperkukuh dasar dan amalan pengurusan sumber manusia di IPT dengan memberi asas saintifik untuk menilai keberkesanan program intervensi sedia ada. Hasil kajian boleh digunakan untuk memperbaiki dasar latihan dan pembangunan, menyokong pembangunan polisi kerja yang lebih fleksibel, serta memperkukuh mekanisme kebertanggungjawaban dalam organisasi. Implikasi ini bukan sahaja relevan kepada IPT tetapi juga boleh diaplikasikan dalam sektor lain yang berdepan cabaran serupa dalam pengurusan budaya organisasi dan CWB.

5.0 Kesimpulan

Kajian ini menegaskan bahawa budaya organisasi memainkan peranan penting dalam membentuk tingkah laku kerja, termasuk tingkah laku kerja tidak produktif (CWB), khususnya di institusi pengajian tinggi (IPT) di Malaysia. Dengan memberikan tumpuan kepada elemen-elemen seperti nilai, norma, sistem ganjaran, serta faktor keadilan organisasi, pengenalan diri pekerja, dan sokongan organisasi, artikel ini telah membuktikan bahawa budaya organisasi yang kondusif mampu mengurangkan CWB, manakala kelemahan dalam budaya organisasi boleh menyumbang kepada peningkatan tingkah laku negatif.

Pemahaman mendalam terhadap hubungan antara budaya organisasi dan CWB memberikan asas kukuh kepada pihak pengurusan IPT untuk merangka strategi yang lebih efektif dalam memperkukuh budaya organisasi yang positif. Kajian ini juga mencadangkan bahawa pendekatan pengurusan yang lebih proaktif, seperti peningkatan keadilan organisasi, komunikasi terbuka, dan pembangunan polisi yang fleksibel, dapat membantu meminimumkan risiko tingkah laku negatif dalam organisasi. Oleh itu, kajian ini bukan sahaja menyumbang kepada literatur sedia ada tetapi juga berpotensi untuk diaplikasikan dalam usaha memperbaiki keberkesanan pengurusan organisasi di IPT dan sektor lain secara umum.

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Sorotan Literatur Bersistematik: Meneroka Kaedah Kawalan Emosi Pelajar Pintar Cerdas Di Kolej Permata Insan

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Abstrak

Kajian literatur bersistematik ini mengkaji kaedah kawalan emosi pelajar pintar cerdas di Kolej Permata Insan. Kajian ini menganalisis artikel yang diterbitkan antara Januari 2020 dan Oktober 2024 daripada pangkalan data Scopus dan SAGE Journals untuk menjawab persoalan kajian. Majoriti kajian tertumpu kepada kaedah yang digunapakai oleh pelajar pintar cerdas di Kolej Permata Insan untuk mengawal emosi negatif yang timbul akibat daripada tekanan akademik dan sosial. Kajian literatur ini mendapati bahawa tidak banyak kajian-kajian lampau berkenaan emosi pelajar dalam apa jua aspek sama ada positif ataupun negatif boleh didapati daripada kedua-dua sumber tersebut terutama yang melibatkan pelajar pintar cerdas di Malaysia.

Kata kunci : Pintar cerdas; Emosi negatif; Permata Insan

1.0 Pengenalan

Sorotan Literatur Bersistematik ini mengkaji kajian-kajian lampau berkenaan kaedah kawalan emosi pelajar pintar cerdas akibat daripada tekanan yang dihadapi daripada sudut tekanan akademik atau tekanan sosial. Pengetahuan berkenaan kaedah - kaedah yang digunakan oleh pelajar-pelajar pintar cerdas ini dalam membantu mereka mengawal emosi negatif yang timbul dalam diri mereka akan dapat membantu guru dan pendidik memperbaiki amalan pengajaran dan berkemungkinan akan mengubah sistem dan disiplin sedia ada bagi meningkatkan keberkesanan pengajaran di institusi-institusi pendidikan yang melibatkan pelajar pintar cerdas, terutamanya di KPI.

2.0 Objektif Kajian

Secara umumnya, kajian ini dilaksanakan untuk meneroka dan memahami kesediaan pelajar pintar cerdas di Kolej Permata Insan dalam mengawal emosi mereka, khususnya dalam menghadapi tekanan akademik dan sosial. Objektif khusus yang telah digariskan oleh pengkaji adalah seperti berikut:

1. Menentukan sama ada tekanan akademik dan sosial memberikan tekanan kepada pelajar KPI.
2. Mengenalpasti bentuk emosi negatif yang ditunjukkan oleh pelajar pintar cerdas KPI semasa menghadapi tekanan akibat akademik dan sosial.
3. Meneliti kesan negatif tekanan akademik dan sosial terhadap pelajar KPI.
4. Mengenalpasti kaedah yang digunakan oleh pelajar pintar cerdas di KPI untuk mengawal emosi mereka.
5. Mendapatkan cadangan daripada pelajar pintar cerdas di KPI untuk meningkatkan sokongan emosi mereka.

3.0 Metodologi

Dalam menjalankan sistematik review ini, pengkaji telah menggunakan pangkalan data SAGE Journals, dan Scopus yang mengumpulkan kajian-kajian ilmiah yang berkaitan dengan kaedah kawalan emosi bagi pelajar pintar cerdas. Pangkalan data ini dipilih kerana kebolehpercayaannya dan capaian kepada artikel yang berkualiti tinggi.

4.0 Strategi Carian

Pencarian artikel-artikel ini adalah berfokus dengan menggunakan pangkalan data Scopus dan SAGE Journals. Pemboleh ubah yang telah dikenal pasti dalam kajian ini adalah emosi pelajar pintar cerdas. Kata kunci "emotional" dan "gifted" telah digunakan untuk mencari artikel yang relevan dalam dalam bahasa Melayu dan bahasa Inggeris.

Jadual 1 Kata Kunci dan Pangkalan Data digunakan dalam Carian Artikel

Pangkalan data	Kata kunci yang digunakan
Scopus	TITLE-ABS-KEY ((emotio* AND gifted student), (emosi AND "pintar cerdas")
SAGE Journals	Search all journals ((emotio* AND gifted student), (emosi AND "pintar cerdas")

5.0 Peringkat pemilihan

Dalam peringkat pemilihan artikel, garis panduan Perfect Reporting Items for Systematic Review and Meta-Analyses (PRISMA) telah digunakan sebagai panduan untuk membuat pemilihan dan penyemakan artikel berdasarkan persoalan kajian. Penggunaan PRISMA membenarkan carian rapi dan sistematik berkaitan emosi pelajar pintar cerdas melalui proses tapisan berdasarkan kelayakan dan pengecualian artikel yang diperoleh daripada pangkalan data yang dipilih iaitu SAGE Journals dan Scopus.

6.0 Kriteria Kelayakan dan Pengecualian

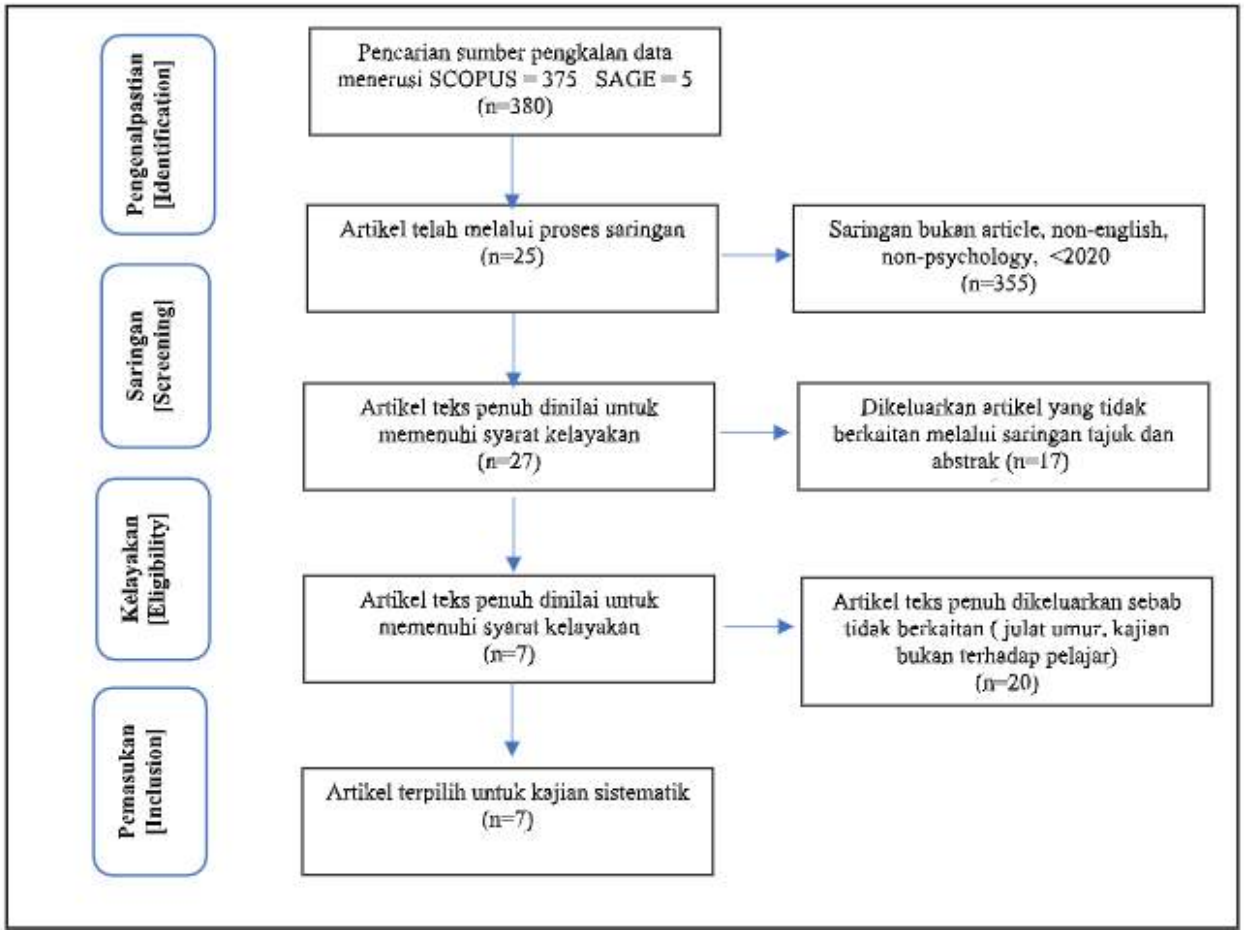
Beberapa kriteria telah ditetapkan untuk kelayakan dan pengecualian untuk menapis artikel yang diperoleh daripada pangkalan data SCOPUS dan SAGE Journals iaitu dari segi jenis dokumen, bahasa, garis masa penerbitan, negara dan artikel jurnal boleh diakses. Dalam peringkat ini, pemilihan artikel terhad kepada artikel jurnal yang boleh diakses dari tahun 2020 sehingga 2024 bagi memastikan kerelevenan artikel tersebut dengan pelaksanaan pengajaran dan pembelajaran. Artikel dalam bahasa inggeris dan bahasa melayu dipilih agar lebih mudah difahami dan ditafsirkan. Manakala, artikel jurnal yang tidak mempunyai akses terbuka, artikel jurnal dalam bahasa selain bahasa Inggeris dan melayu serta prosiding, persidangan, tesis atau buku adalah dikecualikan. Kriteria pemilihan dan penerimaan artikel ditunjukkan dalam Jadual 2 seperti berikut.

Jadual 2 Kriteria pemilihan dan penerimaan artikel

Kriteria	Kelayakan	Pengecualian
Jenis literatur	Journal berindeks (artikel)	Jurnal tidak terindeks, buku, prosiding persidangan
Bahasa	English, Bahasa Malaysia	Non-english (except Bahasa Malaysia)
Jangka masa	Antara tahun 2020 -2024	<2020
Indeks	Indeks Sains Sosial (psikologi)	Indeks Sains

Proses semakan bersistematik mempunyai beberapa tahap. Tahap pertama adalah proses mengenal pasti (identification) artikel yang wujud dalam pangkalan data Scopus dan SAGE Journal berdasarkan kata kunci yang digunakan untuk proses carian. Hasil carian menggunakan kata kunci yang digunakan menunjukkan bahawa terdapat 375 dokumen daripada Scopus dan 5 dokumen daripada SAGE Journal. Pengkaji juga cuba melihat dapatan daripada Google Scholar sebagai sumber sampingan.

Tahap yang kedua adalah proses saringan (screening) yang mana 355 dokumen dikecualikan berdasarkan jenis dokumen bukan artikel jurnal, tahun penerbitan adalah tahun 2019 dan ke bawah, bahasa selain bahasa inggeris dan bahasa melayu dan jurnal tidak berkaitan bidang psikologi. Tahap ketiga ialah proses kelayakan (eligibility) yang mana artikel penuh telah diperiksa dan didapati 17 artikel telah dikeluarkan kerana tidak berkait rapat dengan emosi pelajar pintar cerdas dan hanya 27 artikel jurnal sahaja yang perlu dibuat penyelidikan meta- analisis iaitu penyaringan melalui pelbagai kaedah supaya sepadan dan layak. Hasil meta-analisis mendapati bahawa hanya 7 jurnal kajian yang layak diambil kira sebagai kajian yang paling berkaitan dengan emosi pelajar pintar cerdas. Rajah 1 menunjukkan proses semakan secara sistematik dijalankan dalam kajian ini. Manakala, Jadual 3 menunjukkan hasil dapatan awal 3 artikel jurnal yang layak dimasukkan dianalisa secara kualitatif.



Rajah 1 Proses pemilihan artikel melalui PRISMA (Sumber: Mengist et al., (2020)

Daripada proses tersebut, pengkaji mendapati hanya 3 artikel yang benar-benar menepati kelayakan kajian seperti yang ditunjukkan dalam Jadual 3.

Jadual 3 Dapatan Awal Jurnal Artikel Yang Layak Dianalisa

Penulis	Tahun	Tajuk
Tengku Elmi Azlina	2024	Profil Isu Sosioemosi Pelajar Pintar Dan Berbakat
Pinxten, W.L.F.-V.	2023	The Psychological World of Highly Gifted Young Adults: a Follow-up Study
Sisk, D.	2023	Managing the emotional intensities of gifted students with mindfulness practices
Tsai, Minying	2024	The pilot study on the effect of a Compassion-Based Program on gifted junior high school students' emotional styles, Self-Compassion, Empathy, and Well-Being
Monzó-Martínez, Anna	2024	Teacher Attitudes towards Serving Gifted Students in the Valencian Community. A Case Study
Tsai, Minying	2023	Comparing Perfectionism, Cognitive Mindset, Constructive Thinking, and Emotional Intelligence in Gifted Students by Grade and Gender
Sisk, Dorothy	2021	Managing the emotional intensities of gifted students with mindfulness practices

Dapatan dan Perbincangan

Emosi negatif merujuk kepada perasaan atau reaksi yang biasanya dikaitkan dengan pengalaman yang tidak menyenangkan atau tekanan. Contoh emosi negatif termasuk marah, sedih, cemas, takut, kecewa, rasa bersalah, malu, dan benci. Emosi ini boleh mempengaruhi seseorang secara mental dan fizikal, dan jika tidak ditangani dengan betul, boleh membawa kepada masalah kesihatan mental seperti kemurungan dan kebimbangan (Barlow, 2002). Tekanan adalah emosi negatif yang sangat biasa di kalangan pelajar. Ia boleh disebabkan oleh beban kerja akademik yang tinggi, ekspektasi yang tinggi dari ibu bapa dan guru, serta kekangan masa. Pelajar sering merasakan tekanan untuk mencapai kecemerlangan akademik, yang boleh menyebabkan keletihan mental dan fizikal.

Kebimbangan pula merujuk kepada perasaan risau yang berterusan tentang pelbagai perkara seperti peperiksaan, kerja sekolah, dan interaksi sosial. Kebimbangan ini boleh mengganggu tumpuan dan mengurangkan keupayaan pelajar untuk belajar dengan berkesan. Selain itu, kebimbangan yang berlebihan boleh menyebabkan gangguan tidur dan kesihatan fizikal yang lain. Selain itu, perasaan kecewa pula adalah perasaan yang timbul apabila pelajar gagal mencapai matlamat mereka. Kecewa boleh menyebabkan kehilangan motivasi dan minat dalam pelajaran. Pelajar yang kerap merasa kecewa mungkin akan mula meragui kebolehan mereka sendiri dan merasakan bahawa usaha mereka tidak berbaloi.

Menurut kajian oleh Garfin et al. (2020), tekanan yang dialami oleh pelajar boleh mempengaruhi kesihatan mental mereka secara keseluruhan, menyebabkan gangguan seperti kebimbangan dan kemurungan. Kajian oleh Guse et al. (2022) pula menunjukkan bahawa kebimbangan akademik adalah salah satu faktor utama yang menyumbang kepada tekanan di kalangan pelajar. Kebimbangan dan tekanan akan mengundang kekecewaan. Kekecewaan yang berterusan boleh menyebabkan penurunan dalam prestasi akademik dan keyakinan diri pelajar (Lee et al., 2021).

Kajian lepas telah menunjukkan dengan yakin bahawa pelajar pintar cerdas menghadapi pelbagai isu sosioemosi seperti keinginan untuk kesempurnaan, keterujaan yang luar biasa, dan beberapa kategori emosi lain. Ia mengundang perasaan rasa tidak puas hati, bimbang, takut, putus asa, marah, dan tertekan. Ciri-ciri negatif ini akan membebankan pelajar. Dalam konteks pembelajaran, emosi negatif ini boleh merencatkan proses pembelajaran akibat konflik interaksi yang timbul. (Bee 1999; Rimm 2003; Ng Sen Fa 2005; Ananda Kumar 2008; Mohd Zuri et al. 2008). Namun begitu, dapatan ini hanya secara tidak langsung sahaja. Kurangnya kajian langsung berkenaan pengurusan emosi negatif pelajar pintar cerdas.

Dapatan daripada kajian lepas juga memberikan penjelasan yang sebenar bahawa banyak kajian lalu hanya tertumpu kepada pengetahuan berkenaan kesan daripada sesuatu tindakan terhadap emosi pelajar. Tidak banyak kajian lepas yang meneliti apakah sebenarnya emosi yang selalu dihadapi oleh pelajar pintar cerdas, terutamanya emosi negatif mereka. Kajian lepas juga kurang menumpukan kepada bagaimana pelajar pintar cerdas belajar menguasai emosi negatif mereka.

Pengkaji memerhatikan bahawa perlunya untuk menilai emosi negatif pelajar pintar cerdas. Kajian perlu dilakukan untuk menilai apakah sebenarnya emosi negatif yang selalunya dihadapi oleh mereka. Apakah kaedah yang mereka gunakan untuk membantu mereka menguruskan emosi negatif tersebut ? Adakah rakan, guru dan ibu bapa terlibat dalam pengurusan emosi negatif mereka ? Persoalan ini perlu dijelaskan melalui kajian empirikal yang berkesan. Justeru, pengkaji mengetengahkan satu kajian kualitatif yang mampu mendapatkan jawapan kepada persoalan tersebut secara mendalam dan empirikal. Pengkaji menjadikan pelajar pintar cerdas di Kolej Permata Insan sebagai responden. Hasil kajian diharap dapat menjelaskan apakah emosi negatif yang mereka alami sebagai seorang pelajar pintar cerdas. Begitu juga, kajian ini diharap dapat menjelaskan apakah kesan yang mereka alami akibat daripada emosi negatif yang timbul. Seterusnya, kajian ini diharap dapat menjelaskan bagaimana mereka menguruskan emosi negatif tersebut.

Oleh kerana kajian ini hanya tertumpu kepada pelajar pintar cerdas sahaja, berkemungkinan sifat emosi yang akan dijelaskan nanti adalah tidak sepadan dengan dapatan kajian terhadap pelajar biasa. Malahan kajian ini akan dapat membantu pelajar pintar cerdas untuk memahami perasaan sesama mereka. Sebagai manusia biasa, kita merasakan bahawa apabila kita mengalami sesuatu emosi, kita menganggap bahawa hanya kita berseorangan yang mengalami emosi tersebut, tidak ada orang yang dapat memahami apa yang kita alami. Dalam masalah ini, kajian ini cuba untuk membuktikan bahawa akan ada lebih daripada

seorang yang akan mengalami nasib dan emosi yang sama. Oleh itu, kaedah yang digunakan untuk melaluinya juga boleh dikongsi untuk mendapatkan kesan dan manfaat bersama.

Kajian ini juga diharap dapat memberikan pemahaman yang lebih luas kepada para guru, ibu bapa, pentadbir sekolah, kaunselor dan keluarga dan rakan sebaya bagi pelajar pintar cerdas. Kebanyakan kita juga kurang mengtahui apakah emosi terutamanya emosi negatif yang lazimnya menghantui dan merosakkan pelajar pintar cerdas. Dengan adanya pengetahuan yang mendalam berkenaan emosi mereka, pemahaman akan meningkat dan tindakan yang akan diambil sudah tentu akan sedikit mengalami perubahan berbanding sebelum ini.

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Pengaruh Pemilihan Subjek Akademik Terhadap Kebimbangan dan Kemurungan Dalam Kalangan Pelajar Tingkatan Enam di Tawau, Sabah

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Abstrak

Kajian ini bertujuan untuk mengkaji pengaruh pemilihan subjek akademik terhadap kebimbangan dan kemurungan dalam kalangan pelajar tingkatan enam di daerah Tawau, Sabah. Pemilihan subjek akademik yang tepat penting dalam menentukan hala tuju pendidikan dan minat kerjaya pelajar. Pemilihan subjek yang diminati boleh mempengaruhi kesejahteraan mental mereka. Kajian ini akan melibatkan 268 orang pelajar Kolej Tingkatan Enam (Prauniversiti) Tawau, Sabah untuk mengukur tahap kebimbangan dan kemurungan. Mereka akan dipilih melalui kaedah persampelan rawak berstrata (stratified random sampling) dengan menggunakan formula Cochran untuk populasi seramai 893 orang pelajar dan saiz sampel dari setiap strata adalah berkadar dengan saiz strata dalam populasi. Generalized Anxiety Disorder-7 (GAD-7) akan digunakan untuk mengukur tahap kebimbangan pelajar dan Patient Health Questionnaire-9 (PHQ-9) akan digunakan untuk mengukur tahap kemurungan. Inventori Minat Kerjaya Holland Code (RIASEC) akan digunakan untuk mengukur keselarasan pemilihan subjek akademik dengan minat kerjaya pelajar. Dapatan kajian lepas menunjukkan pelajar yang memilih subjek yang tidak sesuai dengan minat kerjaya mereka cenderung mengalami tahap kebimbangan dan kemurungan yang lebih tinggi berbanding pelajar yang memilih subjek yang sesuai dengan minat kerjaya mereka. Untuk meningkatkan tahap kesejahteraan mental pelajar, sebarang langkah intervensi menangani kemurungan dan kebimbangan pelajar perlulah memberi perhatian kepada pemilihan subjek yang selaras dengan minat kerjaya pelajar serta menyediakan perkhidmatan kanseling yang lebih berkesan.

Kata kunci: Pemilihan Subjek Akademik; Kebimbangan; Kemurungan; Pelajar Tingkatan Enam; Minat Kerjaya.

1.0 Pengenalan

Pendidikan merupakan salah satu aspek penting dalam pembangunan individu dan negara. Di Malaysia, sistem pendidikan menengah mengandungi pelbagai aliran dan pilihan subjek yang membolehkan pelajar memilih bidang pengajian yang sesuai dengan minat dan bakat mereka. Pelajar Tingkatan Enam, yang merupakan peringkat pendidikan menengah atas, mempunyai tanggungjawab besar untuk menentukan subjek-subjek akademik yang akan mereka ambil, kerana keputusan ini akan memberi impak besar kepada peluang pendidikan tinggi mereka dan juga kerjaya masa depan.

Di Tawau, Sabah, pelajar berhadapan dengan kekurangan peluang melanjutkan pelajaran selepas tamat Sijil Pelajaran Malaysia dan cabaran sosial-ekonomi menjadikan tingkatan enam adalah pilihan utama bagi pelajar melanjutkan pelajaran. Pelajar perlu memilih tiga subjek pilihan dan Pengajian Am sebagai subjek wajib. Pemilihan subjek yang selaras dengan minat kerjaya akan memberikan peluang untuk pelajar belajar dalam bidang yang diminati dan selaras dengan personaliti diri yang seterusnya akan meningkatkan pencapaian akademik. Sebaliknya jika pelajar mengambil subjek dan bidang yang tidak diminati sudah tentunya memberikan ganggunan kepada kesejahteraan mental pelajar. Maka kajian ini akan mengkaji pentingnya keselarasan minat kerjaya dalam pemilihan subjek dan pengaruhnya terhadap kesihatan mental pelajar. Tahap kesihatan mental pelajar tingkatan enam merupakan isu penting kerana ia berkait rapat dengan prestasi akademik dan juga kebajikan mereka secara keseluruhan.(Azrinda Othman et al., 2023)

2.0 Kajian Literatur

2.1 Pemilihan Subjek

Dalam kajian lepas telah menjelaskan pentingnya ujian atau inventori untuk pelajar dalam memilih subjek dan bidang yang diminati dan jenis personaliti seseorang. Ujian atau inventori akan membantu pelajar memilih subjek dan program pengajian yang sesuai berdasarkan ujian yang telah diambil pelajar. Hanizam Hussin et al., (2020) antaranya telah menjalankan kajian terhadap 46 orang pelajar di Jabatan Rekabentuk dan Komunikasi Visual, Politeknik Sultan Ibrahim dengan menggunakan instrumen ujian IMKS. Dapatan kajian menunjukkan 29% minat dalam artistik , 26% minat dalam sosial dan 25% minat dalam Realistik. Jumlah dapatan tertinggi pula yang diperolehi pelajar adalah dengan kod ARS dan diikuti kod SRA. Secara keseluruhan kebanyakkan pelajar mempunyai minat kerjaya dalam artistik. Ini menunjukkan pentingnya pemilihan subjek dan bidang pengajian yang selaras dengan minat kerjaya pelajar dan belajar dalam persekitaran yang menyeronokkan dan dapat mengembangkan lagi potensi pelajar.

2.2 Kebimbangan

Azrinda Othman et al.(2023) telah menjalankan kajian tentang prosedur menguji tahap kebimbangan pelajar tingkatan enam termasuk aspek permasalahan dan kajian lepas berkaitan dengan tahap kebimbangan, prosedur kajian dan soal selidik yang sesuai digunakan untuk menguji tahap kebimbangan pelajar tingkatan enam. Soal selidik DASS-21 telah digunakan dan seramai 100 orang pelajar tingkatan enam telah terlibat dalam kajian tersebut. Dapatan kajian menunjukkan simtom dan tanda-tanda kebimbangan yang berlaku kepada pelajar adalah seperti kesukaran bernafas, situasi panik dan melakukan perkara yang membodohkan diri sendiri, degupan jantung laju, mulut terasa kering serta berasa takut yang tidak munasabah. Pelajar perlu meningkatkan kekuatan dalaman iaitu melalui daya tahan atau resilien. Seseorang pelajar yang mengalami kesulitan dan kesusahan dapat menghadapi segala bentuk risiko, cabaran dan kekangan dengan lebih tabah dan yakin, kompeten dan berdaya juang yang tinggi dalam kehidupannya.

2.3 Kemurungan

Nur Ashidah & Fariza (2020) menjelaskan takrifan kemurungan ialah ganggunan yang mempengaruhi pemikiran, emosi, perasaan, dan tingkah laku seseorang sehingga menjadikan kehidupan seharian mereka sukar dan jika tidak mendapatkan rawatan, gangguan ini boleh membawa kesan negatif kepada individu dan masyarakat. Asma et al. (2021) pula menyatakan bahawa kemurungan berkait dengan tingkat laku negatif dan salah laku moral yang boleh membahayakan diri dan masyarakat.

3.0 Metodologi Kajian

Kajian ini akan menggunakan reka bentuk kuantitatif dengan pendekatan tinjauan melalui soal selidik. Sampel kajian terdiri daripada 268 orang pelajar Kolej Tingkatan Enam (Prauniversiti) Tawau yang dipilih secara persampelan rawak berstrata (stratified random sampling) dengan menggunakan formula Cochran (1963) untuk jumlah populasi pelajar seramai 893 orang pelajar. Saiz sampel dari setiap strata adalah berkadar dengan saiz strata dalam populasi. Kaedah persampelan ini memberi peluang kepada setiap ahli dalam populasi dipilih sebagai responden kajian.

Soal selidik yang akan digunakan dalam kajian ini merangkumi tiga bahagian utama iaitu (1) pemilihan subjek menggunakan Inventori Minat Kerjaya Sidek (IMKS), (2) tahap kebimbangan menggunakan Generalized Anxiety Disorder 7 (GAD-7) dan (3) tahap kemurungan menggunakan Patient Health Questionnaire 9 (PHQ-9). Data yang dikumpul akan dianalisis menggunakan perisian IBM Statistical Package for Social Science (SPSS) 23.0 untuk mendapatkan statistik deskriptif dan inferensi. Ujian korelasi pearson digunakan untuk mengkaji hubungan antara pemilihan subjek akademik dengan tahap kebimbangan dan kemurungan pelajar.

Inventori Minat Kerjaya Sidek (IMKS) merupakan salah satu instrumen yang digunakan untuk mengenal pasti kekuatan dan kelemahan diri dalam memahami personaliti diri sendiri dan seterusnya membantu memilih kerjaya yang sesuai dengan keinginan dan minat belajar (Hanizam Hussin et al., 2020).

4.0 Cadangan dan Kesimpulan

Secara umumnya, kajian ini membincangkan pengaruh pemilihan subjek yang selaras dengan minat kerjaya pelajar terhadap kesejahteraan mental pelajar tingkatan enam. Analisis kajian terdahulu meunjukkan terdapat hubungan yang signifikan antara pemilihan subjek dangan tahap kebimbangan dan kemurungan pelajar. Oleh itu, kajian ini akan dapat menjelaskan sebab akibat yang mempunyai kaitan secara langsung atau tidak langsung dengan kesejahteraan mental pelajar disebabkan pemilihan subjek yang tidak selaras dengan minat kerjaya pelajar.

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