



UNIVERSITI PUTRA MALAYSIA

***EFFECTIVENESS OF E-BOOK WRITING SOFTWARE
ON TESL PRE-SERVICE TEACHERS' ESL
ACADEMIC WRITING PERFORMANCE***

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By

KEE LI LI

**Thesis Submitted to the School of Graduate Studies,
Universiti Putra Malaysia, in Fulfilment of the
Requirements for the Degree of Doctor of Philosophy**

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DEDICATION

*To my late father, Kee Chuan @ Kee Ong
To my late elder brother, Yen Tiong*

*To my mother, Kang Ah Hong
To my younger sisters and sister-in-law, younger brother and brothers-in-law,
Li Nah, Li Choo, Lee Lee, Eng Gih, Boon Wei and Wai Hong
To my nieces and nephews,
Zhi Lin, Zhi Han, Zhi Yu, See Kah, Kenrich and Justin*



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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December 2020

Chairman : Abu Bakar Mohamed Razali, PhD
Faculty : Educational Studies

In the preparation to serve as English as a Second Language (ESL) writing teachers, the Teaching English as a Second Language (TESL) pre-service teachers need to acquire writing proficiency as well as writing pedagogies. They need to be aware of their own writing performance, their understanding of the writing process and more importantly their ability to teach ESL writing. Additionally, the amalgamation of digital technologies and process-based writing approach (PBWA) seems viable for writing instruction in the 21st century education. There are few studies, which focus on the use of e-book writing software in ESL academic writing that closely incorporates PBWA in a recursive manner. Therefore, this study investigates the effectiveness of e-book writing software and the ways it affects the TESL pre-service teachers' ESL academic writing performance (i.e., content, communicative achievement, organisation and language).

The social constructivism theory, the concept of digital literacies, the bridging activities model and PBWA synergised to function in tandem and corresponding ways. Within the digital environment as the social context, the research participants partook in the writing process stages generally implemented in a sequence and done in a recursive manner applying the technological knowledge to research, read and write the academic papers as an e-book by using different modality, modes and media.

The quasi-experiment was conducted on two groups of TESL pre-service teachers (N = 40) from one Institute of Teacher Education Malaysia (ITEM), which were selected through purposive sampling. The main quantitative data of pre- and post-tests, observations and students' essays were analysed using

SPSS Version 23. Additionally, the qualitative supplementary data of reflective journal entries, focus group interview responses and students' essays were analysed using qualitative content analysis, deductive approach and document analysis.

The paired and independent samples t-tests and Hotelling's T^2 (i.e., a special case of one-way MANOVA) yielded statistically significant differences in the mean scores. These results reveal that the utilisation of e-book writing software improves the participants' ESL academic writing performance and the four writing constructs. It enables the participants to manage their writing practices in the writing process, increases the participants' motivation in academic writing, provides convenience in the writing process and helps with the recursiveness of the writing process. It also enables the participants to develop and shape the content, promote the audience-based writing, improve the text organisation and promote the correct use of vocabulary and grammar.

The utilisation of e-book writing software is advantageous for the pre-service teachers as it proposes an effective way in enhancing the writing process stages and promotes writing academic papers with increased motivation. To sum up, the utilisation of e-book writing software is able to ignite the positive change in the TESL pre-service teachers' ESL academic writing that will thus give impetus in their provision of ESL writing instruction in the future.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KEBERKESANAN PERISIAN PENULISAN BUKU ELEKTRONIK TERHADAP
PENCAPAIAN PENULISAN AKADEMIK BAHASA INGGERIS SEBAGAI
BAHASA KEDUA GURU PELATIH OPSYEN PENGAJARAN
BAHASA INGGERIS SEBAGAI BAHASA KEDUA**

Oleh

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Di dalam persediaan untuk berkhidmat sebagai guru penulisan Bahasa Inggeris sebagai Bahasa Kedua, guru pelatih opsyen Pengajaran Bahasa Inggeris sebagai Bahasa Kedua perlu menguasai kecekapan serta pedagogi penulisan. Mereka perlu menyedari tentang prestasi penulisan mereka sendiri, pemahaman mereka tentang proses penulisan dan yang lebih penting lagi keupayaan mereka untuk mengajar penulisan Bahasa Inggeris. Di samping itu, penggabungan teknologi digital dan pendekatan penulisan berasaskan proses seolah-olah sesuai untuk pengajaran penulisan Bahasa Inggeris dalam pendidikan abad ke-21. Terdapat kekurangan kajian yang berfokus pada penggunaan perisian penulisan buku elektronik dan yang menggabungkan pendekatan penulisan berasaskan proses secara rekursif di dalam penulisan akademik Bahasa Inggeris sebagai Bahasa Kedua. Oleh itu, kajian ini menyiasat keberkesanan perisian penulisan buku elektronik dan cara-cara ia mempengaruhi pencapaian penulisan akademik Bahasa Inggeris sebagai Bahasa Kedua (iaitu kandungan, pencapaian komunikatif, organisasi dan bahasa) guru pelatih opsyen Pengajaran Bahasa Inggeris sebagai Bahasa Kedua.

Teori konstruktivisme sosial, konsep literasi digital yang disokong oleh model aktiviti penyambungan dan pendekatan penulisan berasaskan proses bersinergi dan berfungsi secara bersesuaian dan seiringan di dalam kajian ini. Dalam persekitaran digital sebagai konteks sosial, para peserta kajian mengambil bahagian dalam proses penulisan yang dilaksanakan secara umumnya di dalam turutan dan dilakukan secara rekursif, mengaplikasikan pengetahuan teknologi untuk menyelidik, membaca dan menulis kertas akademik sebagai buku elektronik menggunakan modaliti, mod dan media yang berbeza.

Kuasi-eksperimen dijalankan ke atas dua kumpulan guru pelatih opsyen Pengajaran Bahasa Inggeris sebagai Bahasa Kedua (N = 40) daripada satu Institut Pendidikan Guru Malaysia, yang dipilih melalui kaedah persampelan bertujuan. Data kuantitatif utama daripada ujian pra dan pasca, pemerhatian dan esei pelajar dianalisis dengan menggunakan SPSS Versi 23. Selain daripada itu, data kualitatif sampingan iaitu entri jurnal refleksi, maklumbalas temubual kumpulan berfokus dan esei pelajar dianalisis dengan menggunakan analisis kandungan kualitatif, pendekatan deduktif dan analisis dokumen.

Ujian-t sampel berpasangan dan tidak bersandar serta Hotelling's T^2 (iaitu satu kes istimewa MANOVA satu-hala) menghasilkan perbezaan statistik yang signifikan di dalam skor min. Keputusan ini mendedahkan bahawa penggunaan perisian penulisan buku elektronik meningkatkan pencapaian penulisan akademik dan keempat-empat konstruk penulisan peserta. Ia membolehkan para peserta mengurus amalan penulisan mereka di dalam proses penulisan, meningkatkan motivasi peserta di dalam penulisan akademik, memberikan kemudahan di dalam proses penulisan dan membantu proses penulisan rekursif. Penggunaan perisian penulisan buku elektronik juga membolehkan peserta memperkembang dan membentuk kandungan, mempromosi penulisan berasaskan pembaca, memperbaiki organisasi teks dan mempromosi penggunaan perbendaharaan kata dan tatabahasa yang tepat.

Penggunaan perisian penulisan buku elektronik adalah bermanfaat kepada guru pelatih kerana ia mencadangkan satu cara yang berkesan untuk meningkatkan proses penulisan dan menggalakkan penulisan kertas akademik dengan peningkatan motivasi. Secara ringkas, penggunaan perisian penulisan buku elektronik dapat menyemarakkan perubahan positif di dalam penulisan akademik guru pelatih yang dengan ini akan memberikan dorongan dalam penyediaan pengajaran penulisan Bahasa Inggeris mereka pada masa akan datang.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

ANCOVA	analysis of covariance
BPPDP	<i>Bahagian Perancangan dan Penyelidikan Dasar Pendidikan</i>
CALL	Computer Assisted Language Learning
CD	compact disc
CDA	confirmatory data analysis
CEFR	Common European Framework of Reference
EDA	exploratory data analysis
ELSQC	English Language Standards and Quality Council
EPRD	Educational Planning and Research Division
eRAS 2.0	Education Research Application System 2.0
ESL	English as a second language
ICT	Information and Communication Technology
ITEM	Institute of Teacher Education Malaysia
ITEMs	Institutes of Teacher Education Malaysia
MANOVA	multivariate analysis of variance
MEB	Malaysia Education Blueprint
MKO	More Knowledgeable Other
MKOs	More Knowledgeable Others
MOE	Ministry of Education Malaysia
NLS	New Literacies Studies
PBWA	process-based writing approach
PPMCC	Pearson Product-Moment Correlation Coefficient
SNSs	Social Networking Services

SPM	<i>Sijil Pelajaran Malaysia</i>
TESL	Teaching English as a second language
TWP	The Writing Portal
UPM	Universiti Putra Malaysia
ZPD	Zone of Proximal Development



CHAPTER 1

INTRODUCTION

This chapter provides an overview of the study reported in this thesis. The researcher discusses the background of the study, statement of the problem, purpose of the study, research objectives, research questions and research hypotheses that guide her study. This is followed by a discussion on the practical and theoretical significance of the study. She then explains the scope, limitation and delimitation of the study. She also discusses the definition of terms used in the study, conceptually and operationally. A chapter summary at the end concludes Chapter 1 of the study.

1.1 Background of the Study

Malaysian education emphasises the importance of English language and it is learned as a second language in the country (English Language Standards and Quality Council [ELSQC], 2015). The minimum formal learning of the English language as a subject for Malaysian learners is 11 years from the age of 7 to 17 and they continue learning the language at college or university. However, many stakeholders in Malaysian education have voiced their concerns over the learners' deficiency as writers despite the number of years spent learning writing skills (Darmi & Albion, 2013; Musa et al., 2012).

Knowing the fact that good writing proficiency warrants future advancement for many Malaysian students (Ali & Yunus, 2004; Annamalai, 2016; Chan et al., 2003; Darus & Ching, 2009), in each major Malaysian education reform, the importance of English language is repeatedly emphasised (Jayasingam et al., 2018; Palpanadan et al., 2014). Writing as one language skill has received much attention in the Malaysian English education (ELSQC, 2015). However, writing skills are identified as the least comprehended English skills among Malaysian students, especially given the recurring unsatisfactory achievement in the subject that highlights writing section as the one that has recorded the lowest performance among the four language skills (Chitravelu et al., 2005).

Undoubtedly, writing is a complex activity and many scholars observe that learners find learning it challenging (Bowen & Van Waes, 2020; Choy & Troudi, 2006; Govindasamy, 2014; Johnson, 2020; Mukundan et al., 2013; Shamsudin & Mahady, 2010; Tan et al., 2006). In commencing their writing, many pre-service teachers cite doubts on where and how to construct their English essays owing to a perceived lack of support outside their writing classrooms (Said & Lee, 2014). To explain, the pre-service teachers seem to be overwhelmed by

the difficulty and complexity of writing and this may affect their future classroom instructions (including writing instruction).

Recently, the Malaysian national English language education policy, the English Language Education Reform in Malaysia: The Roadmap 2015-2025, was launched to boost the level of English language in Malaysia to international standards (ELSQC, 2015). As one of its aspirations, the roadmap guides many stakeholders in Malaysian education to use the Common European Framework of Reference (CEFR) as a benchmark in determining English language standards among Malaysian students in public schools, institutes and universities (ELSQC, 2015).

Concerning the abovementioned matter, the entire process of English language instruction in all tertiary educational institutions that prepare future English language teachers for teaching as a career needs to be implemented in accordance with the CEFR standards as stated in the English Language Education Reform in Malaysia: The Roadmap 2015-2025 (i.e., Chapter 9: Teacher Education) (ELSQC, 2015). The intake of pre-service teachers into TESL programmes for teacher education needs to fulfil the required CEFR standards. The roadmap has addressed several issues related to ESL writing among TESL pre-service teachers. For one, the exit proficiency level for TESL pre-service teachers upon their graduation is at least of C1 level in which the CEFR Global Scale (see Appendix A) for writing section states that students are “able to produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors and cohesive devices” (ELSQC, 2015, p. 48). This further conveys the necessity of writing pedagogies at the Institutes of Teacher Education Malaysia (ITEMs) to be aligned with the required standards in enabling the pre-service teachers to gain adequate English language proficiency, especially their writing abilities as well as writing pedagogies before they are posted to teach writing in Malaysian primary classrooms.

As documented in the roadmap and for two constitutive years of 2012 and 2013, the TESL pre-service teachers at 26 ITEMs took the Cambridge Placement Test; 65 per cent of the pre-service teachers did not attain at least C1 level, thus failing to fulfil one graduation requirement. Additionally, only a mere 6.4 per cent and 3.7 per cent of the pre-service teachers secured a C2 level in 2012 and 2013 respectively (ELSQC, 2015). In other words, a significant number of the pre-service teachers failed to achieve the proficiency standards set in accordance with the CEFR Global Scale writing section, this further reflects the inadequate writing proficiency among the pre-service teachers.

In 2014, all TESL pre-service teachers at 26 ITEMs took the British Council Aptis test, the results obtained indicated that less than 50 per cent of them who were in the one-year TESL preparation programme and four-year Bachelor’s Degree

in Teaching (TESL) programme were at C1 or C2 level (ELSQC, 2015). Again, these results reflected the inadequacies in many of the pre-service teachers' writing abilities when reference was made to the same standard required for the CEFR Global Scale writing section. These inadequacies indicate that immediate efforts are much needed to raise the pre-service teachers' English language proficiency, particularly of their writing skills. This is especially when the learners' writing proficiency is found to influence their performance in the other subjects (Calkins, 2014).

Additionally, there needs to be a shift from the conventional writing instruction, which is teacher-fronted to a more student-centred approach, particularly in Malaysian writing classrooms (Mansor, 2008; Musa et al., 2012; Thang & Wong, 2005). Varying the teaching approach can possibly motivate students to learn the English language and one way is by incorporating digital technologies in language classrooms (Bakar & Ismail, 2009; Bakar et al., 2010; Majid, 2011; Murugaiah et al., 2010; Scott, 2015).

In terms of writing abilities and writing pedagogies, pre-service teachers need to show interest in and know about what they learn so that they can use the knowledge gained from the pre-service tenure to teach their students effectively in the future. In preparation to become English as a Second Language (ESL) writing teachers, the Teaching English as a Second Language (TESL) pre-service teachers ought to know their writing needs and the good writing approaches and be ready to implement any necessary changes to their future writing instruction. In this sense, an understanding towards a notable way of writing such as process-based writing approach (PBWA) that has to be fostered within them is much needed as implied in the English Language Education Reform in Malaysia: The Roadmap 2015-2025 (ELSQC, 2015).

There is no doubt that the purpose of teaching English writing skills to TESL pre-service teachers is to prepare them to become proficient English language writers. To extend the notion of teaching writing as a process as documented in writing curricula of ITEMs, the researcher is positing the idea that exposing pre-service teachers to the full implementation of PBWA itself is a better way for teaching them writing than the traditional method. Apart from emphasising the writing process, PBWA caters to the final written product as well (Rahman, 2017). This can possibly triumph over the traditional way of teaching writing, which is solely product-based.

In addition, the emergence of social tools enables the execution of digital writing (Elola & Oskoz, 2017). On top of that, digital technologies lead to writing practices that are more effective (Neu & Scarcella, 1991; Yunus, Nordin, Salehi, Redzuan, & Embi, 2013). Additionally, Murray (1983) indicated, "There must be a glorious diversity among writers" (p. 172). In other words, PBWA can be enhanced to result in the writers' diverse written products and one way is by

incorporating digital technologies such as the writing of e-books as products of ESL writing in Malaysian writing classrooms.

To elaborate, e-books are able to enhance the interaction between educators and students when dealing with teaching and learning materials (Shiratuddin et al., 2004). Mulholland and Bates (2014) claimed that upon realising the function of e-books in teaching and learning process, teachers would be prompted to use e-books more often to improve their students' proficiency. In the Malaysian education setting, there are two major projects, which are linked to the use of e-books in education, inclusive of English language. For one, Embong et al. (2012) stated that the Electronic Book Project in 2001 initiated by the Ministry of Education Malaysia (MOE) involved the use of e-books in 35 schools for the duration of five months. For another, the Terengganu State Government allocated 15 million US Dollars in 2010 to purchase 50,000 e-book readers to Year 4 and Year 5 pupils (Embong et al., 2012) so that these e-books can be used mostly as reading materials in Malaysian education. It is noteworthy to mention that the usage of e-books is limited to the teaching of reading skills among Malaysian students thus far.

White and Arndt (1991) professed, "Indeed, the word processor and a process approach to writing might almost have been made for each other" (p. 100). Process-based writing approach that is compatible with digital technologies, such as the writing of e-books, seems suitable and appropriate to be inculcated among the TESL pre-service teachers and used in their ESL academic writing classes. Instructional practices implemented alongside digital technologies are deemed more comprehensive (Aziz, 2008; Foltos, 2013; Noordin, 2004; Noordin et al., 2008). By noticing the prospects brought by digital technologies into writing instruction, it is crucial to muster immense efforts to impart the necessary skills to the pre-service teachers in preparing them to teach writing with the adequate knowledge of utilising digital technologies, such as the writing of e-books, which is still very less researched on as for now.

Furthermore, in increasing students' writing performance, there should be intense focus on improving the teacher quality, particularly the teachers' own writing performance, their understanding of the writing process, and more importantly their ability to teach writing. Kwan and Yunus (2014) indicated that the improvement to teacher quality, which includes teachers' writing abilities, has to be done gradually and in phases. In preparing the pre-service teachers to teach their students to write fluently and well, teacher education strives to produce teachers possessing high proficiency in English language, including writing skills, together with pedagogical expertise, which will lead to effective writing instruction in Malaysian writing classrooms. In this regard, Shiratuddin et al. (2004) found that the interaction between students and educator is enhanced when e-book technology is used throughout the teaching and learning process. Hence, new approaches that amalgamate PBWA and digital technologies such as the writing of e-books have to be introduced as one of the ways to achieve

high standards of understanding and practice of writing among pre-service teachers who will then utilise these approaches to teach writing in the future. This preparation is hoped to be achieved by way of utilising the e-book writing software, which will improve the provision of writing instruction in the country.

The utilisation of e-book writing software to enhance the pre-service teachers' academic writing performance is therefore, crucial to be investigated. Writing e-books as products of ESL writing not only exposes the pre-service teachers to the forms of digital writing but also allows them to practise PBWA, which can aptly develop their writing performance. The pre-service teachers are the ones who will be providing writing instruction at schools and they need to learn to write well so that they are capable of not only teaching their students to write fluently, but also motivating them to write in ways that are more effective.

To be competent as a writing teacher and in writing is undoubtedly a complex and continuous process (Kroll, 1990). There needs to be due attention and efforts to improve the pre-service teachers' writing proficiency and their writing pedagogies. Moreover, the pre-service teachers who will teach their students the art and practice of writing should also be well-versed in writing knowledge. Emphasis on the pre-service teachers' training at the ITEMs will increase their English language proficiency, including writing skills (Macalister, 2017). Hence, before going out for their service, proper instruction, guidance and support are much needed in developing the pre-service teachers' writing proficiency and in nurturing a positive attitude towards writing (Tan et al., 2006) and more importantly, in preparing them to be able to teach writing well to their future students. To sum up, Hairston (1982) emphasised this fact: "Writing teachers should be people who write" (p. 85).

1.2 Statement of the Problem

The Ministry of Education Malaysia (MOE) has taken numerous initiatives to enhance the teacher education to continuously train and develop English language teachers in general and writing teachers in particular. Nonetheless, several issues and gaps identified require much attention. Firstly, there is a need to cater for the lacking of writing proficiency and writing pedagogies among many TESL pre-service teachers in the Institutes of Teacher Education Malaysia (ITEMs). These pre-service teachers undergo the inadequate writing curricula at ITEMs that take them to write using process-based writing approach (PBWA), which is much simplified and lack of its recursiveness. It is noteworthy that low writing proficiency among English language teachers escalates the probability of producing lower student performance in writing (Malaysia Education Blueprint [MEB], 2013).

Additionally, Aziz (2008) emphasised the needs to address the lacking of digital literacy competency among the English language teachers in the country,

especially to ease the transition from traditional to digital writing in embracing the 21st century education. Regardless of the numerous affordances provided by digital technologies such as the production of e-books as a form of digital writing, the use of e-books, as well as studies pertaining to writing e-books as products of ESL writing, is still very much lacking in Malaysian writing classrooms.

In teacher education, it is crucial to produce teachers who can write fluently and teach writing well; they are seen as the key to the provision of successful writing instruction (Graves et al., 2004; Matsuda et al., 2013; Palpanadan et al., 2015). In fact, English language teachers are held responsible for their students' declining writing performance (The National Commission on Writing, 2003). Turvey (2007) forewarned the following challenge: "With writing and teaching writing you have to be in it for the long haul" (p. 158). In addition to the immense efforts invested in their writing lessons, it is necessary for writing teachers to grasp the essence of good writing in order to teach writing well (The National Commission on Writing, 2003). In actuality, these aforementioned criteria are found lacking in many of the Malaysian primary school writing teachers. As already mentioned, this can affect the teachers' writing instructions and eventually their students' writing proficiency.

In line with the issues mentioned, writing teachers need to be informed with both writing skills and pedagogies to provide sound writing instruction (Hughey et al., 1983). Many writing teachers have found teaching writing an uphill task, nonetheless it is necessary for these teachers to polish their writing skills continuously to teach writing well (Berlin, 1982; Lu, 2002). In addition, it is noteworthy that teachers are not capable to teach writing if they have not experienced the writing process (Dass, 2003; Graves et al., 2004). Although the Malaysian writing curricula endorse more current approaches such as PBWA, which is compatible with digital technologies, writing instruction in Malaysian writing classrooms is still very much dependent on the product-based writing approach (Mastan et al., 2017), typically executed in a more traditional way of writing. Consistent with the findings for the preference of teacher-fronted lessons which adopt product-based writing approach at most of the time, it is noteworthy that 43 per cent of primary school teachers had reached only Band 2 in 2013 for Teaching Knowledge Test (see Appendix B) and the low achievement could possibly be due to their pre-service training (ELSQC, 2015).

Undoubtedly, pre-service teachers at the ITEMs will encounter students who face numerous writing difficulties and they will need to overcome the teaching and learning issues in their writing lessons. Hence, in teacher education, there is an increasing demand to develop the pre-service teachers' writing skills and knowledge to better prepare them for their future career, including the ability to overcome the awaiting teaching challenges (Ahmed, 2010). Therefore, the need to reinforce teacher education arises, the pre-service teachers should be guided

to resolve their own writing issues to better prepare themselves in addressing their future students' writing needs.

Additionally, the learners of the 21st century prefer the use of digital technologies as opposed to the traditional method in writing (Ansarimoghaddam et al., 2012; Elgort, 2018; Gentner, 2018; Godwin-Jones, 2018). Shiratuddin et al. (2004) emphasised on the growing interest among the learners in converting paper books to e-books as well as writing new titles in digital form. The proliferation of digital technologies makes the digital writing environment possible and conducive, such as the writing of e-books, for both teachers and their students in enhancing the writing process as well as reducing their writing frustrations. As mentioned by Yunus, Salehi, and Nordin (2012), the advancement of digital technologies has influenced the students' writing practices as well as the teachers' writing pedagogies. The authors further elaborated that the advancement of Information and Communication Technology (ICT) brings along opportunities to English language teaching. Thus, the ways the digital tools aid the teaching of language skills and writing skills in particular, merit further investigation. Courses on harnessing the pre-service teachers' digital literacy competency to enable them to facilitate better their future students' collaborative learning by using different modes and media have since been included in teacher education (Noordin, 2004). However, more initiatives are needed to enhance the pre-service teachers' digital literacy competency to enable them to demonstrate a good range of procedures and techniques, and are able to plan and deliver very effective writing lessons, which provide for learner interaction and challenges and engage the learners, especially via the amalgamation of digital technologies and ESL writing.

In corresponding to the lacking of writing e-books as products of ESL writing, Woody et al. (2010) professed that an e-book, in actuality, offers more flexibility and accessibility as opposed to paper-based texts. E-book encompasses visual appeal (e.g., still and colourful graphics and texts, flipping pages, availability of thumbnails and zooming in and out function) and responsiveness to supportive materials and applications (e.g., collections of images, online and offline viewing, files and links to be embedded in websites). Shiratuddin et al. (2004) discovered that the writing of e-books as products of ESL writing improves the essay presentation, promotes better storage of essays, establishes authorship among writers, improves writers' digital writing experience, promotes self-publishing and encourages teachers' responses and feedback in the form of digitised writing. What is more, the aforementioned advantages corroborate the teaching of writing through a process. With the affordances provided by the e-book writing software in general, it is viable to facilitate the teaching of ESL writing within PBWA. Even though the e-book writing software entails the teaching of writing within PBWA, writing process stages are mostly not emphasised especially given the simplified version of PBWA being practised by many teachers and their students, and with the lacking of its recursiveness in ESL writing (Argueta, 2006; Carlin-Menter, 2006). These findings do not resonate the underlying

pedagogical principle (i.e., to teach writing within PBWA) of the tools in that the necessary recursiveness is somewhat missing from the writing process.

To sum up, the effectiveness of utilising e-book writing software on the TESL pre-service teachers' ESL academic writing performance is therefore a subject of great importance. The combined factors justify the choice of the researcher's study topic and give a genuine reason why researching this issue is important. E-book writing software incorporates features that facilitate the teaching of writing within PBWA, hence, how to maximally utilise the e-book writing software in externalising the ideas of PBWA and which will be reflected in the pre-service teachers' academic writing performance is therefore, the focus of the researcher's study. By hypothesising that the utilisation of e-book writing software leads to the pre-service teachers' improved academic writing performance, the researcher seeks to investigate the effectiveness of this treatment on the pre-service teachers' academic writing performance.

1.3 Purpose of the Study

This study sets forth to investigate the effectiveness of utilising e-book writing software on the TESL pre-service teachers' ESL academic writing performance (i.e., content, communicative achievement, organisation and language). To gain insight into the study, the researcher investigates the ways the utilisation of e-book writing software affects the pre-service teachers' ESL academic writing (i.e., content, communicative achievement, organisation and language).

1.4 Research Objectives

This study is guided to achieve two specific objectives as follows:

1. To determine the effectiveness of utilising e-book writing software on the TESL pre-service teachers' ESL academic writing performance (i.e., content, communicative achievement, organisation and language)
2. To investigate the ways the utilisation of e-book writing software affects the pre-service teachers' ESL academic writing (i.e., content, communicative achievement, organisation and language)

1.5 Research Questions

The research questions that the study seeks to answer are as follows:

1. To what extent does the utilisation of e-book writing software affect the TESL pre-service teachers' ESL academic writing performance (i.e., content, communicative achievement, organisation and language)?
 - (a) To what extent does the utilisation of e-book writing software affect the pre-service teachers' content scores?
 - (b) To what extent does the utilisation of e-book writing software affect the pre-service teachers' communicative achievement scores?
 - (c) To what extent does the utilisation of e-book writing software affect the pre-service teachers' organisation scores?
 - (d) To what extent does the utilisation of e-book writing software affect the pre-service teachers' language scores?

2. In what ways (if at all) does the utilisation of e-book writing software affect the pre-service teachers' ESL academic writing (i.e., content, communicative achievement, organisation and language)?
 - (a) In what ways (if at all) does the utilisation of e-book writing software affect the content of the pre-service teachers' ESL academic writing?
 - (b) In what ways (if at all) does the utilisation of e-book writing software affect the communicative achievement of the pre-service teachers' ESL academic writing?
 - (c) In what ways (if at all) does the utilisation of e-book writing software affect the organisation of the pre-service teachers' ESL academic writing?
 - (d) In what ways (if at all) does the utilisation of e-book writing software affect the language of the pre-service teachers' ESL academic writing?

1.6 Research Hypotheses

As to determine the effectiveness of utilising e-book writing software on the TESL pre-service teachers' ESL academic writing performance and in terms of content, communicative achievement, organisation and language before and after the treatment, the following hypotheses are formed:

- H1: There is a statistically significant difference in the means of pre- and post-tests ESL academic writing scores for the treatment group.

- H2: There is a statistically significant difference in the means of pre- and post-tests content scores for the treatment group.
- H3: There is a statistically significant difference in the means of pre- and post-tests communicative achievement scores for the treatment group.
- H4: There is a statistically significant difference in the means of pre- and post-tests organisation scores for the treatment group.
- H5: There is a statistically significant difference in the means of pre- and post-tests language scores for the treatment group.

As to compare the effectiveness of utilising e-book writing software (treatment) and academic paper writing lessons (non-treatment) on the pre-service teachers' ESL academic writing performance after the treatment (or lack thereof), the following hypothesis is formed:

- H6: There is a statistically significant difference in the population means of post-tests ESL academic writing scores between the treatment and control groups.

As to compare the effectiveness of utilising e-book writing software (treatment) and academic paper writing lessons (non-treatment) in terms of content, communicative achievement, organisation and language after the treatment (or lack thereof), the following hypothesis and its four parts are formed:

- H7: There is a statistically significant difference in the population mean vectors between the treatment and control groups.
- H7(a): There is a statistically significant difference in the population means of content scores between the treatment and control groups.
- H7(b): There is a statistically significant difference in the population means of communicative achievement scores between the treatment and control groups.
- H7(c): There is a statistically significant difference in the population means of organisation scores between the treatment and control groups.
- H7(d): There is a statistically significant difference in the population means of language scores between the treatment and control groups.

1.7 Significance of the Study

The researcher explains how the utilisation of e-book writing software in the study can possibly contribute to the body of knowledge. The contributions are explained in terms of the practical significance as well as the theoretical significance of the study.

1.7.1 Practical Significance of the Study

Malaysian education emphasises the importance of learning and practising ESL writing among students at all educational levels, including teacher education institutions. In this sense, the TESL pre-service teachers will be posted to teach in schools later on, and they will be responsible to not only know how to write in the English language, but they also have to teach writing skills to their students. This study can give strong implications on the TESL pre-service teachers' learning of ESL academic writing by practising the utilisation of e-book writing software as an eclectic approach, which amalgamates process-based writing approach (PBWA) and digital technologies and which is also promoted by the English Language Education Reform in Malaysia: The Roadmap 2015-2025 (ELSQC, 2015). The utilisation of e-book writing software entails potentials to teach writing through a process. This calls for possible utilisation of the eclectic approach at the ITEMs to investigate its effectiveness and the ways it affects the pre-service teachers' ESL academic writing.

This study can also give important implications on Malaysian writing curricula, as there needs a revamp in the current practice of moulding teachers for the teaching profession to develop a high-performing English education system, and what teachers really need is a high-level education to prepare them to adequately perform their duties as professionals (ELSQC, 2015). As such, the findings from this study can help to guide the Ministry of Education Malaysia (MOE) to obtain clarification pertaining to the underlying issues faced by pre-service teachers when they enrol to the TESL preparation programme, so as to revise writing curricula and provide insights into the alignment of writing approaches, which are currently practised by most of the teacher educators and their pre-service teachers at the ITEMs.

1.7.2 Theoretical Significance of the Study

The researcher identifies the social constructivism theory, the concept of digital literacies espoused by the bridging activities model and process-based writing approach (PBWA) as the underpinning theories for her study, which can possibly synergise to function in tandem and corresponding ways. Such findings can help to justify and prove the applicability and viability of the theories in Malaysian ESL writing research, especially at the ITEMs. The findings can also contribute a theoretical guideline as a contribution to the field of ESL writing and particularly of Malaysian ESL writing research.

1.8 Scope, Limitation and Delimitation of the Study

According to Simon and Goes (2013), in the scope of a study, a researcher conducts the research and covers the research areas within the established

parameters of the study. Employing quasi-experimental design, two intact classes of pre-service teachers in their second semester of the one-year TESL preparation programme for Bachelor's Degree in Teaching (TESL) at one Institute of Teacher Education Malaysia (ITEM) are purposively sampled as the participants for this study.

The researcher notes that the pre-service teachers' accumulative points for the degree programme will not be affected by whatever outcomes from the treatment. Therefore, the scope of the study includes the pre-service teachers in their first and second semester of the one-year TESL preparation programme at all ITEMS offering the programme, but excludes the other cohorts of the four-year Bachelor's Degree in Teaching (TESL) programme.

The core course of Language Advancement II (TSL1054) (a pseudonym) taught during the second semester of the one-year TESL preparation programme is related to the pre-service teachers' academic writing performance. Another supplementary course of Language Support II (LS1022) (a pseudonym) taught during the second semester of the one-year TESL preparation programme is also related to their academic writing performance. The researcher also notes that whatever outcomes from the treatment will not affect the pre-service teachers' accumulative points for their preparation programme. Therefore, the scope of the study includes the course of Language Support II but excludes the course of Language Advancement II enrolled by the pre-service teachers in their second semester of the one-year TESL preparation programme even though the course is also related to their ESL academic writing.

Limitations are constraints that might affect the outcome of a study but are largely beyond a researcher's control (Simon & Goes, 2013). In this study, the utilisation of e-book writing software does not represent the other e-book writing software or applications, which are available for producing e-books as products of writing instruction. However, the PBWA module to be used alongside the e-book writing software is described extensively on its salient features, therefore, the PBWA module is deemed replicable for future research.

Simon and Goes (2013) defined the delimitations of a study as conscious exclusionary and inclusionary decisions, which result from the specific choices made by a researcher. The delimitation of the study corresponds with the researcher's choice of the problem. There are other significant problems exist in writing instruction, however, she is keen in investigating the effectiveness of utilising e-book writing software on the pre-service teachers' academic writing performance. Academic writing is emphasised in Malaysia Education Blueprint (MEB) (2013) in that this 21st century pedagogical skill is to be promoted at all ITEMS and among the pre-service teachers. Hence, the study covers only the problem in academic writing instruction.

1.9 Conceptual and Operational Definitions of Terms

The researcher defines every important term conceptually and operationally. The terms include e-book writing software, TESL pre-service teachers and ESL academic writing performance (i.e., content, communicative achievement, organisation and language).

1.9.1 E-Book Writing Software

E-book writing software produces electronic books that can be read digitally on a screen (Nelson, 2008). Conceptually, the term of e-book writing software refers to the software, which produces e-books by the name of iSpring (see Appendix C). The iSpring presents numerous salient features such as the drafting features (e.g., typing, inserting, deleting and adding) and preview function to the TESL pre-service teachers when writing the academic papers as an e-book. The purchased iSpring is available at the Language Laboratory of the ITEM the researcher works in. On top of that, the free iSpring, which is downloaded from <https://www.ispringsolutions.com>, is accessible at the Language Laboratory of the ITEM where the researcher conducts her study. Both versions differ in the publishing feature. Due to the high cost of software, the academic papers are written using the free iSpring and published into an e-book using the purchased iSpring. This software is utilised in the study due to several reasons: (1) a workshop is attended by the researcher on ways to use iSpring to write and produce e-books, (2) the availability of the free version, which can be used alongside the purchased version and (3) the purchased version is available, which enables the publication of e-books.

In this study, the utilisation of e-book writing software constitutes the independent variable of the study. It is operationalised as the combined use of iSpring and PBWA module to enhance the writing process stages in PBWA (i.e., generating ideas, focusing, structuring, drafting, evaluating and reviewing) for the pre-service teachers when writing the academic papers as an e-book. The PBWA module can be opened and worked on as a file in iSpring. The pre-service teachers engage with the writing process stages of generating ideas, focusing, structuring, drafting, evaluating and reviewing when writing the academic papers. The writing process is generally implemented in a sequence and done in a recursive manner before the pre-service teachers publish the final drafts as an e-book.

In this sense, the writing process stages are eased by the PBWA module and the salient features provided by iSpring. To explain, the-mind map templates for generating ideas, focusing and evaluating, and 1000-word academic paper template for structuring in the PBWA module, together with the readily available drafting features (e.g., typing, inserting, deleting and adding) and preview function provided by iSpring function in tandem to ease the pre-service teachers

into writing the academic papers via PBWA. The PBWA module is further discussed in the Treatment section in Chapter 3.

1.9.2 TESL Pre-Service Teachers

Pre-service teacher as defined by Virginia Wesleyan University (2018) refers to the individual who is initially trained as an observer and to complete the pre-service tenure as a skilful professional in teaching career. In this study, the term of TESL pre-service teachers refers to the pre-service teachers who are placed in their second semester of the one-year TESL preparation programme for Bachelor's Degree in Teaching (TESL) that is offered by one Institute of Teacher Education Malaysia (ITEM).

1.9.3 ESL Academic Writing Performance

Writing performance is the skill to express thoughts, ideas and feelings, and it includes grammatical, sociolinguistic, strategic and discourse competencies (Kellogg, 2008). The pre-service teachers' ESL academic writing performance is evaluated via the course of Language Support II (see Appendix D) and it covers the writing of a 1000-word academic paper (i.e., expository essay). The writing of the academic paper is taught by utilising the e-book writing software, which focuses on the four writing constructs of content, communicative achievement, organisation and language. One example of an academic paper (see Appendix E) is used to aid the pre-service teachers to comprehend its format. In this study, ESL academic writing performance consists of four writing constructs (i.e., content, communicative achievement, organisation and language). The ESL academic writing performance constitutes the main dependent variable and the four writing constructs the dependent variables. The four writing constructs are explained in detail as follows:

1.9.3.1 Content

With explicit reference to the Common European Framework of Reference (CEFR), the construct of content focuses on if and whether the learners have addressed the task requirements (Cambridge English, 2016; Council of Europe, 2001). Content constitutes the first dependent variable. In this study, the construct of content is operationalised to focus on if and whether the pre-service teachers have responded to the topic as per required by the writing prompt. They have to write the content for intended publication and on one of the focused themes given. As the task is to write a 1000-word academic paper, the pre-service teachers should write and develop the academic papers relevant to the subject matter stated in the task and include substance in the academic papers. The pre-service teachers also have to address and inform their intended audience of the relevant points required are included in their academic papers.

1.9.3.2 Communicative Achievement

The construct of communicative achievement focuses on the appropriateness of the register used in a piece of writing (Cambridge English, 2016; Council of Europe, 2001). The learners have to demonstrate a thorough command of the register to communicate both simple and sophisticated ideas effectively and convincingly, hold the intended audience's attention with ease and fulfil all the communicative purposes (Cambridge English, 2016; Council of Europe, 2001). Communicative achievement constitutes the second dependent variable. In this study, the construct of communicative achievement is operationalised to focus on if and whether the pre-service teachers have used the register of the communicative task with sufficient flexibility; and if and whether they have communicated both straightforward and complex ideas effectively and convincingly to allow the intended audience to gain understanding and focus their attention on the writing. In this study, the pre-service teachers have to identify and inform the intended audience the topic and its substances using the right tone, as the communicative purpose of the academic writing task.

1.9.3.3 Organisation

The construct of organisation focuses on the way a learner arranges the parts in a piece of writing using a logical order (Cambridge English, 2016; Council of Europe, 2001). The text needs to be organised coherently and cohesively using cohesive devices, organisational patterns and connectors in an effective way (Cambridge English, 2016; Council of Europe, 2001). Organisation constitutes the third dependent variable. In this study, the construct of organisation is operationalised to focus on if and whether the pre-service teachers have organised their academic papers coherently and cohesively in a presentation style, which fully engages the intended audience. The academic papers need to be organised using cohesive devices, organisational patterns and connectors in an effective way. In achieving the organisation that is coherent and cohesive, they also need to demonstrate skills to review critically the academic papers that they have sourced with clarity, and refer to the literature review that is relevant and accurate for them to write their academic papers.

1.9.3.4 Language

The construct of language focuses on the accuracy and appropriateness of vocabulary and grammar usage in a piece of writing (Cambridge English, 2016; Council of Europe, 2001). Language constitutes the fourth dependent variable. In this study, the construct of language is operationalised to focus on if and whether the pre-service teachers have used the vocabulary and grammar, which are accurate and appropriate for the academic papers. The pre-service teachers have to demonstrate the correct use of vocabulary and grammar consistently in relating the meaning to the intended audience in the academic papers.

Appropriateness of words and phrases must be met in that the use of vocabulary must fit the content of the academic papers. On top of that, they need to demonstrate a high level of simple and complex grammar structures in their academic papers, all of which must be done accurately.

1.10 Chapter Summary

The researcher has discussed in detail the background of the study, statement of the problem, purpose of the study, research objectives, research questions and research hypotheses that guide the study. She has continued the discussion with the presentation of practical and theoretical significance of the study. She has also explained the scope, limitation and delimitation of the study. The discussion ends with the definition of terms used in the study, conceptually and operationally.

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BIODATA OF STUDENT

Kee Li Li graduated with a Bachelor of Education (TESL) in 2007 from Universiti Putra Malaysia, Malaysia. Kee obtained her Master of Education (TESL) in 2011 from Universiti Kebangsaan Malaysia, Malaysia. Kee now holds the position of English lecturer at one of the Institutes of Teacher Education Malaysia, Malaysia and has been teaching English for the past 20 years. Kee is currently pursuing her PhD studies in the field of Teaching English as a Second Language (TESL) at Universiti Putra Malaysia, Malaysia. Kee's research interests are on ESL Writing, English Grammar and Literature.



LIST OF PUBLICATIONS

Journals:

- Kee, L. L., Razali, A. B., Samad, A. A. & Noordin, N. (2020). Effects of digital writing software as a tool for process approach to writing on teacher trainees' academic writing performance. *The Journal of Asia TEFL*, 17(4), 1346-1362. (Q1, Scopus-indexed)
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Kee, L. L. (2016). English language proficiency course in Schoology-bridging the gaps. *Prosiding Seminar Pendidikan Nusantara*, 185-192.

Chan, Y. J., & Kee, L. L. (2014). Using journal writing to improve pupils' subject-verb agreement usage. In R. A. Rahman, A. R. Ibrahim, B. C. Yee, L. L. Kee, J. Y. W. Tan, M. H. Masron, N. A. M. Salleh, N. A. Shaari, & Y. J. Chan (Eds.), *The TESL Journal 2014 Proceedings* (pp.17-32).

Jamil, I. S. M., & Kee, L. L. (2014). Using the technique of sentence expansion to enhance pupils' writing skill. In R. A. Rahman, A. R. Ibrahim, B. C. Yee, L. L. Kee, J. Y. W. Tan, M. H. Masron, N. A. M. Salleh, N. A. Shaari, & Y. J. Chan (Eds.), *The TESL Journal 2014 Proceedings* (pp.73-86).

Other Publication:

Yee, B. C., Kee, L. L., Redzuan, N. R., & Shamsuddin, S. Z. (2017). Using digital story to improve primary school pupils' understanding of poem. *Selected Papers (The 15th Asia TEFL & 64th TEFLIN International Conference)*, 228-240.

LIST OF CONFERENCES AND SEMINARS

- [1.] The 6th ASIA International Conference (Online) from 18 to 20 December 2020 International Conference FKIP Universitas Kristen Indonesia Toraja (Online) on 4 and 5 December 2020
- [2.] Graduate Research in Education Seminar 2019 (GREduc 2019) at Universiti Putra Malaysia, Serdang, Selangor, Malaysia on 13 December 2019
- [3.] International Conference on Educational Research and Practice 2019 (ICERP 2019), Palm Garden Hotel, Putrajaya, Malaysia on 22 and 23 October 2019
- [4.] 1st International Conference on English Language and Linguistics at Mehran University of Engineering and Technology (MUET), Jamshoro, Pakistan from 29 to 31 March 2019
- [5.] Graduate Research in Education Seminar 2018 (GREduc 2018) at Universiti Putra Malaysia, Serdang, Selangor, Malaysia on 15 December 2018
- [6.] The 12th Malaysia International Conference on English Language Teaching (MICELT) 2018 at Universiti Putra Malaysia, Serdang, Selangor, Malaysia on 5 and 6 October 2018
- [7.] 27th MELTA International Conference at Berjaya Waterfront Hotel, Johor Bahru, Johor, Malaysia from 18 to 20 August 2018
- [8.] The 16th Asia TEFL, 1st MAAL & 6th HAAL 2018 International Conference at University of Macau, Macau SAR, China on 27 to 29 June 2018
- [9.] 1st International ASEAN-ELT Conference at Equatorial Hotel, Melaka, Malaysia from 15 to 17 March 2018
- [10.] *Seminar Penyelidikan Pendidikan dan Pertandingan Inovasi Pedagogi* 2017 at Institute of Teacher Education Malaysia, Tun Hussein Onn Campus, Batu Pahat, Johor, Malaysia on 4 October 2017
- [11.] The 15th Asia TEFL & 64th TEFLIN 2017 International Conference at Royal Ambarrukmo Hotel, Yogyakarta, Indonesia from 13 to 15 July 2017
- [12.] 25th MELTA International Conference at Casuarina Hotel & Convention Centre, Ipoh, Perak, Malaysia from 30 May to 1 June 2016
- [13.] *Seminar Pendidikan Nusantara 2016* at Sekolah Tinggi Keguruan dan Ilmu Pendidikan Siliwangi, Cimahi, Bandung, Indonesia on 11 April 2016

- [14.] 13th Asia TEFL International Conference at International Youth Cultural Centre, Nanjing, China from 6 to 8 November 2015
- [15.] *Seminar Penyelidikan Pendidikan Zon Selatan Peringkat Kebangsaan* at Institute of Teacher Education Malaysia, Perempuan Melayu Melaka Campus, Melaka, Malaysia on 14 and 15 October 2014
- [16.] 12th Asia TEFL International Conference and 23rd MELTA International Conference at Borneo Convention Centre, Kuching, Sarawak, Malaysia from 28 to 30 August 2014

