The Journal of Asia TEFL

Undergraduates' Attitudes of Writing and Views towards Mind-Mapping as a Pre-Writing Strategy

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Introduction

Writing is said to be challenging and more difficult for learners in a second language academic context (Shakoori et al., 2017). Undoubtedly, lecturers in higher education, teachers in schools as well as students face several challenges in teaching and learning writing. Challenges faced by students include students' lack of interest, readiness and motivation regarding writing in English (Anyiendah, 2017). Such challenges have made it difficult for lecturers and teachers to teach writing (Moses & Mohamad, 2019).

Hence, the need to provide appropriate teaching strategies is essential to stimulate and motivate learners to express and generate their ideas. Several writing strategies have been posed to tackle the challenges faced by lecturers, teachers and students. However, it is the concern of this study to focus on the initial stage of writing that is a pre-writing activity. This is based on the premise that an effective teaching strategy is required to motivate learners to express and generate their ideas in writing at an early stage.

Mind-mapping is a technique that is used in the pre-writing activity. It is a "planning activity in the writing that is done by writing key words around the topic" and this is to "expand the students' ideas into good paragraphs" (Waloyo, 2017, p. 73). Besides, it is "easier for students to write down their ideas that are in their minds into a written work" (Mantra et al., 2021, p. 16). Also, mind maps can work as a tool to facilitate the learners to plan ideas in the pre-writing process (Bukhari, 2016) and can create an enjoyable classroom atmosphere (Sapitri et al., 2019). Mind maps that are applied as a pre-writing activity are said to enhance the content and organization of written outputs (Sebit & Yildiz, 2020).

Due to the challenges students face in writing classes and the application of mind-mapping activities at a pre-writing stage, the present study aimed to provide insight into writing attitudes and views on mind-mapping among learners in an ESL context.

Objectives of the Study

The objectives of this study were as follows:

1. To investigate undergraduates' attitudes of writing in English;
2. To discover undergraduates' views towards mind-mapping activity as a pre-writing strategy;
3. To determine any relationships between writing attitudes and mind-mapping activities.

Literature Review

Theoretical Values

Constructivism is a theory that influences the world of education. Proponents of constructivism argue that students actively seek knowledge. We can improve students' understanding of language by focusing on the process of learning. Naibaho (2022, p. 321) highlighted that "…applying teaching strategies using mind maps in essay writing" emphasizes "the active involvement of students to utilize their existing knowledge and construct new knowledge." In addition, Bukhari (2016, p. 62) emphasized that mind-maps help students "…to think, learn, and make meaningful connections between prior knowledge and new knowledge."

It is also said that mind-mapping is categorized under the theory of cognitivism. This theory focuses on schemata, where a person associates what he knows with the new knowledge he receives (Suyono & Hariyanto, 2012). Thus, with mind-mapping, students will then create concepts and build their own patterns of thinking through their experiences.

Pre-Writing

Writing is a very effective tool in academia (Grant & Knowles, 2010). To produce good writing, one needs to implement a suitable strategy. One strategy that can be used is the pre-writing strategy. According to Lanon (2011), the pre-writing strategy is a method used in writing activities to support the process of finding inspiration and supporting ideas for writing. Furthermore, Mahnam and Nejadansari (2012) stated that pre-writing is a strategy to assist someone in optimizing the knowledge they already have, getting new ideas, and sorting out these ideas. In addition, Alemu (2020), Enighe et al. (2021), Hung and Van (2018) and Jonathan and Widiati (2020) revealed that pre-writing is something that is recommended to be done by those who want to produce good writing.

Mind-Mapping

Mind-mapping is a system that is carried out by mapping information in the form of images, graphics, branch lines, as well as keywords related to the main concept or idea (Selvi & Chandrahoman, 2018). By applying mind-mapping, one will be assisted in comprehending the big picture of an idea so that it is easier to understand. In addition, it is easier and clearer to present and communicate a concept or ideas through mind-mapping.

Mind-Mapping, a Pre-writing Strategy

Students can use mind-mapping, as a pre-writing strategy, that can develop a piece of writing. In this process, ideas are directed freely, not limited to one direction only, so that writing can be developed more easily. In other words, without any preliminary activities, the writing process will become more complicated and cause confusion by the various ideas to be included in writing. Davies (2011) explained that the relationship between diagrams in a mind map will enable the writer to understand the interrelationship of one idea with another and analyse each element better. Mind-mapping can be used to improve writing skills, especially in organizing writing ideas to achieve a deeper understanding of the writing topics.

Related Studies

Previous studies have identified the challenges students faced in learning the writing skill. Ceylan (2019) investigated first-year students' perceptions about their difficulties in a writing course in a university in Turkey. The results of analysis indicated these students lacked writing strategies; such as, pre-writing, drafting, and editing. These results suggested that learners need writing strategy training.

Other studies conducted by Ismail (2011) and Ansarimoghaddam and Tan (2014) revealed students' positive views towards writing. Ismail (2011) investigated female students (n=64) on their perceptions about ESL writing in general and a course called, the Academic Writing Course (AWC). As it was found, these students had positive perceptions about ESL writing in general and AWC in particular. Ansarimoghaddam and Tan (2014) studied university students' attitudes and experiences of writing in English which involved 30 first-year university ESL students in a BA programme in English. Based on the data elicited using questionnaires and interviews, participants had positive attitudes towards ESL writing. The results also showed that most of the participants preferred English for writing while some preferred their L1 to do so.

However, despite their positive results, both Ismail (2011) and Ansarimoghaddam and Tan (2014) still conclude that learning and teaching ESL writing has room for improvement. Ismail (2011) highlighted the fact that ESL students have problems while writing in English and recommended that educators improve their teaching to enhance their students' writing skills. In addition, Ansarimoghaddam and Tan (2014) recommended further studies with larger sample sizes and in a variety of contexts.

Studies on writing have shown that mind-mapping is a beneficial pre-writing strategy for learners' writing skills. For instance, Mantra et al. (2021) and Rubiyah et al. (2018) in their Classroom Action Research (CAR) studies reported that the implementation of mind-mapping positively affects students' writing skills. Additionally, in their survey, Mantra et al. (2021) concluded that their learners' motivation improved in learning ESL writing through mind-mapping after they were taught writing through mind-mapping. Furthermore, the participants, who learned how to write using mind-mapping technique in Rubiyah et al.'s (2018) study, indicated significant improvements in their writing mean scores. An experimental study on students (n=43) at a university in Indonesia by Naibaho (2022) showed that as a result of integration of mind-mapping in a writing course the experimental group outperformed the control group in writing. It was concluded that both Mantra et al. (2021) and Rubiyah et al. (2018) agreed that mind-mapping is a useful and successful strategy to in ESL writing classes. This was also supported by Naibaho (2022) that university students can use mind-mapping to improve their essay writing skills in English.

Methods

Participants

Sixty-four tertiary level university students participated in a five-week expository essay writing class. The students enrolled in a writing class which required them to write an expository essay as part of their English course.

Instruments

The questionnaire was adopted and adapted from Ceylan (2019), Ansarimoghaddam and Tan (2014) and Ismail (2011). The questionnaire was in English and started with a background information section comprising three items, namely, age, gender and faculty. The next sections sought to elicit undergraduates' attitudes of writing (section two), and views towards mind-mapping (section three). Each of these sections consisted of 20 items that followed a Likert style five-point scale that ranged from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was validated by the researchers as appropriate for this study and established using Cronbach's Alpha.

Data Collection and Analysis

In order to collect responses, the course lecturer shared the link to the questionnaire in Google forms with the participants via their WhatsApp groups. We used SPSS (Version 26) and descriptive statistical methods to analyse our quantitative data. Descriptive statistics were employed to measure undergraduates' attitudes of writing and views towards mind-mapping. We also used Spearman's Rho correlation coefficient to test the relationship between attitudes of writing and views towards mind-mapping. Correlation analysis was also done to test the significance of relationship between attitudes of writing in English and views towards mind-mapping.

Finding and Discussion

The results of the analysis of the data collected from our participants are reported and interpreted in the following sections.

Reliability Analysis

We tested the internal reliability of the items in the two sections of the questionnaire using Cronbach's Alpha. These results are presented in Table 1. The Cronbach's Alpha values of more than 0.70 indicate that the scales for both attitudes of writing and views towards mind-mapping have high internal consistency.

TABLE 1
Internal Reliability

Section	Cronbach's Alpha
Attitudes of Writing	.714
Views towards Mind-mapping	.873

Demographic Profile of the Respondents

The respondents were comprised of 19 to 20 year old students who majored in Communication and Media Studies. Most of them were females (78.1%). Male students made up the rest of the respondents with a percentage of 21.9%.

Objective 1: To Investigate Undergraduates' Attitudes of Writing in English

The means and standard deviations for attitudes of writing are summarized in Table 2. The means and standard deviations were calculated based on a total of 60 samples who gave their response to all 20 statements on the attitudes of writing in English. Samples with missing values were removed. Generally, the students gave high scores on positive statements such as items 2, 6-8 and 10-15 and gave low scores on negative

statements such as items 1, 3-5, 9 and 16-20. This indicates that the students have positive attitudes to writing in English. This can be supported by the overall mean score of 3.13. The standard deviations for all items can be considered small. This means that the students' feedback was consistent in which there was not much variability among the students' feedback.

TABLE 2
Means and Standard Deviations for Attitudes of Writing

Item	Mean	Standard Deviation
1. "I avoid writing in English whenever possible.	2.18	1.049
2. I look forward to writing down my ideas in English.	4.02	0.892
3. My mind seems to go blank when I start writing in English.	2.52	1.049
4. Expressing my ideas through writing in English is a waste of time.	1.67	0.896
5. I do not have enough motivation to write in English.	2.00	0.844
6. I like to have my friends read what I have written in English.	3.67	0.986
7. I enjoy writing in English.	4.25	0.773
8. I think I can express my thoughts easily if I write in English.	4.12	0.976
9. I never seem to be able to write down my ideas clearly in English.	2.55	1.126
10. I like seeing my thoughts on paper in English.	4.15	0.709
11. Discussing my writing in English with others is an enjoyable activity.	3.88	0.940
12. It is easy for me to write essays in English.	3.62	1.010
13. Writing in English is a lot of fun.	4.18	0.813
14. Writing in English is less difficult than writing in my first language.	3.27	1.163
15. When I have something to express, I would rather write it in English than say it.	3.73	0.989
16. I think writing in English is difficult.	2.45	1.111
17. Writing in English is more complicated than writing in my first language.	2.82	1.000
18. I hate writing in English due to my bad experience in the past.	1.98	1.112
19. I have low self-confidence toward writing tasks.	2.82	1.384
20. I have great amount of anxiety when writing. "	2.75	1.284
Total	3.13	0.372

Note. These items have been adapted from Ceylan (2019), Ansarimoghaddam and Tan (2014) and Ismail (2011).

Objective 2: To Find Out Undergraduates' Views Towards Mind-Mapping Activity as a Pre-Writing Strategy

Table 3 summarizes the means and standard deviations for views towards mind-mapping as a pre-writing strategy. The means and standard deviations were calculated based on a total of 51 samples who gave their responses to all 20 statements on the views towards mind-mapping as a pre-writing strategy. Samples with missing values were removed. The overall score of 3.98 indicates that the students have positive views towards mind-mapping. Similar to attitudes of writing in English, the students tend to give high scores on positive statements and low scores on negative statements. They "enjoy doing mind-mapping" (*M*=4.43) and "agree that mind-mapping activity is fun" (*M*=4.43), easy (*M*=4.31) and useful (*M*=4.25). The standard deviations for all items, except items 3 and 13, are less than 1 which can be considered as small. This indicates that the students' feedback on the views towards mind-mapping were consistent and there was not much variability among the students' feedbacks.

TABLE 3
Means and Standard Deviations for Views towards Mind-Mapping

Item	Mean	Standard Deviation
1. I enjoy doing mind-mapping.	4.43	0.671
2. Mind-mapping is fun.	4.43	0.728
3. Creating mind maps is time consuming task.	3.41	1.152
4. Mind-mapping is difficult for me.	2.00	0.959
5. Mind-mapping helps me to organize my ideas in writing.	4.31	0.787
6. I can connect my ideas in writing using mind-mapping.	4.45	0.577
7. Mind-mapping helps me plan my writing.	4.63	0.488
8. I feel that mind-mapping improves the quality of my writing.	4.37	0.631
9. My writing is easier when I use a mind map.	4.31	0.787
10. Mind map motivates me to write.	4.25	0.796
11. Writing is more difficult without using mind maps.	3.47	0.966
12. Using mind-mapping makes me confident of my writing.	4.02	0.812
13. There is no difference if I use mind maps or not before writing an essay.	2.88	1.259
14. Using personal touch like colors, images, pictures and symbols in mind maps makes learning easier and more interesting.	4.27	0.896
15. Using mind maps decrease my anxiety to write an essay.	3.76	0.992
16. I am interested in the topic of the essay if I use mind maps.	3.94	0.904
17. I enjoy writing an essay if I begin with mind-mapping.	4.10	0.831
18. Mind map helps me to understand the writing topic.	4.20	0.601
19. I feel comfortable if I use mind map for my writing activity.	4.12	0.816
20. I find it useful to use mind-mapping as a pre-writing strategy.	4.25	0.688
Total	3.98	0.448

Objective 3: To Determine Any Relationships Between Writing Attitudes and the Mind-Mapping Activity

For the third objective, the analysis requires the respondents to answer both sections, attitudes of writing in English and views towards mind-mapping. Therefore, the analysis was performed based on 49 samples. Samples with missing values were removed.

The Shapiro-Wilk test was performed beforehand to check the normality of both variables, attitudes of writing and views towards mind-mapping. The results revealed that attitudes of writing were not normally distributed ($p=0.039$) while views towards mind-mapping were normally distributed ($p=0.328$) at a 5% level of significance. Therefore, Spearman's Rho correlation coefficient was employed to test the relationship between attitudes of writing and views towards mind-mapping.

TABLE 4
Shapiro-Wilk Test of Normality

Scores	Statistic	*p*-value
Attitudes	0.951	.039
Views	0.973	.328

The results of the correlation analysis are presented in Table 5. As indicated by the p-value (0.283), there is no significant relationship between attitudes of writing in English and views towards mind-mapping. This implies that the scores that the student gave on the attitudes of writing in English did not depend on the scores that they gave on the views towards mind-mapping or vice versa.

TABLE 5
Correlation Analysis

		Views Score
Attitudes Score	Correlation Coefficient	0.156
	p-value	0.283

Conclusion

This study explored undergraduates' attitudes of writing and views towards mind-mapping as a pre-writing strategy for expository essay writing. The results revealed that the students have positive attitudes of writing in English and this was in agreement with other studies conducted by Ceylan (2019), Ansarimoghaddam and Tan (2014) and Ismail (2011). The results of this study also showed positive views towards mind-mapping activity as a pre writing strategy as found in studies by Naibaho (2022), Mantra et al. (2021) and Rubiyah et al. (2018). However, the correlation analysis showed there was no significant relationship between attitudes of writing in English and views towards mind-mapping. Although, this implies that the scores on the attitudes of writing in English did not depend on the views towards mind-mapping or vice versa, mind-mapping could still provide an insightful teaching strategy in a writing class.

Despite the positive attitudes towards writing and positive views towards mind-mapping, it is suggested that mind-mapping needs to be implemented in a writing class to stimulate and motivate learners to express and generate their ideas. However, it is essential to also consider the length of time it takes to complete the mind map as well as the writing. According to Nurlaila (2013), the length of time is one of the weaknesses of mind-mapping because the author's focus is more on the process of listing ideas. Therefore, the time issue should be considered to maintain learners' motivation throughout the writing process.

Eventually, this study has provided its theoretical contributions in the constructivist view of knowledge and the theory of cognitivism. Positive attitudes towards writing have led students to connect their prior knowledge and new knowledge meaningfully which are presented in their active involvement in mind-mapping activity.

Acknowledgements

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