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I-Think Map in Organization of Ideas in Argumentative Writing

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Abstract

Writing is an important skill, which must be mastered to effectively transfer ideas and thoughts in the form of written language. However, the skill is considered as the most difficult skill to be mastered by English as second language learners. Thus, this study is developed to examine the use of i-THINK map (tree map) in organising ideas in argumentative writing. The study used a quasi-experimental design to collect the data and did not use the control group for comparison. The participants of the study comprised 40 form four students from a sub-urban National Secondary School in Bandar Baru Bangi, Selangor, Malaysia. They were required to sit for pre- and post-test to observe their writing performance. An intervention during the pre-writing stage is applied to promote organisation of ideas in argumentative writing by using i-THINK map as a tool. The findings of the paired sample t-test revealed the statistically significant improvement of students' ability in organisation of ideas in argumentative writing. It is hoped that the findings of the study would be useful to the teachers incorporating i-THINK maps in teaching to promote students' writing skills. It is recommended that future study should emphasise on examining the use of i-THINK map in the organisation of ideas in different type of writing as well.

Keywords: I-Think map (Tree Map), Writing Skill, Organization of Ideas, Argumentative Writing, Secondary School Students.

Introduction

To be able to compete in the 21st-century learning, a need for good writing skills becomes essential. This is due to the demands where students entering the higher educational institution must be effective in writing skills. The writing component provides 85 marks of the English language paper 1 of the national standardized examination- *Sijil Pelajaran Malaysia* (SPM). According to studies done by the Malaysian Examinations Council (2016), a lot of students find it challenging to be good at writing. Lots of recommendations are given to improve the students' writing skills in the English language. One of the government programs is the I-Think Maps which emphasized reading and writing to help the students to improve their understanding of English.

I-Think maps (thinking maps) are used to arrange and organize ideas and thoughts. It is highlighted as being significant as a foundation for successful writing at the pre-writing stage. Students will have a chance and choices to control their writing performance as wanted. (Evmenova et al. 2016).

From the observation and teaching writing skills to students, the researchers found out that students have various difficulties and problems in writing. They are less proficient in constructing sentences in argumentative essays. One of their biggest drawbacks in writing an argumentative essay is they do not plan their writing before they write and assert that they have no idea and do not know what to write. Therefore, they cannot satisfactorily complete the essays. As cited in Ka-kan-dee M. and Kaur, Sarjit (2015), students have trouble in organizing ideas and generating firm evidence to write a good argumentative essay. Argumentative writing uses evidence and facts to verify either the arguments are true or not. The study emphasizes the use of i-THINK map (tree map) as a visual teaching tool, which promotes better ideas at the pre-writing stage of argumentative writing. (Refer to Appendix A). Tree map is used to arrange and classify the main and supporting ideas in a hierarchy structure. The use of tree map also fosters the teaching and learning from teacher-centered to student-centered system.

Therefore, this study is conducted to discover the use of i-THINK map (tree map) in helping form four students of 16 years old to organize their ideas in argumentative writing.

The study aims to answer two research questions:

- 1) what is the students' performance in organizing ideas before using the i-THINK map (tree map)?
- 2) how does i-THINK map (tree map) helps students in organizing their ideas in argumentative writing?

Accordingly, the quasi-experimental design conducted is meant to address all these important subjects and also to validate the importance of using i-THINK map for the students in the organization of ideas before writing.

Literature Review

Based on the reviewed articles, writing is an intimidating task as it involves several processes before a final product can be achieved. It consists of brainstorming, organizing ideas, drafting essays and editing. This was supported by Nik Y. A. et al. (2010) & Negari (2011) as cited in Al-Shaer (2014), it is acknowledged that writing is the most difficult skills for students to comprehend. However, on a constructive note, a few researchers believe that good writing directs to good thinking (Rao 2007) as cited in (Al-Shaer); others suggest that writing encourages thinking skills (Mekheimer, 2005) as also cited in (Al-Shaer). The study uses Piaget's theory which comprises a growth in logic whereby it stresses the understanding of the students to use rational thinking to understand the ideas. The students are to come up with logical thought, efficient planning and creative solutions to problems. The theory and concepts related to the current studies in a way the students must have the prior background knowledge that is relevant to be integrated and organized in the i-THINK map to produce a piece of argumentative writing.

Difficulties of Teaching Writing using the Traditional Method

Good writing skill is vital to convey the message clearly. However, it is also considered as the most difficult skill in an ESL classroom and the most despised task because it is perceived as too linear. The struggles become more difficult and problematic as academic tasks become more challenging. Using the traditional method, which is globally implemented in teaching writing is one of the reasons for students' weak achievement in writing (Tayib 2016). It is quite difficult for teachers to teach writing to some students. This is because the students are not from the same level of mastering the skill. By using the traditional method of teaching, students are still showing their low performances in writing. According to Zhang. Y (2018), students are not provided with the necessary writing skills in traditional writing instruction, which may worsen the situation. Thus, students experience frustration and a low level of motivation associated with the writing process, which makes them uninterested in practicing English writing except for exam needs.

I-Think map (thinking map) as a Pre-Writing Strategy

In encountering the complicated demands of writing, several researchers have all emphasized the effectiveness of thinking maps for the pre-writing stage because it helps writers mainly on brainstorming, generating and planning ideas. Emphasizing the importance of organizing ideas, experienced writers spend more time to pre-writing (Hillocks 1986) cited in Al-Shaer (2014). In the relation of visual representation in the i-THINK map that helps students in thinking, it was found out that connecting images to ideas is an innovative way, which requires thinking skills instead of memorizing (Abd Karim, R. et al. 2016). This goes in line with Al Shaer's finding (2014) that using concept mapping strategy established enhancement in writing better essays in terms of organization and thinking. The finding is generally dependable with previous studies that indicated a positive effect of using mind maps in a pre-writing stage on promoting ESL learners' writing skills.

i-THINK map allows students to think for themselves. Teaching students to create an i-THINK map of their own empowers them to independently seek out the ideas, organisation, and connections present in a text or set of texts, and to visualize and arrange those ideas in a way that helps them make sense of the information for themselves (Somers 2015). This related to the learning strategies, itself. Students are able to perform the writing task if they are introduced to the contents earlier by having the idea of what and how to write. Thus, the i-THINK map provides a visual illustration for the students to help them understand and organise information (Wise 2014). Once they identified the points to allocate into the i-THINK map, they found the information for their writing too. This will help to develop their writing skills and also help them to generate their learning practice. Since the pre-writing stage is a complex process, teachers' guidance is needed to support students technically and psychologically (Tayib 2016). Hence, the usage of i-THINK map is helping the teaching and learning process in writing. It helps students to sort out ideas and facts, and in this, they can be extremely useful as they make information visible and show the relationships and connections among pieces of information (Somers-Arthur, 2015).

There have been a number of studies of using mind maps or thinking maps in argumentative writing (Al Shaer 2014; Karim, R. et al 2016; Yunus & Chan, Chien, 2016; Tayib, 2016; Zhang,

2018). Reviewing the success of previous studies, which indicated thinking maps or mind maps help in promoting students' writing, henceforth this study examines the use of i-THINK map, specifically tree map in organization of ideas in argumentative writing. The current study contrasts with the previous studies whereas it focuses on the instructional strategy of brainstorming at a pre-writing stage using the i-THINK map. It is tested specifically on 16-year-old form 4 national secondary school students, who have average and low proficiency of English whilst the previous studies emphasized on ESL tertiary learners.

Methodology

Research Design

The emphasis of the study is to determine the use of i-THINK map (tree map) in organisation of ideas in argumentative writing. In this study, i-THINK map (tree map) is utilised as a tool to help form four students to organise their ideas in a systematised way before the actual writing. Then, students will expand the notes into full sentences and arguments based on the given title. This is a quasi-experimental study and data was collected using pre-test- post-test design.

Research Instruments

The instruments were predominantly argumentative writing tests in a pre-test and post-test. The topics were chosen from among the topics covered for argumentative compositions in SPM. The questions need the students to state their viewpoints and to argue the pros and cons of the issues. In the post-test, the students were given i-THINK map (tree map) template at the pre-writing stage to organise their ideas in a hierarchical structure.

Research Participants

The study was conducted in one of the suburban secondary schools in Bandar Baru Bangi, Selangor. In this study, the participants comprised of 40 form 4 students of age 16. They have an average and weak level of English language proficiency in writing skill. The study does not have a control group. The purposive sampling procedure is applied for the study whereby most participants were selected as their grades for mid-year examinations writing paper are C and D.

Data Analysis

The quantitative data from pre- and post-test were analysed using The Statistical Package for The Social Science (SPSS Version 23). Paired t-test was performed to measure increment in the mean and standard deviation between the students' pre-test and post-test scores. This is to measure the differences in students' writing performance before and after the use of i-THINK map (tree map). The tests are also conducted in order to find out the use of i-THINK map in helping students to organise their ideas in argumentative essays.

Data Collection Procedure

The students were asked to write pre-test argumentative essays about 350 words in one hour to evaluate their writing skills. The questions were taken from the SPM continuous writing module to ensure they had the same difficulty level. The writing was graded by experienced examiners

based on the analytical marking criteria, specifically for content, organisation and language. (Refer to Appendix B). The examiners were three experienced SPM examinations' examiners. The researcher was not one of the examiners to reduce biases due to the involvement with the participants of the research. The students used similar argumentative reading materials in the classroom. The treatment was conducted within eight weeks. During the treatment phase, the students were introduced to the use of i-THINK map (tree map) as a pre-writing strategy. The researcher showed ways how to make use of the tree map in organising ideas. Students needed to discuss and work collaboratively to support their viewpoints with evidence and examples using i-Think map (tree map) as the main instrument. They worked independently and the researcher facilitated the process and provided help as necessary. The researcher also examined the end product. The students are required to write argumentative essays based on those tree maps. The students handed their i-THINK maps and their argumentative essays. In the post-test stage, they were given an argumentative topic to compose the essays.

Validity and Reliability

The study attained face validity whereby the questions given to the students were taken from the SPM continuous writing module. All the essays marked by the experienced teachers, who are also SPM examinations' examiners. Content validity is attainable as the tests are fixed to measure students' organisation of ideas based on the use of i-THINK map (tree map) anticipated for argumentative writing. Content validity is also achievable as the tests are adequate to measure students' writing based on the use of i-THINK map (tree map) anticipated for organisation of ideas in argumentative writing. The content is given to the expert reviewers, who are experienced teachers and also SPM examinations' examiners.

The study implemented the test-retest reliability method. The pilot test was conducted before the actual study is carried out to test the reliability of the research instruments and make suggestions for the actual research. A pre- and post-tests were given to another different 30 students of form 4 from a different school to find out the reliability of the instrument. The consistency of the result shows that i-THINK map (tree map) promotes organisation of ideas in argumentative writing.

Research Findings

A paired sample T-test was implemented to compare the pre-test and post-test scores of argumentative writing by calculating the mean and standard deviation.

Table 1: Result of Normality test for Organisation of Ideas in Argumentative writing

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest_Score	.134	40	.069	.953	40	.095
Posttest_Scor	.121	40	.143	.955	40	.109

e

a. Lilliefors Significance Correction

The table above presents the results of normality test for organisation of ideas in argumentative writing. According to Shapiro & Wilk (1965) and Razali & Wah (2011), a Shapiro-Wilk's test ($p > 0.05$) showed that the test scores were normally distributed for both pre-test and post-test. The pre-test p -value=0.095 and post-test p -value=0.109. Both values are greater than 0.05 ($p > 0.05$), fail to reject the null hypothesis.

Based on the research objective (RO), to find out the effect of i-THINK map (tree map) in organizing students' ideas in argumentative writing.

Two research questions (RQ) are developed:

- i. what is the students' performance in organising ideas before using the i-THINK map (tree map)?
- ii. how does i-THINK map (tree map) helps students in organising their ideas in argumentative writing?

To answer RQ1 and RQ2 of the research objective, a paired sample T test was implemented to compare the result of using i-THINK map (tree map) in organisation of ideas in argumentative writing. The result as illustrated in table 2 and table 3 below.

Table 2: Result of Paired Sample Statistics for Organisation of Ideas in Argumentative writing
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Score before intervention	32.28	40	3.121	.494
	Score after intervention	38.35	40	3.627	.574

Table 2 shows the descriptive statistics for the test scores before and after the intervention. Result showed that the participants made a higher test scores for the post-test (mean=38.35, SD=3.627) than in the pre-test (mean=32.28, SD=3.121).

In Table 3, a repeated measures of paired sample T test found this difference to be significant, $t(39) = -31.884$, p -value = 0.000. The null hypothesis is rejected in favour of the experimental hypothesis since the significant level or p -value is < 0.05 . There are significant differences in the mean scores of the pre- and post-test. The result was also in favour that the use of i-THINK map (tree map) helps students to have improved scores in the post-test. Specifically, the result suggests that when the students use i-THINK map (tree map), they can

organise their thoughts and ideas better in argumentative writing compared to not using it during the pre-test.

Students' performance in writing improves based on their test scores before and after the intervention. In the intervention stage, the students learned how to classify ideas and organise them in the i-THINK map (tree map). The students showed substantial progress after the eight-week intervention phase. Their argumentative writings display a coherent organisational structure, which enables the message to be followed. As a result, they managed to improve their marks and grades in writing. i-THINK map (tree map) helps the students to see their ideas clearly. Thus, develop their writing performance. Furthermore, collaborative learning in producing ideas for the i-THINK map (tree map) provides a comfortable environment for the students to organise the ideas for the given written task. Teachers and educators are encouraged to apply i-THINK map (tree map) as a pre-writing strategy to help students improve their writing skill, particularly in argumentative writing. Besides, it promotes students' self-independence learning and critical thinking skills. It proves that i-THINK map (tree map) helps students in organising their ideas in argumentative writing.

Conclusions, Limitations and Implications

Based on the research findings above, it implies that using i-THINK map (tree map) at a pre-writing stage assisted students in strategically learning. By analysing the data from pre-test and post-test scores, the results showed that 40 students who used i-THINK map (tree map) in a pre-writing stage could organise their thoughts, classify their arguments and produce better argumentative writing essays. They can organise information and connect them to produce clear communication of ideas. Once, they know how to comprehend the i-THINK map (tree map) accurately, they can write a clear and organised essays. Therefore, we may conclude that increasing the chances for students to use i-THINK map (tree map) as a graphic illustration in a pre-writing stage helps them to characterise their ideas in an organised way and improve their argumentative writing skill. Students can separate the main ideas and supporting ideas in a tree map. They can write their arguments in an organised structure. When the students can organise their ideas, they can write coherent arguments, which leads to the improvement of the essay writing and boost their critical thinking. The findings of the present study go in line with the similar research findings of Somers-Arthur (2015). Thinking maps also make information visible and show the relationships and connections among pieces of information. In summary of these results, teachers and educators are stimulated to apply i-THINK map (tree map) as a pre-writing strategy in improving their students' argumentative writing skills.

Accordingly, it also promotes writing skills and the students were able to attain good scores in argumentative writing tasks. Zhang Y. (2018) highlighted that teachers should not only pay attention to students' writing product but guide students to make plans and direct their attention to the organisation of ideas before the actual writing process. The importance of using i-THINK map also underlined in the study done by Yunus M. M & Chien C. H. (2016), students are encouraged to use mind mapping strategy at their pre-writing phase which helps to organise

their thoughts and broaden their writing skills. They also emphasised that the mind mapping technique would seem to be an effective tool to help students in planning and organising their writing by encouraging students to gain a comprehensive or in-depth understanding of the writing topics.

Although the objective of the study has been achieved, there are still foreseeable limitations. The study should be comprehensive to include more students from different secondary schools in order to make generalisation above bigger groups. Secondly, only students' views of the use of i-THINK map (tree map) in their writing were discovered in this study.

The study has some constructive implications for ESL teaching and learning. Students are encouraged to use i-THINK map (tree map) at their pre-writing stage which helps to organise their ideas in the argumentative writing skill. Teachers should promote students' independence in practising argumentative writing through the use of i-THINK map.

The practical implications derived from the findings of the study is i-THINK map (tree map) promotes a better understanding because it conveys the relationships of the ideas in an organisational way. Moreover it permits the students to get creative while making their point of view flow easily while making important relations between arguments. Mekheimer (2005) and Rao (2007) found out that good writing established good thinking and it encouraged thinking skills. Using i-THINK map (tree map) in argumentative writing also promotes students to work collaboratively. They can easily share their ideas and arguments with their peers in a conducive learning environment. As a result, it allows the students to develop their ideas and encourage them to engage in active thinking. It is also an excellent tool for teachers to boost students' productivity and creativity in writing.

Hence, the important implication for using i-THINK map (tree map) is it assists form four students in organisation of ideas in argumentative writing. The interrelationships of ideas can be understood clearly. The students can generate and organise their ideas appropriately and systematically. They can also do it in a visually beautiful, attractive and comprehensible way. Furthermore, the students increase their ability and skill in argumentative writing.

Further studies should involve the use of i-THINK map in organization of ideas and effects of it on the writing performance of students from different proficiency levels and between genders to get more accurate information. The future researchers can carry out the study in a longer time and increase the total of participants so that the findings can be generalised to all other students' population in secondary school.

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