The Effectiveness Use of Mind Maps in the Learning of History

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Abstract — Mind map concept is considered as an effective and meaningful teaching and learning tool previously in many studies. The mind map moreover claimed that it can attract and enhance students' understanding of concepts, information, facts and others. Moreover, mind maps also can be used as self-learning methods that facilitate understanding of difficult concepts. Within the understanding, this study aims to examine the effectiveness of using mind map on learning History subjects for 4th grade students at Sekolah Kebangsaan Seafield, Subang Jaya, Selangor, Malaysia. A visual mind map book was designed to help students to gain more understanding in the study of history. A total of 20 students were taken as a sample of the study and involved in the survey to assess the effectiveness of visual mind map book. As an overall outcome, a visual mind map book contributes to the improvement of students'achievement in the learning of history.

Keywords - Visual Mind Maps, History Subject, Primary School Students, History textbook

1. Introduction

In 1979, The Malaysian Ministry of Education was set up an outline as a holistic and integrated individual excellence to produce intellectually, spiritually, emotionally and physically balanced individuals (JERI). Therefore, the Integrated High School Curriculum (KBSM) and the Primary School Integrated Curriculum (KBSR) have been enacted after 10 years of spirit. Towards this, the Malaysian Ministry of Education aimed to strengthen the Curriculum particularly in History subject. The Curriculum Development Center (KDP) has also revised the curriculum that was adopted until 2003 to ensure the content of History subjects in line with the country's future development. In increasing the level of students' performances in History subject, many methods of teaching were introduced by teachers. One of it is mind-maps concepts. Mind map is a method of remembering and recording effective notes to students. Mind map also is used to retrieve information, so it is easier for students to remember. Note that the form of mind map is easy to describe and understand over long essays. Mind maps are the ideal teaching tools for classroom handouts, as the inherent color, images, and visually appealing layout of the mind map engages students instantly. Mind map provide subject overviews succinctly, making even the most complex topic easy to understand and interesting. Reviews from the previous study on learning History subject highlighted many problems. It included the claim on long textual reading of textbooks will cause students to be depressed and subsequently indulge in the dislike and bored of historical subjects. Another issue is related to students' lack of interest in reading too many texts, difficulty in memorizing facts, no interest in subject, their inability to comprehend lessons and the ineffective learning styles. This was because textbooks were packed with factual information. Therefore, other studies defined that the visual features of the visual mind map will enhance the creativity of the students through the use of visuals, colors, shapes and symbols to facilitate the fact of being easily understood and concise.

The situation becomes more problematic when History subject teachers do not take a more creative mindset to stimulate student's interest in historical learning (Zahara & Nurliah, 2009). Studies also claimed that teachers also have difficulty in exam orientation and form learning activities and teaching in traditional way where they over shipped to a textbook. Thus, based on this scenario, this research project has addressed two research questions: (1) what are the best layout of visual mind map that highly suitable for the History subject and (2) how effectives visual mind map be used to assist students in learning History subject. In answering the questions raised, two objectives are formed including ascertain an appropriate layout of visual mind map including visual images and colors and further to gain the efficiency level of Mind Maps use in learning History subject.

The results of this study are important not only for students but also valuable for teachers towards effective teaching and learning experience. Teachers can use the results obtained in evaluating the best teaching methods to be more interesting and orderly using mind maps to diversity teaching aids in schools. On the other hand, students who learn to use this mind map method hopefully will be easy to remember the facts because the visual mind map are produced using the characteristic and attractive features.

2. A Mind Map Concept

The mind map is a construction made on a piece of paper in which an important idea is centered as the main and other related ideas are developed beyond the main idea using small centers, lines, blocks, geometry, colors and image. In addition, mind maps are graphical arrangements that contain certain information, written in brief but compact. The mind map was first explored in the 1970s, as a graphic means of expressing concepts to children. Since then, concept maps have been used in a wide variety of settings and contexts. Towards this, Trochim (1989) claimed that a mind map is a process that can help us to develop ideas on different topics. According to Abdosamad, M.I.I. (2007) a mind map is one of the most effective methods of learning that uses brainstorming from a knowledge concept to a related branch. In this research, the mind map used refers to the order of information for 4th year's titles. The order of information is a sub-topic that is expanded to several branches according to the content in concise terms. Therefore, visualizing knowledge is an approach where a subject with non-visual content is represented by graphics, diagrams or other readable/recognizable forms (Kosara, R 2011). These visuals can be illustrated either in two dimensional (2D) or three dimensional (3D) forms. One of the popular techniques that can be used to visualize knowledge is by adopting a concept map approach. Within this, a visual mind map is claimed as a definitely understood tool (Canas, A.J. 2005). The concept visual mind map also has become as a useful instrument for teachers to enhance students understanding various subjects as it combines scientific rigidity with simplicity and flexibility. It also assists those who intend to generate, transmit, store and spread information and knowledge (Espinosa, M.L. 2007). In learning and teaching process, Alhberg (2008) mentioned that teachers can monitor and promote students' learning and thinking through the use of concept mind map where is a concept map that could be described as a visual way of representing knowledge. Through this concept, learners are able to externalize their existing knowledge and combine it with new knowledge (Wu, P.H., Hwang, G.J. 2012). The most general and inclusive concepts are placed at the top of map, while the secondary concepts are placed below with the cross linkages and relationships between concepts indicated by lines (Wang 2010).

3. Research Methodology

This exploratory study involved two phases. The first phase involves a visual content analysis of the existing history textbook. Visual content analysis is one of the qualitative techniques most widely used as 'a symbolic reading of a body of text, images, and symbolic matter. The second phase is about gaining an empirical data through a questionnaires survey that contains three sections: (1) student demographics, (2) level of students understanding on mind map concept and (3) level of student used visual mind map in their study of History subject. A total of 20 students from 4th year at Sekolah Kebangsaan Seafield, Subang Jaya, Selangor were selected to answer the questionnaire. They are 12 girls and 8 male students. Further, an interview with teachers and selected five students randomly were conducted in the second stage. For a sample of teachers, they were chosen by the researcher based on the experience of teaching History subject over 2-8 years and attended many courses related to teaching History subject. Interview questions set was used to explore teachers' views on how visual mind map used in actual classroom practice.

4. The Outcomes

The sample of participants for this research project is 20 students and 3 teachers. Figure 1 below shows the percentage of the students' age and gender.
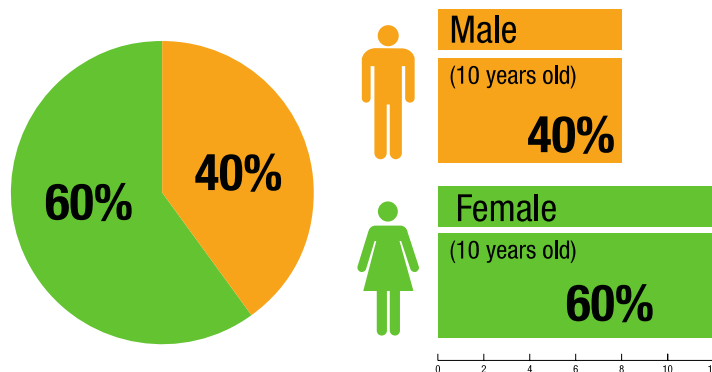
Figure 1: The percentage of participating student's age and gender.

In term of student's understanding on visual mind map concept towards learning History subject, most of the students participating in open ended questions agreed that visual mind-map is highly give them more solid understanding in learning History subject. As per shown in Table 1, 19 students out of 20 were agreed that their achievement in historical learning is increase when they used visual mind map.

Table 1: Number of students understands on the visual mind map concept

Agree	Disagree	Total (Students)
19	1	20

Further, students who participated in this research were given their opinions on the contents of History textbook. Table 2 shows 95% students (19 students) found the existing 4th year History textbook which has a very lengthy content. Therefore, most of them (17 students) agreed that History subject is interesting to learn more and only 3 students claimed that learning History is boring.

Table 2: Students opinion toward existing History Textbook and learning history subject

Items	Options	Students	Percentage
History	Interesting	17	85%
Subject	Boring	3	15%
Difficult in understanding	Yes	11	55%
the lesson	No	9	45%
Lengthy	Yes	19	95%
Syllabus	No	1	5%

Students also had been asking on the difficulty of learning the History subject. The survey revealed 11 students having difficulty in learning History subject through the existing textbook. This moreover highly showed that more than half of the participants having difficulties of using the existing history textbook in their learning. The participant students were required to give their views on the existing textbook compared to visual mind map book. The results showed that most of the participants claimed that the existing history textbook has too much content to be learned. If comparing to the visual mind map, 11 students agreed that it is less than the existing textbook. The responds received were shown in Figure 2.
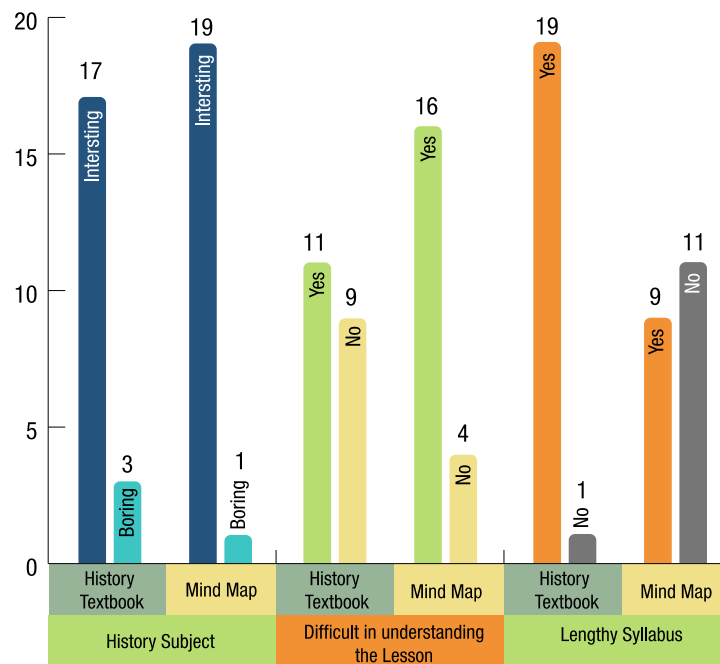
Figure 2: Students opinions on visual mind maps and problems on exiting history textbook

Referring to the students' preference towards visual mind map, the results revealed some interesting outcomes. Table 3 shows more students who preferred learning the history subject through visual mind map. The students also preferred to practice more on using visual mind map to increase their achievement. Overall results also showed that the majority of students like to use visual mind maps in reviewing history subjects.

Table 3: Students preference towards the use of Visual Mind Map in history learning

		Yes	No
1.	I like to learn history through mind map	17	3
2.	Mind mapping concept is does not assist me during my exam revision	2	18
3.	I like to practice using mind maps	17	3
4.	A mind map makes me love the subjects of history	17	3
5.	Each student must use a mind map to make a study review	14	6
6.	I draw a mind map when I revise for exams	18	2
7.	I draw a mind map when answering a history question during an examination	7	13
8.	Mind map helps me to remember what teachers are teaching	17	3
9.	Mind maps are less useful for the learning process	1	19
10.	Learning history is simple and fun using the visual mind map	17	3
11.	I can improve memorizing facts when using a mind mapping concept	17	3
12.	Teaching using mind map is more effective for teachers	17	3
13.	Mind map helps me to remember historical facts	18	2
14.	I can easily remember the notes teachers give when using the mind map	18	2
15.	The mind map makes me have fun while learning the history subject	17	3
16.	The mind map helps me to understand more	16	4

5. Conclusion

The government is committed to upholding historical by requiring all students at any level to study History subjects. O This research project determined the use of visual mind-maps concept in the learning of History subject which is effective as one of the teaching techniques. The mind-map concept can further help to improve students' achievement. The findings also clearly showed that students' attitude changes towards the learning History subjects after being exposed to visual mind-map concept. This study moreover suggests that students not only enhance their understanding of the topics taught, but also can use this method to solve the problem while responding to examination questions in a more confident way. Therefore, the content of the History subject should be more interesting, simple and comprehensive.

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