APPLY THINKING MAP FOR SAFE LIFE SKILL WORKSHOPS PRACTICE

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Abstract- The purpose of this study is to determine the application of thinking maps for practice of safety rules in life skills workshops. The study conducted in the scope of finding the difference between conventional group and the treatment group to the knowledge of salvation rules and the extent of compliance with practice rules can be seen in this research. Samples were taken about 40 respondents from form two students at Northeast school, Penang. Pre-test and post-test instrument was used to determine the level of knowledge respondents and questionnaires were used to evaluate the effectiveness of thinking maps. Reseacher use t test to analyse the collected data and proves the significant between the control group and the treatment group to the level of knowledge and there were no significant differences in the level of compliance of respondents to practice the safety regulations.The result recommend the researcher to provide motivation and training to the students so that the students will improve their safety rules in life skills workshop.

Keywords- thinking map, level of knowledge

I. INTRODUCTION

Education is a tool that generates power of human thought. Therefore, the application of thinking skills to be a key objective in education systems around the world today (Nor Hamizah and Zanaton, 2016). According to them, the Integrated Primary School Curriculum (KBSR) and Integrated Secondary School Curriculum (ICSS) is an initial effort in applying thinking skills to expose students to be critical thinking and creative for all subjects.Establishment of Integrated Secondary School Curriculum is a major change in the education system in order to achieve the goals of national development as a whole. Life Skills is one of the subjects contained in the Integrated Secondary School Curriculum (ICSS). This subject was introduced in 1989 with the aim of enabling students to use a variety of tools and materials through a variety of methods andtechniques to produce a planned project. Implementation of -21st century learning which aims to enhance and develop thinking skills to generate innovative student is aligned as contained in the Blueprint 2013-2025 (MOE, 2013). Thinking map (i-Think) is a program that aims to enhance and develop thinking skills among students towards producing innovative students (MOE 2013). Here, teachers and students will use the thinking tools in teaching and learning as well as implementing higher-order thinking skills activities. According to the Ministry of Education (2013), the alphabet 'i' - stands for innovation and 'THINK' also means thinking, innovative thinking that are required of all students. According Rohaida And Zamri (2015), the implementation of i-Think program in schools throughout Malaysia aims to enhance and develop thinking skills among students towards producing innovative students in the future. It is also supported in a study (Rosnidar, Haeidatul, Norazilawati and Nik Azmah, 2015), namely the use of a map wondering i-Think in the process of teaching and learning is a teaching technique that was introduced to encourage students to think and focus more on understanding the topic being studied. They stressed that every map brains have adapted to the thought process unit or lesson title.

There are different kinds of visual tools used in schools as "graphic organizers," mind maps and concept maps (Hyerle. D, 2014). According to him, it is a metaphor based mapping, which reflects our ability to create a network of information and knowledge map cognitive content and concept. According Hyerle. D (2014), mapping is a comprehensive metaphor for teaching, learning and knowledge representation for 21st century . It has a high role in helping students to understand and to support the change information into knowledge nowadays.

Teaching and learning processes requires a variety of methods and approaches that are appropriate for use (Siraj and Saleh, 2004). However, most teachers usually deliver knowledge-based and content-centered teaching itself. The goal of the teacher is to prepare students to sit for the examination at the end of each year (Ahmad and Tamura, 2010). What happens is that the learning process is only valid for the base only. The teachers are not concerned about whether students' understanding really master the skills or not. Sometimes every concept presented is not clear and is far out of context.

The approach of using thinking maps (i-Think) should be implemented to improve the effectiveness

of safety practice life skills in the process of teaching and learning in the workshop (Yusof and Mahamod, 2016). If the implementation is less efficient and not done then it will indirectly interfere with teaching and hands-on learning in the workshop (Rohaida And Zamri, 2015). Teachers and students are able to focus entirely on practical work done. This will invite a lot of accidents and injuries if students do not comply with current safety regulations in the workshop.

Teachers play an important role in the science regarding regulatory aspects and safety in the workshop then apply to students whenever -Students teaching and learning process is carried out (Sharudin and Yahaya, 2008). This is important to ensure that students are sensitive to the safety of themselves and others when they conduct hands-on workshops. Researchers feel that the study is a reasonable action that can help to provide more scientific information about the use of thinking maps. This study will explore aspects of the discipline, the safe use of hand tools and machines, security management and compliance of the aid.

In general, this study aimed to identify the safety of students in Living Skills workshops. The specific objectives are to identify the use of thinking maps for the title of the workshop safety practices in Integrated Living Skills and know the level of students' knowledge of safety rules in practice life skills workshops. This research is important in order to be a useful guide to the parties involved, namely teachers, school administrators and the Ministry of Education. The results of this study are expected to provide an understanding and knowledge to teachers to make action to address and prevent security problems faced by students in workshops throughout the service as an educator. This study can also assist schools in planning activities and programs taking into account the students' safety. In addition, the results of this study may also provide the knowledge and theoretical contributions in the field of employee management. The Ministry of Education can plan and take appropriate action to address this problem from spreading and in turn affects the driver education system.

II. HIGHLIGHTS OF THE REVIEW

Management is an activity of an organization or travel movements are closely linked to the rules, regulations and responsibilities and tasks assigned to the staff (Sugianto, 2002). Management is all activities involving the work of planning, organizing, directing, coordinating and controlling the activities (Abd Hamid, 1989). It can be a good or service that is able to yield or satisfaction to consumers and was conducted by the economical and efficient.This view is in line with Principal (1998) in which he stressed that the management is the process of division of labor. In terms of education, management is planning the teaching and learning that is designed to be implemented properly without interruption (Abd Hamid, 1989). Integrated Living Skills subject, however, it is the responsibility of a teacher who will manage all the technical requirements for teaching and learning workshops will be conducted in order to be in a situation that is conducive and safe to use (Mohd Sidin, 1998).

Management workshop Integrated Living Skills is not only confined to the updating of equipment after use but it can be characterized more thoroughly where the teacher need to document all activities in the workshop, including the provision of information official, evidence or travel records a laboratory, information appliances either it involves teaching and learning activities (Asnul Eating & Nurul Faezah, 2011).According to Hamid, 1989 management systematically in Living Skills workshop is very important to obtain effectiveness and ensure safety in the process of teaching and learning in schools. Good management practices workshop will create an atmosphere conducive workshops and ecosystems, effective and efficient (Mustapha, 2000). Accident in a lot more work done by those who are trained in their respective sectors (Longley, 1969).

Each exercise traveled and studied will produce learning skills, knowledge and attitude in which the practice of science that has been obtained will lead to excellence and benefits to its practitioners (Charles, 1998). This factor is important because if the garage is not managed properly and Living Skills teachers are less knowledgeable about the management of the workshop will lead the workshop can not be maintained and managed effectively (Asnul Eating & Nurul Faezah, 2011). This problem is aggravated by the teachers who teach Living Skills subjects claimed they did not receive security management training workshop specifically for the management of workplace safety in a systematic and effective (Oh, 2003).

In situations in schools, administrators and teachers need to ensure that all aspects of safety in the workshop observed that it meets the requirements set by the ministry and coincides with the concept of "safe schools" (Shamsiah Amin, 2005). According to The National Education Association (1996) school is a school that has a safe learning environment that is safe and healthy behaviors and can create positive relationships between teachers and students as well as to bring the involvement of parents and the community to become more meaningful.
Management workshop or laboratory made according to standard operation set by the ministry will create sense of security among students and cause a sense of enthusiasm to attend school. Effective school must be a safe and secure (Mahmood, 1993). Acceptance of

the project and awareness of the practice of safety rules will be able to determine safe or not a hands-on activity that (Arshad Hussin, 2006) teachers should provide safety measures such as putting on "Safety First" or "Beware While Working" on the walls of the workshop or using appropriate security chart.

Complying with the safety of themselves and colleagues is the responsibility of each individual to be done at the garage (Arbaeen, 2008). How to dress and improper work procedures are the cause of the accident (Mohd Nor 2000). The clothes worn should be in accordance with the work done as not too tight or loose, put on gloves appropriate to the work to be done, wear safety shoes, wear a helmet, wear safety belts.In addition, the appearance should be neat, short hair and hygiene. Human error and mechanical failure to function properly is a factor of the accident (Kurniotis, 2001). Attitudes like reprimand if there are among friends who make mistakes is one of the factors that can reduce the number of accidents while doing practical work (Arbaeen, 2008).

Students use a variety of machine tools in the workshop and it is at high risk for an accident (Mustapha, 2000). The equipment was used during the practical work should be placed in its original place to keep them organized and tidy (Mustapha, 2000). Students need to be trained in order to have the right work attitude and positive values such as discipline, diligent and dedicated (Mohd Anuar, 2008). Most accidents occur in the workplace can be avoided if the students always comply with safety measures (Muhammad A.Manan, 2003). Students should be given training and guidance necessary for them to use the machine and tools are available in the workshop (Bunawan, 2007). In addition, teachers who are not proficient in the job scope will often make mistakes and are prone to accidents (Mohd Nor 2000). He suggested that each teacher living skills given systematic training to improve the efficiency and skills in their work and to raise awareness about safety at work (Charles, 2007). The school facilities should be handled as soon as possible so that they are in good condition and does not disturb the process of teaching and learning (Mohd Sidin, 1998).

Provision of equipment and practical work carried out prior to the session will be fruitful and that it (Saleh, 2002). Teachers should plan learning experiences that are consistent with the safety of students and provide opportunities for them to develop a reasonable attitude toward safety (Hassan, 1977). In connection with the management, maintenance tools and materials are to be addressed in order for any disaster or accident in the workshop can be avoided (Bakar, 1994).

In the lessons, teachers often deal with students who vary in their abilities. Teacher expertise is required in determining the strategy of the PDP. Strategies and techniques are chosen that, in addition to potentially stimulate students to learn actively and is also able to help analyze the concept or idea and be able to captivate students and can produce meaningful learning (CDC, 2002).

According to Sharifah Nor (2012), there are several reasons not emphasize thinking skills among some teachers just thought that students first master all the words and concepts of a subject before students can be encouraged to think. According Maimunah (2004), a change from the conventional way of thinking maps and teaching methods require commitment or large challenges. While the success and excellence of a subject will not be realized if teachers still use traditional methods (Zamri, 2012).Review by Siti Zabidah (2006) found that teachers still can not use the map infusing thinking in the teaching process. While the needs assessment report by consultants Kestrel Education (UK) and the 21st Century Schools set out in the United States on 2 November 2011 found that higher-order thinking among teachers and students in Malaysia is still low.

Sidek study (2012) showed that teachers' practice through reflection map has been changed to a more positive student behavior. Map this idea has raised a remarkable memory than the old way of learning. Lee & Gan (2012) notes that in writing his reflections thinking maps can help students in organizing their thoughts, ease of understanding and help students presenting constructive ideas and new.

Learning happens in the workshop will become more interesting with the ingredients and new ideas (Shih, 2006). The major problems faced by teachers is the unwillingness of teachers to implement this agenda is because knowledge and skills (Rosnani & Suhailah, 2003). In addition, the willingness of teachers to handle teaching and learning demanded by an innovation is one of the key variables that determine the success or failure of these innovations (Rajendran, 2001). The teachers are poorly prepared in terms of knowledge, skills and attitudes to teaching pedagogy (Rajendran, 2001).

According to Ball and Garton (2005), most of the teachers do not know how to implement the use of thinking maps to the students but also some less willing. According Saree (2015), the use of thinking maps in teaching writing easier for teachers to engage students and focus on a particular topic. The ability of a student to obtain information on the use of thinking maps to add knowledge to use information more effectively (Doyle, 2007). Thus, this study will identify the extent of emphasis on the use of thinking maps for the safety practices in life skills workshops used by teachers as a teaching and learning process in workshops to stimulate students.

III. METHODOLOGY

This section covers aspects - aspects such as study design, study population, sample study, research instruments, validity and reliability, the pilot study, data collection procedures and procedures for analyzing the data to be used in this research. Researchers are also using appropriate quantitative method because it is used to get a lot of information about the use of thinking maps for Living Skills subject. This study uses three instruments, namely the pre-test, post-test and a questionnaire to answer the research questions related background of the respondents, the level of knowledge and the level of compliance of respondents to practice safety regulations.

The instrument is given a pre-test before the use of thinking maps are introduced. This involves pre-test all samples in this study. Pre-test is conducted to detect differences in students' knowledge of and adherence to safety practices at the workshop title life skills among students before learning input given by the teacher. Pre-test and post-test in the form of knowledge and level of adherence to safety practices header. The results of this pre-test will be used as control documents for the effective use of thinking maps were introduced. Meanwhile, the post-test conducted after the experimental group students were given treatment. An assessment of the success of this study was carried out by comparison scores obtained by students during the pre-test and post-test. The use of the formula method to assess the level of knowledge respondents for the pretest and post-test were as 0% - 40% low, 41% - 79% moderate and 80% - 100% higher level.

The study population is Form Two student of a secondary school in the Northeast, Penang. The study only involved a sample of students of two levels of about 40 people from SMK Methodist. Respondents are divided into two groups, a control group and a treatment group have a total of 20 respondents per group. A pilot study was conducted to test the validity and reliability of the item in questionnaire on 10 students who are studying at SMK Air Itam, Penang. The results obtained after the Alpha Index analyzed using Statistical Package for the Social Sciences (SPSS) is 0.95. Therefore, the questionnaire can be used to gather data for this study.

Distribution of questionnaires to students at the school are involved with the administration of the school. A detailed description has been given to all students to avoid error. The data obtained by using descriptive statistics, mean and percentage. All information or data required analyzed using Statistical Package for the Social Sciences (SPSS) after all the completed questionnaire collected.

IV. FINDINGS

The analysis covers the background of the respondents, the level of knowledge and level of compliance with safety rules in practice life skills workshops.

4.2.1 Descriptive Data

The distribution of respondents by gender comprised 40 male participants divided into two groups, a control group and a treatment group consisted of 20 samples for each group. Each group consisted of 20 respondent with a frequency of 50%. Equilibrium occurs because the number of respondents took from the form two students who were not involved in the examination and the workshop for their projects.The group consisting of four categories of people, namely Chinese, Malays, Indians and others. From the statistics, we can make a general idea that the number of Malay respondents was more than the Chinese and Indians. This is because the number of students is not balanced between the nation and a bit hard to get respondents from the same in terms of race.

4.3 Analysis By Study Issues

These data and analysis of research questions 4.3.1 Comparative analysis of the results of pre-test and post-test for the control group

Problem 1: What is the level of knowledge of students for the control group to title deeds life skills workshops safety regulations integrated?

Table 4.3.1: T - test comparison of the mean value of pre-test and post using conventional methods for the control group

N	PRE TEST		POST TEST		Difference of mean	t value	Significance value
	Mean	Standard deviation	Mean	Standard deviation			
20	**54.75**	**9.64**	**77.15**	**10.83**	**-22.40**	**-10.773**	**.000**

Results from the analysis showed that the mean score and standard deviation before learning is 54.75 and 9.64 while the mean and standard deviation after learning sessions using conventional methods is 77.15 and 10.83. This shows an improvement in performance with its mean score difference of -22.40. The t-test results show t = -10,773, p = .000<.00. then that means the null hypothesis is rejected.

4.3.3 Comparative analysis of the results of pre-test and post-test for treatment group

QUESTION 2: What is the level of students' knowledge of the treatment groups against the title deeds?

Table 4.3.4: T-test comparison of the mean scores before and after the learning using thinking maps for the treatment group

N	PRE TEST		POST TEST		Difference of mean	T value	Significance value
	Mean	Standard deviation	Mean	Standard deviation			
20	**51.45**	**10.062**	**59.40**	**10.148**	**-7.95**	**-5.052**	**.000**

Table 4.3.4 shows the results of t-test analysis comparison of the mean before and after the learning

process using teaching materials, thinking map to the treatment groups. Results from the analysis showed that the mean score and standard deviation before learning is 51.45 and 10 062 while the mean and standard deviation after learning session using thinking maps is 59.40 and 10.14. This shows an improvement in performance with its mean score differences -7950. The t- test results shows t = -5052 , p .000 <.00. that means the null hypothesis is rejected.

4.3.5 Comparative analysis of the results of pre-test and post-test between treatment group with the control group.
QUESTION 3: Is there a difference between the level of knowledge and control group treatment group for the topic of safety regulatory practices workshops integrated live?

Table 4.3.5: T-test comparison of the mean value of the pre and post-test after learning sessions between the treatment group and the control group

Variables	f Ujian t	Mean	Sig. (2 way)
The knowledge level between the control group and the treatment group	2.580 -5.542	-14.450	.117

Table 4.3.5 shows the difference between the treatment group and the control group. Results of statistical t-test showed significant difference p = 2.580 and p = .000 <.00. then the null hypothesis is rejected. The difference in the mean score for both groups of students such as 4.3.5 above table large enough to reject the null hypothesis of -14.45 mean.

4.3.7 Comparative analysis of the results of the questionnaire between treatment group with the control group.

QUESTION 4: Is there a difference between the level of compliance and control group treatment group for the topic of safety regulatory practices workshops integrated live?

Table 4.3.7: T-test questionnaire after learning session between the treatment group and the control group

Variables	F	Ujian t	Sig. (2 way)
The level of compliance between the control group and the treatment group for the topic of practices integrated life skills workshops?	.025	- .625	.536

The t - test results showed f = .025 and p = .536> .00. then the null hypothesis is accepted. This can be evidenced by the results mean score was at a moderate rate of 3.370 mean for control group and treatment group mean 3.521as shown Table 4.3.4 below.

Table 4.3.8: T-test comparison questionnaire after learning session between the treatment group and the control group

Variables	Mean
Control group	3.370
Treatment group	3.521

In conclusion, the analysis results obtained in the descriptive analysis above shows that the respondents selected level of knowledge did not practice fully.The results showed compliance levels at a moderate rate for the control group and treatment group mean is 3,370 and 3521.

5.0 Discussion

Overall, it was found that the level of students' knowledge for the two groups, control group and the treatment group had much of a difference. This suggests that the role of teaching techniques or methods used play an important role in influencing the level of knowledge of students on the topic of safety practices in life skills workshops. These results are consistent with several previous studies such as Nonoyama Yuko (2007), Badrulzaman (2006) and Mohammad Kyayyer (1994).

Based on the data that has been analyzed and discussed in detail previously, can be clearly seen that conventional methods used against students from the control group showed a modest improvement in the achievement of safety practice life skills. Meanwhile, the method of thinking maps showed a high and effective teaching using thinking maps may affect the interest and motivation in learning life skills to be an effective strategy for process of teaching and learning.In addition, the t - test for the control group and the treatment group to the questionnaire on the practice of safety rules give a positive difference. The difference in the mean values was found that there were not significant differences in scores. It can be proved that the learning method uses thinking maps or conventional methods can not improve the practice of safety rules in the topic effectively and still at a moderate level.

As the implications of the study some suggestions that can be used as an alternative to overcome the shortcomings that would exist to ensure the quality of research better shape. Students will be disciplined themselves in learning to use the equipment. Positive behaviour to the use of thinking maps must be inculcated to it in line with the needs of the present. In addition, they should always be aware of their surroundings while in the workshop because full of dangerous equipment around. With this knowledge the students will be explore to existing knowledge in the world of technology.

In addition, the schools and teachers should provide teaching and learning environment that is positive and timely as it can form a conducive and safe environment. Teachers also act as a model and be sensitive to changes of students interest about learning methods used. Teachers are always creative and innovative thinking and practice safety rules apply in workshops with various methods and attentive to the needs of its students. As this study has several limitations, the researchers would like to suggest some scope for future research studies so that the mass media, teaching strategies and interest in these topics can be emphasized. Education on the practice of safety rules should be strengthened and expanded, particularly the involvement of students. Use of the method - appropriate method such as virtual workshop is a part of the study to improve the mastery of the concept of security in the workshop.

In addition, the sampling ratio can be improved by taking into boarding schools, ordinary schools and private schools so that the findings can be generalized to the population made real. It may give more representation to all parties the importance of the study. Thus, the selection of the sample must be different ethnicity, level of attainment, sex for comparison.

In conclusion the effective use of thinking maps to the level of students' knowledge affects the practice of security at the workshop, namely the level of knowledge of students does not affect the level of compliance of the students as a whole. Therefore, to enhance the level of compliance in the workshop students, parents, teachers and school authorities need to join forces to find the best alternative to improve adherence students. To expand the scope of the review and consolidate the advanced study should be implemented as proposed to help everyone get a better achievement.

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