ELECTRONIC MIND MAPPING: PROMOTE STUDENTS' ENGAGEMENT IN SPEAKING-BASED ACTIVITIES

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ABSTRACT

This study aims to explore deeply on the use of electronic mind mapping in order to promote students' engagement in English class, especially in speaking-based activities. The method used was descriptive qualitative with purposive sampling. The instruments for collecting data were class observation, interview, and questionnaire sheets (triangulation technique). The participant was first graders of 89 Junior High School, Jakarta. The finding showed that the use of electronic mind mapping gave the benefit to students' speaking activities. They had effective, behavior and cognitive engagement when doing their tasks in using electronic mind mapping. They had a positive perception of using that application because they had new knowledge of it, high learning motivation and participate actively in learning.

Keywords: *electronic mind mapping, students' engagement, speaking activities, students' perception.*

ABSTRAK

Penelitian ini bertujuan untuk mengeksplorasi secara mendalam tentang penggunaan pemetaan pikiran elektronik untuk mempromosikan keterlibatan siswa di kelas bahasa Inggris, terutama dalam kegiatan berbasis berbicara. Metode yang digunakan adalah deskriptif kualitatif dengan purposive sampling. Instrumen pengumpulan data adalah observasi kelas, wawancara, dan lembar kuesioner (teknik triangulasi). Peserta adalah siswa kelas pertama dari 89 SMP, Jakarta. Temuan menunjukkan bahwa penggunaan pemetaan pikiran elektronik memberi manfaat dalam kegiatan berbicara siswa. Mereka memiliki keterlibatan afektif, perilaku dan kognitif ketika melakukan tugas mereka dalam menggunakan pemetaan pikiran elektronik. Mereka memiliki persepsi positif dalam menggunakan aplikasi tersebut karena mereka memiliki pengetahuan baru tentang hal itu, motivasi belajar yang tinggi dan berpartisipasi aktif dalam pembelajaran.

Kata kunci*: pemetaan pikiran elektronik, keterlibatan siswa, kegiatan berbicara, persepsi siswa.*

INTRODUCTION

English has crucial role in globalization era nowadays. It can be seen from its influence in most aspects such as economics, finance, industry, education, science and technology, tourism and others which it demands people to have good English for communication (Jianing, 2007). For those reasons, English is required to teach at school as compulsory subject at junior and high school level in national curriculum.

Even though, English is important as global language, it has not been practiced effectively in the class. Students tend to use their mother language, Bahasa Indonesia, in the class in interacting or communicating among students and to their English teacher. That condition leads to them to ignore to speak English. If they have lack of English speaking exposure, their skill will not explore much. Ur (2012) explains that if the students always use their fist language all the time, they will lose a chance to develop and enhance their speaking skill.

Zhang (2009) in Dincer, Yesilyurt, & Takkac (2012) finds that increasing students' speaking skill is challenging for English teachers especially in EFL context because they have lack motivation to use English for communicating and tend to keep silent and are not able to communicate because of some reasons such as high anxiety, low motivation in participating and low self-belief. Those condition occurs in one of junior high school located in Tanjung Duren, West Jakarta. The class observation showed that mostly they speak using Bahasa Indonesia, even their teacher speaks English. Their engagement to use English especially in speaking-based activities is still low. It requires the learning process change to solve the problem.

The previous studies had been undertaken by some researchers to answer the learning problems. Azizah (2013) implemented mind mapping for fourth semester college students to overcome writing problem because they had difficulty to find an idea and low motivation to write. When they applied mind mapping, their writing skill increased. Similarly, Holland, Lyndahollandwlvacuk, & Davies (2003) also used mind mapping to increase their art and design and computer students. The result showed that their students' writing skill gained. Not only to solve the writing problem, mind mapping also could be used to overcome a concept understanding. Crowe & Sheppard (2012) taught their students mind mapping in gaining their research concept understanding. Simonova (2015) taught e-learning concept to his management information students at Hradec Kralove University and Karaganda State Technical Kazakhstan University

(KSTU). Pravitasari & Fitriasih, (2014) used mind mapping to teach written and structure expression of TOEFL course for STMIK *Sinar Nusantara* students. Fun (2010) taught his students accounting concept using mind mapping. Buran & Filyukov (2015) also conducted research to fifty students of National Research Tomsk Polytechnic to deal with the creativity problem, new vocabulary, reading and public speaking problem by using mind mapping in learning process.

From the previous investigation on mind mapping, it can be concluded that it is beneficial to students' improvement for their learning result, not only gaining their skill but also the concept understanding. The research on the use of mind mapping in engaging students especially in junior high school level is limited. Therefore, this study is important to be conducted by concerning on the use of the electronic mind mapping in engaging the students especially in speaking-based activities.

RESEARCH METHODOLOGY

This research method described the participant involving, data collection instruments, data analysis and interpretation procedure. This study employed the qualitative approach. This study had research consent form from the principal and teacher before conducting the research.

Participant

The participants of the study were thirty-five first graders of 89 junior high school, Jakarta comprising of nineteen female and sixteen male which the age range was 12 until 13 years old. They were taught by an English teacher named Ms. V. She was graduated from English education department and has been taking master program at one of state university in Jakarta.

Data Collection Procedure

This study used qualitative approach with some data collection instruments such as class observation sheet, questionnaire sheet and interview protocol sheet. Triangulation data were used to test the data credibility. The questionnaire consisted of twenty open-ended questions on students' perceptions after they used electronic mind mapping in their English learning process. Class observation sheets comprised the learning process in using electronic mind mapping. It was useful to portray the students' engagement while using it.

Data Analysis and Interpretation Procedure

After collecting the data, data analysis and interpretation were conducted (Creswell, 2008). Those procedures were as follows:

1. Class observation sheets describing the learning process of using the electronic

mind mapping were narrated to be the data analysis. It portrayed the introduction of electronic mind mapping delivered by the teacher, how the students used it, students' engagement while using the electronic mind mapping in English learning class.

2. Six students from different intellectual level (faster, medium and slow learner) were interviewed on their perception after using the electronic mind mapping in English class.

3. Thirty-five students filled the questionnaire. Before they filled it, they were given the explanation to avoid the misunderstanding.

4. Interview and questionnaire sheets were analyzed.

Class observation sheet, interview and questionnaire analysis were interpreted descriptively to answer the research questions

FINDING AND INTERPRETATION

This study answered the research questions as follows:

1. How is the implementation of electronic mind mapping in promoting the students' engagement in speaking-based activities?

2. How is students' perception toward the use of electronic mind mapping in speaking-based activities in the class?

The Implementation of Electronic Mind Mapping

Before the first grade English teacher, Ms. V, applied the electronic mind mapping, she got the training from the researcher how to use it. She studied the features and their functions for 3 meetings. While training, she stated that it was interesting because it had some tools such as inserting some pictures. Mind mapping is a symbol, picture or words that can be formed using some branches, lines or central theme (Aykac, 2015). Similar to Aykac, Jain (2015) also describes mind mapping is as diagram visualizing the information using various colours, pictures or words. There are characteristics of mind mapping by Buzzan (1994) in Aykac (2015): central picture as the main topic which can be developed with interesting branches; the branches can be pictures or words with lines associating to the key words and there is the relationship among the branches.

After mastering the electronic mind mapping, she applied it in the class. One day before the English class, she announced the students to bring the laptop to be used in English class. She was helped by IT expert to install the electronic mind mapping to her students. While installing it, she prepared some learning media such as projector and her laptop. She informed the students the

learning goal was to learn the mind mapping features and its functions. Before she explained it, she made some group so her students would have cooperative learning while making a mind mapping in English class. She made a group of four. She explained the mind mapping feature and functions enthusiastically. All students

province they chose. In learning process, each student shared their idea and opinion to choose one of provinces in Indonesia for their mind mapping project. They chose the template they decided. They interacted enthusiastically in group. Sometimes they asked the teacher if they had problem. They were supervised by Ms V while browsing
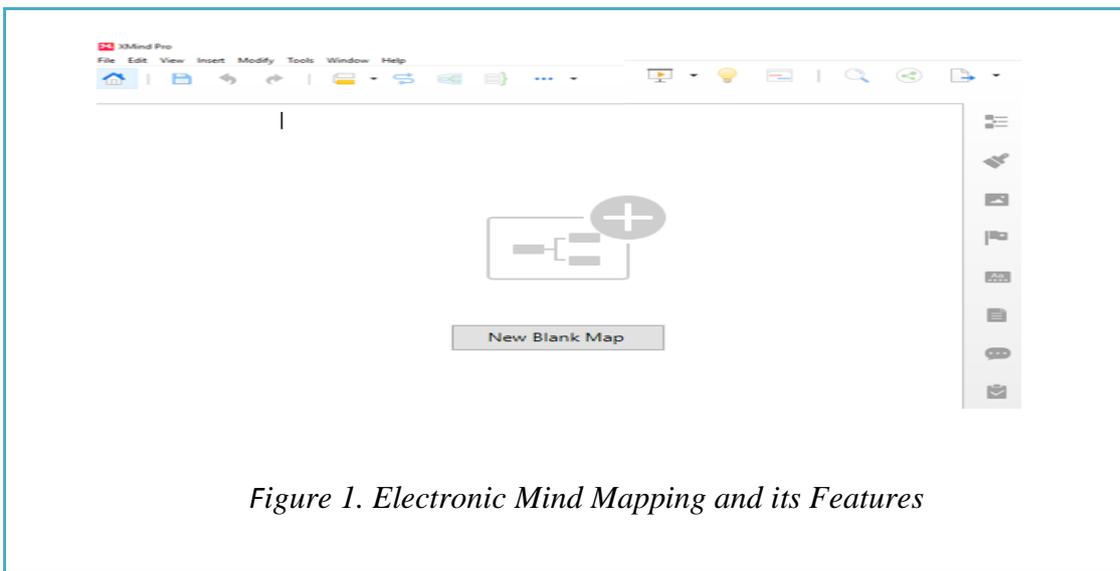

Figure 1. Electronic Mind Mapping and its Features

tried and had fun to use it.They were happy and they had not known it before. While Feo they already made as well save their mind mapping project, like in the *Figure 1. Electronic Mind Mapping and its Features.*

The teachers still asked the students to bring their laptop when they had English class because they continued to make the mind mapping project in group. The second meeting, the students made the concept about Indonesian culture using mind mapping and asked them to present it in group. Each member of the group had to speak up to describe their culture of

the picture in internet. The time was up and they did not have time to present their mind mapping project. Therefore, they continued next meeting.

Third meeting, each member presented the culture of province they chose in front of the class by showing their mind mapping project *(one of group project can be seen in figure 2).* Mostly each student presented their project using English well. From the interview, Rizky and Adrian told, that "*lebih enak pakai mind mapping karena lebih mudah presentasinya*".

Azizah (2013) finds that mind mapping is a technique to understand the

concept easily and creatively that can be used to describe various information. Mind mapping requires students' imagination or creativity so it can support them to find or develop the idea. It also has various form, shape, or structure that can build students' idea and creativity (Noonan, 2013).

practiced for presentation. After practicing with their group, they presented in front of the class.

The class observation showed that mostly they participated actively in discussing and making the mind mapping in group.
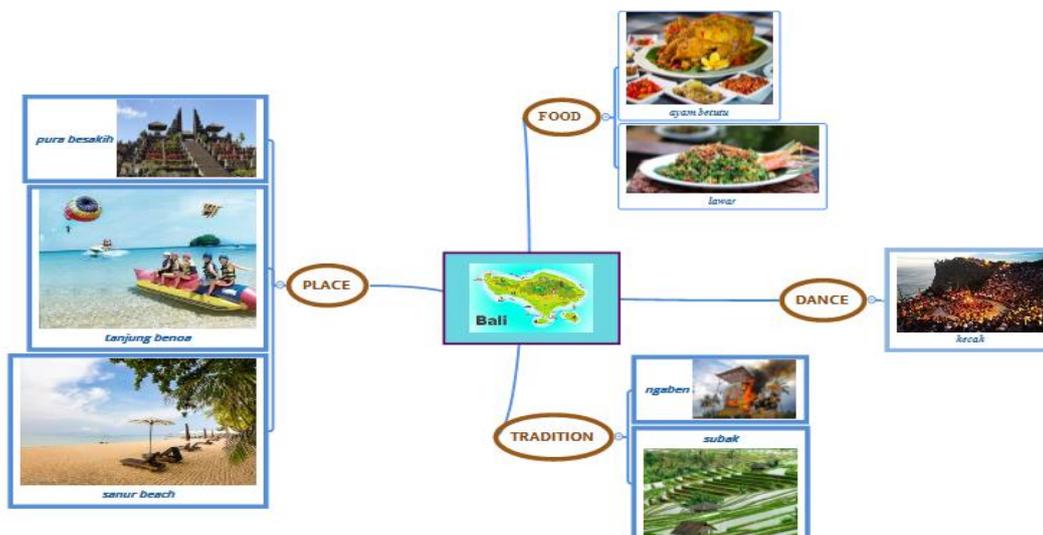

Figure 2. Sample of Students' Mind Mapping Project

The fourth meeting, teacher asked the students to describe things in the classroom using the electronic mind mapping. Similar procedures were conducted by the teachers. Students discussed in group to decide the things that they would describe. They determined to choose the pictures attached in mind mapping. Some of them asked the teacher the vocabulary that they did not know in English. Some of them forget to change the font and background, thus they asked to their teacher. After finishing making the mind mapping, they shared the job and

Their participation could encourage their learning outcome. Connell (1990) in Baroody, Rimm-kaufman, Larsen, & Curby (2016) pointed out that the indicator of successful school was promoting the students' engagement in learning process. Engagement is an activity which students focuses on their attention to respond actively (Csikszentmihalyi, 1990 in Hart et al., 2011). Students' engagement is important because they can be successful or reach the learning outcome (Hart et al., 2011). Hourigan (2013) also agrees that students will be successful if they involve

actively in learning process which they always attend the class with their idea and integrate the real experience and knowledge they have. Johnson (2008) describes the students' cognitive and emotional engagement are the foundation of students' flow experience, thus, teacher requires to involve the students in learning experience actively (McKinney et al. 2004 and Perseil, Pferffer, and Syed, 2008 in Hourigan, 2013).

There are three students' engagement: affective engagement, behavior engagement, and cognitive engagement. The affective engagement refers to students' feeling towards their school, teacher, friends, and learning. The behavior engagement is the observable action or involvement through students' active participation such as extra-curricular activities, attendance, work habit, etc. Cognitive engagement emphasizes on students' perception and belief toward their learning (Hart et al., 2011). Those engagements can be seen detail in table 1.

Table 1. Types of Students' Engagement

Engagement Type	Item
Affective	I am very interested in learning.
	I like what I am learning in school.
	I enjoy learning new things in class.
	I think learning is boring.
Behavior	I try to do well in school.
	I work as hard as I can in class.
	I participate in class activities when

	I'm in class
	I pay attention in class
	When I'm in class, I just act like I'm working.
	When I'm in class, my mind wanders.
	If I have trouble understanding a problem, I go over it again until I understand it.
Cognitive	When I study, I try to understand the material better by relating it to things I already know.
	When learning new information, I try to put ideas in my own words.
	I try to understand how things I learn.

Uden, Ritzen, & Pieters (2013) classify the engagement into two, behavior and emotional engagement. The behavior engagement can be seen from the participation in the class, do the task on time, have concentration, try to accomplish the task given by the teacher. The emotional engagement can be observed from students' enthusiasm to attend the class or come to school and show the positive learning attitude.

The students' engagement was measured from three approaches, observations, students' report and teachers' report. The students' engagement observation can be gauged by some criteria such as attention, focus, and on task behaviors (Baroody, Rimm-kaufman, Larsen, & Curby, 2016). The class observation indicated that students had cognitive, behavior and affective engagement. Those engagement could be seen from how they interacted to their friends in group well, helped each other in

accomplishing their tasks, enthusiastically completed their tasks, conducted their tasks on time and had ability to describe their concept using their mind mapping.

Students' Perception Toward the Use of Mind Mapping in Learning Process

The questionnaire analysis showed that thirty-four students were interested to learn English using electronic mind mapping application and one student was not because she had problem with her eyes. Her eyes would be painful if facing the laptop in long time. Mostly they were enthusiastic to use it because they stated that it was helpful when they had presentation in front of the class. They were never bored to use it and participated actively in discussing while making the project using it. They also urged that they could develop their creativity using it. They thought that it was easy to use and made them more motivated to learn and gave the new experience in using the application.

CONCLUSION

The government not only focus on the reading, writing, culture literacy but also information and technology literacy as national literacy movement. In the curriculum, the technology must be integrated in the learning. It is relevant to this era which the students are familiar to the technology. The use of electronic mind mapping is one of

learning media used in learning process. The result shows that it gives the positive impact to students' learning especially students' engagement in speaking-based activities. It also builds the positive perception for the students toward its use. They learn the new thing, have learning motivation, participate actively in learning. This study gives the practical implication for the students to promote their speaking skill by using the electronic mind mapping and for the teachers as an effective alternative learning media. The theoretical implication is to enrich the theory on the use of electronic mind mapping in language learning, especially English language. The study has limitation on participation. The further research needs more than one class and one school.

REFERENCES

Aykac, V.(2015). An Application Regarding the Availability of Mind Maps in Visual Art Education Based on Active Learning Method. *Procedia - Social and Behavioral Sciences, 174, 1859–1866.* *https://doi.org/10.1016/j.sbspro.2015. 01.848*

Azizah, S. (2013). Efektivitas Penggunaan Strategi Mind Mapping Mata Kuliah Writing. *Nuansa, 10 (Desember), 362–384.*

Baroody, A. E., Rimm-kaufman, S. E., Larsen, R. A., & Curby, T. W. (2016). A Multi-Method Approach for Describing the Contributions of Student Engagement on Fifth Grade Students' Social Competence and Achievement in Mathematics. *Learning and Individual Differences, 48,*54–60 *http//doi.org/10.1016/j.lindif.2016.02.012*

Buran, A., & Filyukov, A. (2015). Mind Mapping Technique in Language Learning. In Procedia - Social and Behavioral Sciences. *Elsevier B.V. (Vol. 206, pp. 215–218). https://doi.org/10.1016/j.sbspro.2015.10.010*

Bystrova, T., & Larionova, V. (2015). Use of Virtual Mind Mapping to Effectively Organise the Project *Activities of Students at the University, 214 (June), 465–472. https://doi.org/10.1016/j.sbspro.2015.11.724*

Creswell, John W. 2008. *Educational research.* Third Edition. New Jersey: Pearson

Crowe, M., & Sheppard, L. (2012). Mind Mapping Research Methods. *Quality and Quantity, (August), 1493–1504. https://doi.org/10.1007/s11135-011-9463-8.*

Dincer, A., Yesilyurt, S., & Takkac, M. (2012). The effects of autonomy-suppor engagement , achievement and competence in English speaking classrooms. *Procedia - Social and Behavioral Sciences, 46, 3890–3894. https://doi.org/10.1016/j.sbspro.2012.06.167*

Fun, C. S. & N. M. (2010). Teacher-Centered Mind Mapping vs Student-Centered Mind Mapping in the Teaching of Accounting at Pre-U Level-An Action Research. *In Procedia - Social and Behavioral Sciences (pp. 240–246). Elsevier B.V. https://doi.org/10.1016/j.sbspro.2010.10.034.*

Hart, S. R., Stewart, K., & Jimerson, S. R. (2011). The Student Engagement in Schools Questionnaire (SESQ) and the Teacher Engagement Report Form-New (TERF-N): Examining the Preliminary Evidence. *Contemporary School Psychology, 15, 67–79.*

Holland, B., Lyndahollandwlvacuk, L. H., & Davies, J. (2003). An Investigation into the Concept of Mind Mapping and the Use of Mind Mapping Software to Support and Improve Student Academic Performance. *Learning and Teaching Project, 89–94.*

Hourigan, K. L. (2013). Increasing Student Engagement in Large Classes : The ARC Model of Application, Response, and Collaboration. Teaching *Sociology, 41(4), 353–359.*

Idrissova, M., Smagulova, B., & Tussupbekova, M. (2015). Improving Listening and Speaking Skills in Mixed Level Groups (On the Material of New English File). *Procedia - Social and Behavioral Sciences, 199, 276–284.* *https://doi.org/10.1016/j.sbspro.2015. 07.517*

Jain, S. (2015). The Comprehensive Study of How Mind Mapping Technique Helps to Understand Concepts and Ideas in Science Teaching. *International Journal of Scientific and Research Publication, 5(12), 284–286.*

Jianing, Xu. 2007. Storyteling in the EFL Speaking Classroom. *Iteslj Vol. XIII, No.11.*

Johnson, L. S. (2008). Relationship of Instructional Methods to Student Engagement in Two Public High Schools. American Secondary Education, 36(2), 69–87.

Noonan, M. (2013). Mind maps : Enhancing Midwifery Education. *YNEDT, 33(8), 847–852.* *https://doi.org/10.1016/j.nedt.2012.02. 003.*

Pravitasari, S. G., & Fitriasih, S. H. (2014). *Pembelajaran Bahasa Inggris III Berbasis Mind Map untuk Meningkatkan Skor TO*EFL Mahasiswa STMIK Sinar Nusantara (pp. 44–51). UNIBA.

Tungprapa, T. (2015). Effect of Using the Electronic Mind Map in the Educational Research Methodology Course for Master-Degree Students in the Faculty of Education. International Journal of Information and Education Technology, 5(11), 803–807. https://doi.org/10.7763/IJIET.2015.V5 .615

Uden, J. M. Van, Ritzen, H., & Pieters, J. M. (2013). I Think I Can Engage My students. Teachers' Perceptions of Student Engagement and Their Beliefs about Being a Teacher. *Teaching and Teacher Education, 32, 43–54.* *https://doi.org/10.1016/j.tate.2013.01. 004.*

Simonova, Ivana. (2015). E-learning in Mind Maps of Czech and Kazakhstan University Students. *In Procedia - Social and Behavioral Sciences (pp. 1229-1234). Elsevier B.V.* *https://doi.org/10.1016/j.sbspro.2015. 01.236.*