

## A Closer Look on English Language Education Department Students' Contention of Using Mind Mapping Techniques

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### Abstract

Teachers and students have widely used mind-mapping techniques to enhance teaching and learning experiences in education. This study intended to explore the benefits and challenges of applying mind-mapping techniques based on students' perceptions. The current study used a qualitative approach. In-depth interviews were employed to collect the data. The study involved four students in their junior year of an English Language Education Department of a private university who had frequently used mind mapping. All participants in the study viewed that mind mapping positively contributed to their English learning. The contributions included saving time, assisting them in learning and understanding materials, and recalling materials more easily. In addition, the participants also claimed that mind mapping enhanced their creativity in learning, helped them brainstorm ideas, improved language skills, increased their interests, and motivated students to learn. Apart from the benefits, all participants considered mind-mapping techniques challenging due to their complexity, especially when they were new to mind-mapping. In addition, they also believed that applying mind-mapping techniques consumed much time. The study concluded that mind mapping positively contributed to students' learning experiences, especially in organizing the information they gained when learning.

**Keywords:** mind mapping techniques, mind maps, learning experiences

### INTRODUCTION

The educational process requires changes because there are still many problems faced by teachers and students in language learning in classrooms. The problems include teaching methods (Smith, 2011; Waters, 2012), materials (Garton & Graves, 2014), motivation (Ushioda, 2013), technological use (Coskun & Marlowe, 2015), policy (Yusny, 2013), gender (Pawelczyk et al., 2014), etc. Teaching methods, in particular, have drawn

scholars' attention to conduct and discuss this issue in ELT. Mattarima and Hamdan (2011) found that most Indonesian EFL employs traditional methods, such as drilling and presentation. Many efforts have been made to implement different teaching and learning English techniques successfully. Employing mind mapping techniques can be one of the strategies to solve the problems in language learning. According to Buran and Filyukov (2015), mind mapping is a practical, creative, and adaptable technique in teaching and learning languages. Besides, mind mapping is essential and valuable for students' complete understanding (Buran & Filyukov, 2015). This method brings a new and interactive teaching technique for teachers and students. Boley (2008), who conducted a study about mind mapping techniques, found that the technique increases students' learning to derive material more effectively by 65%.

Mind mapping techniques are activities that anybody can perform. According to Buzan (2010), mind mapping techniques are note-taking techniques designed to meet the needs of the whole brain. It includes not only words, numbers, sequences, and lines but also colors, images, dimensions, symbols, rhythm, and maybe other visuals. Additionally, Ayudyah and Sumarsono (2014) asserted that mind mapping is a technique to categorize ideas based on individuals' thinking. The technique is commonly used to take notes efficiently, interestingly, creatively, and effectively. The results of mind mapping techniques are mind maps. In English learning, employing mind-mapping techniques has increased some macro-English skills. For example, Bukhari (2016) stated that students improve their writing abilities by applying mind-mapping techniques. The opinion is in line with Male and Tias (2016) and Puspitasari (2020), who asserted that mind-mapping techniques offer a promising improvement in reading comprehension skills. Further, mind-mapping techniques have improved students' long-term memory (Fatmawati, 2016). It might be because the technique assimilates new information with the existing one and builds the schema (Keleş, 2012). In the end, the way that mind mapping techniques work can stimulate innovation and facilitates learning.

Another benefit of mind mapping techniques is saving time in the learning process (McMurray, 2018). In addition, applying mind-mapping techniques in learning will be more fun (Bevan, 2018) because it can boost the students' motivation. It can also encourage students' participation by creating colorful and meaningful images, leading to more effective learning (Wilson et al., 2016). Mind mapping techniques may also enable students to practice brainstorming in the learning process (Rizqiya, 2013). Students are encouraged to connect one idea with others; thus, more ideas are explored. Although scholars have indicated the benefits of the mind mapping technique, mind mapping techniques also present some challenges which students in the learning process cannot be avoided. Christiani and Latief (2018) noticed that many students find it challenging to apply this particular technique since they must deal with a lack of vocabulary and some other technical issues. Furthermore, Fu et al., (2019) tried to design an English writing class by including role-playing game activities with a mind-mapping technique to enhance students' writing ability. It was found that mind mapping is a challenging learning technique for some students to increase their writing skills and technical acceptability for study.

Moreover, according to Muhib et al., (2014), students face challenges when creating a comprehensive mind map. Creating mind maps needs much time to organize and find out essential keywords of the materials. Also, it may be challenging for many students because

no templates of mind maps are provided. In addition, Adodo (2013) stated that one of the challenges of mind mapping techniques is that it is too difficult to interpret the complicatedness of a mind map if the students are unfamiliar with the concept of mind mapping. It means that mind mapping has relatively little explanation for a complex topic. Accordingly, mind-mapping techniques are more suitable for explaining simple materials or issues. Finally, mind-mapping techniques also take time because the students must find the keywords and are sometimes confused about putting them in every branch (Nurlaila, 2013).

Furthermore, in its application, practitioners and scholars have tried to combine which teaching activities fit with mind mapping activities, especially ELT. Ayudyah and Sumarsono (2014) once attempted to match reading activities with mind-mapping techniques. Using a quasi-experimental design, they aimed to engage students with reading comprehension activities and mind-mapping techniques. The findings revealed that using mind-mapping strategies could increase the students' engagement and comprehension, particularly in reading. Other scholars, Buran and Filyukov (2015), conducted research in which they focused on the use of mind-mapping techniques in language learning. Their study found that mind mapping helped to solve problems, brainstorm before tasks, and learn vocabulary for students. Finally, they emphasized that mind-mapping techniques can be applied as one way to provide a creative learning process for students by placing teachers as facilitators and coordinators to assist students. In addition, Bukhari (2016) conducted the effect of mind-mapping techniques in enhancing writing skills. He mentioned that mind-mapping techniques also work perfectly well to improve students' writing skills. In conclusion, it is safe to say that mind-mapping techniques, particularly in language teaching and learning, have a positive impact. It is eligible to be used to improve language skills.

The comparison learning techniques between mind mapping and semantic mapping techniques were also explained by Khatimah and Rachma (2018). Their research aimed to determine which is the best technique that gives more benefits to reading comprehension. An experimental study was used in their research by having two sample classes. The results found that students' scores increased after using the mind-mapping techniques and their learning interests. Another previous research about mind mapping was conducted by Sulastri (2020), which focused on using mind mapping to improve students' speaking skills. Using classroom action research, Sulastri (2020) found that students' speaking skills improved after being taught using mind mapping techniques. The classroom observations showed that students also appeared more relaxed and comfortable when explaining the material in front of the classroom.

Even though mind mapping can benefit teaching and learning in classroom activities, only some students feel satisfied using mind mapping techniques. Muhib et al., (2014) asserted that students sometimes find it challenging to create a comprehensive mind map. For this reason, creating a mind map may require much time when organizing and finding significant keywords. In addition, in her thesis, Wandut (2018) asserted that mind mapping techniques, in some cases, confused students because the results of mind mapping techniques of each student were different. Students often tried to determine the best way to reiterate the material into a mind map. Researchers argue that mind mapping will likely make students need assistance from their teachers because, as Davies (2010) argued, mind mapping techniques may result in students' understanding of the topic with little or no explanation from the teachers. Teachers' assistance is needed to ensure students create a

correct mind map and understand mind mapping techniques correctly, even though they have their way or style of expressing their understanding of the topic being learned.

After reviewing the existing studies, the researchers noticed the empirical gap in which the prior research positioned and showed the positive side of mind mapping. In other words, teaching students using mind-mapping techniques may lead to effective teaching and learning. Unfortunately, existing studies in the area have mainly focused on using mind-mapping techniques based on teachers' perspectives. Students' perspectives on using techniques have received little to no attention. In this current research, we seek to extend the discussion of using mind-mapping techniques based on students' experiences in ELT practices. By voicing their experience, this research is expected to reveal and enrich the discussion under the mind mapping techniques, both the positive and negative sides. Also, this current research can comprehensively justify the use of mind mapping. Lecturers and students are given an apparent reason to use mind mapping. As for other researchers, the findings of this research can be used as a reference for similar topics. The objectives of the study are twofold. The first aim is to discover the benefits of using mind-mapping techniques based on students' perceptions. The paper also focuses on finding out the challenges when employing this strategy. The study focused on English Language Education Department (ELED) students in their junior year at a private university in Yogyakarta.

## **METHOD**

The current research employed a qualitative approach. According to Pathak et al. (2013), the qualitative method is used to understand people's beliefs, experiences, attitudes, behavior, and interaction. They also added that qualitative research allows participants to share their experiences and interests. The research was conducted at an English Language Education Department (ELED) of a private university in a college town in Indonesia. Four ELED students in their junior year agreed to participate in this research. They were selected because these students were deemed to have an extensive learning experience in creating mind maps from their teacher(s) and used the mind mapping techniques independently in their study. The other similar characteristic of the participants was that they were enrolled in Teaching English as a Foreign Language (TEFL) course. Students learned mind-mapping techniques in this class as one of the class activities. For example, they used mind mapping to find the information on the articles or books they had read. After creating a mind map of their reading, they shared their information with the class. All the participants were interviewed using the same questions. For example, they were asked how often they used the mind mapping techniques when they employed them and the perceived advantages and barriers when using mind mapping techniques. Moreover, follow-up questions were given depending on the participants' answers to obtain rich data. For confidentiality purposes, the participants were presented using P1, P2, P3, and P4.

After collecting the data through interviews, the researchers analyzed them by transcribing and coding them. The interviews were audio-recorded. Since the interviewer and interviewees were all multilingual, the discussions used combinations of the languages they spoke (i.e., Bahasa Indonesia and English). It aimed to make the participants feel comfortable answering the questions and avoid misunderstanding. However, the Indonesian language was mainly used throughout the interviews.

The first data analysis step was to write verbatim transcription from each participant's interview. To get the best results, the researchers listened carefully to the audio and took notes on the contents resulting from the recording. The names of participants used in the current study are pseudonyms to keep their privacy. After transcribing the data, the researchers conducted member checking to examine the trustworthiness of the data from the interview (Creswell, 2018). The transcriptions were returned to the participants to see if they would like to change the information given during the interviews. All participants stated that no data alteration was necessary. The last step was data analysis, which was conducted by finding the similarity of the codes from each transcription. The researchers then put these codes into themes that "can represent the codes" (Creswell, 2018). The interview excerpts in the next section have been translated into standard English.

## **FINDINGS AND DISCUSSION**

### **Students' Perceptions of the Benefits of Using Mind Mapping Techniques**

#### ***Prolonged recollection***

The data revealed that using mind-mapping techniques positively impacts students' learning to remember the materials for a more extended time in the memory. The participants shared that the learning process in the department requires students to read all materials before coming to the class. Mind mapping helped them make a road map of the materials they had read. P1, the first participant, stated that mind mapping helped P1 to understand the plot of the materials.

"I can draw a line between one theory and the other, and I realize that it helps me understand the bigger picture of the topic" (interview excerpt P1.4).

Other participants, P2 and P3, asserted that they used mind mapping techniques as a strategy to memorize a theory or description from a material. As said by P2,

"I prefer to learn my class materials using mind mapping strategy because this technique is all about the main points of the materials, which enables me to memorize the readings more easily" (interview excerpt P2.5).

Similarly, P1 also stated that mind mapping is a powerful technique to describe complex materials by breaking down and nailing keywords related to the reading materials. P1 remarked,

"Finding the keywords of long materials through mind mapping techniques helped me better understand the complex reading materials. The keywords worked as hints for me" (interview excerpt P1.6).

In addition, P3 also argued that mind mapping is a powerful way to take notes because it provides a general picture for a learner to know complicated explanations through lines and keywords. This current finding is in line with Gavens et al., (2020), who found that mind-mapping techniques prevent students' memory traces from declining. Consequently, students can restore the materials longer than using other techniques.

### ***Saving time***

The second finding from the obtained data showed that mind mapping helped students manage their study time. Students saved more time using mind-mapping techniques when reading a text. P4 stated that instead of re-reading the class materials multiple times, P4 preferred looking at the mind map she created when reading the class material for the first time. She remarked,

"Reading class material sometimes takes too much time because I have to re-read it. Once you know how to use this particular technique, it will be much easier for you. You just need to read the mind map that you have created. It saves so much time" (interview excerpt P4.5).

This finding underpins that learning time can be saved for other learning activities, particularly reading and understanding class materials, as mapping techniques provide keywords that lead to the main class materials. It is in harmony with Liu (2016), who found that mind mapping can provide efficiency in learning. Thus, students can save time in relearning and learning related subjects. Previously, Betancur and King (2014) also found that mind mapping can shorten the time students learn and make learning more efficient with its features. As a result, students will understand a concept from materials more easily so that the teacher may not need to re-explain and can move on to the subsequent discussion.

### **Increasing students' learning engagement**

In brief, learning engagement here refers to students' participation in the teaching-learning process. The data also revealed that mind mapping increased students' participation in teaching and learning activities. As mentioned in the previous section, mind mapping involves students' creativity to create an engaging mind map based on their understanding. For instance, mind maps consisting of various shapes, lines, and colors made them more eye-catching and appealing. P2 and P4 support this particular finding. They stated that the mind mapping technique was not monotonous because it was more than rewriting things they had read. It was also about re-designing a complex theory to become engaging materials. P3 asserted,

"Mind mapping is more interesting than just reading. I mean, students can show their creativity freely and make mind maps that are easy on the eye and good to read. (Interview excerpt P3.5)

The data shows that the creative process when using mind mapping techniques and the created mind maps can increase students' learning engagement. As a result, it will influence their motivation to learn. This finding aligns with Wilson et al., (2016) asserted that mind-mapping techniques encourage students to actively participate in the learning process when creating their mind maps and explaining the products to others. In addition, Wahyu (2019) noticed an increase in students' engagement in the English classroom by employing mind mapping. Last, Jones et al., (2012) revealed that mind-mapping teaching techniques could increase students' motivation to learn English. Indeed, in some learning theories, motivation plays a significant role in learning. Thus, mind mapping techniques can be considered an effort to increase students' engagement when learning and motivation to learn.

### ***Supporting speaking skills***

The last finding confirmed that mind-mapping techniques positively contributed to students' speaking skills. P3 maintained that employing the mind-mapping technique helped her prepare her presentation. P3 added that mind maps helped her manage what P3 had to say, such as explaining a theory and describing the reading materials to P3's peers. P3 stated,

"[Because of mind mapping techniques] I know the things that I have to say. I have the order [of what to say], and it helps me a lot so that I will not say something out of topic" (interview excerpt P3.6).

Mind mapping techniques require students to read and understand the material before creating the mind map, so students need to have background knowledge. The lines connecting the bubbles in the mind maps worked like road maps for the participants. They considered these lines helpful to have them in hand when explaining a theory or material. Thus, they would deliver their ideas in mind maps first before explaining them in front of the class. Students had to explain the map they created to their friends when the teacher had just taught the techniques. It is also in line with Tuan and Mai (2015), who mentioned that mind-mapping techniques could increase learners' speaking performance. Khodabandeh (2021) also found that students improved their pronunciation, flow of ideas, and speaking after employing the mind-mapping teaching technique.

### ***Students' Perception of the Challenges of Using Mind Mapping Techniques***

#### ***Mind Mapping techniques are complex***

Reading and understanding class materials beforehand are needed in making a mind map. Students need to understand the context of the materials from which a mind map will be created. This process requires students to synthesize the reading by connecting each part of the materials.

The data obtained were also consistent with the argument. P2 mentioned,

"Applying mind mapping techniques is a bit complex. But the complexity happens only at the beginning of the process. We should be detailed when creating the mind map [so we can understand it later]" (interview excerpt P2.7).

The key process of mind mapping techniques is a good grasp of the materials. Students must ensure that the lines go with the correct bubbles and that mind maps have to replace the intended materials. Thus, when students do not have the reading in hand, they still use the mind map to contribute to the class discussions. The finding is in line with Seminarski et al., (2020), who noticed that students find it difficult when they are trying to correlate one idea to another. Thus, in applying mind mapping, students must understand the material well. Also, teachers are supposed to monitor students' understanding of the ongoing discussion and topic.

#### ***Mind mapping techniques are highly personalized***

Mind maps are too personalized means that each student will have a unique way of transferring the materials into a mind map based on the level of their understanding of the materials. For instance, one student will draw a simple mind map, which only he understands. On the other hand, another student may have a more complex mind map, and only he can tell 'a story' behind the mind map. Therefore, the first student's mind map may not be understandable to the other students. P3 remarked,

"Yes, mind maps are quite difficult to understand if we are not clear to make it. There are some points in which we understand a mind map, but others do not. I think it is because our interpretation of what we read is different from one another. So, everybody has different perspectives even if the reading is the same" (interview excerpts P3.8).

The emerging finding from this research is that each mind map is unique. Each student has their way of creating a mind map, which may look different from others. These differences may confuse some students about the 'correct' form of a mind map or the correct way to perform the technique. This finding, to some extent, enriches the discussion of the challenges of mind mapping in the learning process. The current research finding shows that mind mapping is subjective since it is based on each student's understanding of the materials and techniques. Thus, the particular finding highlights that the process and objectives of the mind mapping teaching technique should be well monitored due to the uniqueness of each mind map.

## **CONCLUSION**

This current research revealed that mind-mapping techniques could be powerful in helping students understand the class reading materials or complicated theory. While the techniques may provide some promising benefits for students, teachers must be aware of the challenges. The benefits, however, outweigh the challenges. The benefits, which include improving students' engagement in the learning process, seem to suggest that this particular technique is worth applying in the class. Understandably, students may feel that mind-mapping techniques do not make their tasks easier. For instance, they still must read the materials before creating the mind maps. Students may think that the mind-mapping technique gives them more work. Rather than simply write down the summary of the materials, they have to do extra work, such as synthesizing, drawing, and sharing it with their friends.

When teaching mind mapping techniques in the Indonesian context, particularly in EFL classes, teachers should be ready to inform the students that there are no good or bad mind maps or correct or incorrect ones. As the finding revealed, making mind mapping will invite students' subjectivity to deal with the high in-person perspective. On a side note, if the teacher wishes to grade students' mind maps, an assessment rubric should be available to maintain the assessment process toward their progress. Therefore, this study has the limitation that the data were obtained merely from students. The opinions of teachers teaching mind mapping techniques are essential to investigate to give a balanced opinion about the technique. At the same time, teachers' voices need to be heard as much as we hear students' voices.

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