



มุมมองของครูผู้สอนภาษาอังกฤษในฐานะภาษาต่างประเทศต่อการใช้แผนผังความคิด  
ในการสอนไวยากรณ์

EFL TEACHERS' PERSPECTIVES TOWARD USING MIND MAPPING TECHNIQUE  
IN GRAMMAR INSTRUCTION

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**บทคัดย่อ**

การวิจัยนี้มีจุดประสงค์เพื่อ 1) ศึกษามุมมองทั่วไปของครูผู้สอนภาษาอังกฤษในฐานะภาษาต่างประเทศต่อการใช้แผนผังความคิดในการสอนไวยากรณ์ และ 2) ศึกษาอุปสรรคของการใช้แผนผังความคิดในการสอนไวยากรณ์ กลุ่มตัวอย่างของงานวิจัยนี้คือครูผู้สอนภาษาอังกฤษในฐานะภาษาต่างประเทศจำนวน 50 คน จากโรงเรียนมัธยมศึกษาสองแห่งในจังหวัดเพชรบูรณ์ซึ่งถูกเลือกโดยการสุ่มตัวอย่างแบบง่าย เครื่องมือที่ใช้ในการวิจัย ได้แก่ แบบสอบถามและแบบสัมภาษณ์ การวิเคราะห์ข้อมูลเชิงปริมาณ ใช้สถิติเชิงพรรณนา ความถี่ การทดสอบค่าที และการวิเคราะห์ความแปรปรวนแบบทางเดียว การวิเคราะห์ข้อมูลเชิงคุณภาพนั้นใช้การวิเคราะห์เนื้อหา ผลการวิจัยพบว่าครูผู้สอนภาษาอังกฤษในฐานะภาษาต่างประเทศส่วนใหญ่ใช้แผนผังความคิดในการสอนไวยากรณ์ และยอมรับว่าเป็นเครื่องมือที่มีประโยชน์และมีประสิทธิภาพต่อการสอนไวยากรณ์ ครูส่วนใหญ่มีความตั้งใจที่จะใช้แผนผังความคิดในตอนท้ายของบทเรียนเพื่อให้ นักเรียนได้รับรู้และจดจำไวยากรณ์ภาษาอังกฤษ การจัดการเรียนรู้แบบร่วมมือทำให้ผู้เรียนสามารถสร้างแผนผังความคิดได้อย่างมีประสิทธิภาพ อุปสรรคที่เกิดขึ้นในขณะใช้แผนผังความคิดประกอบด้วย การขาดประสบการณ์ในการใช้แผนผังความคิดในการสอน และการสิ้นเปลืองเวลาเมื่อมีการสอนผ่านแผนผังความคิด ครูมีความเห็นว่าขั้นตอนการวางแผนและการสร้างรายละเอียดบนแผนผังความคิดเป็นขั้นตอนที่ยากที่สุด นอกจากนี้ ความคิดเห็นของครูเพศหญิงและเพศชายนั้น ไม่มีความแตกต่างกัน แต่ในกรณีของครูที่มีประสบการณ์การสอนต่างกัน พบว่าครูมีความคิดเห็นต่อความเชื่อและความตั้งใจในการสอนไวยากรณ์ผ่านแผนผังความคิดที่แตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .05

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## Abstract

The study aimed to 1) to investigate EFL teachers' general perspectives toward using mind mapping technique in grammar instruction and 2) to examine the difficulties of using mind mapping technique in grammar instruction. The participants of the study were 50 EFL teachers at two secondary schools in Phetchabun province selected through the simple random sampling technique. The instruments for this study were a questionnaire and a semi-structured interview. The quantitative data was analyzed using descriptive statistics, frequency, t-test and One-way ANOVA. The qualitative data obtained from the semi-structured interviews was analyzed using content analysis. The results showed that the majority of EFL teachers used mind mapping technique in grammar instruction and they acknowledged that it was useful and effective tools in teaching grammar. Most of them intended to use this technique at the end of the lesson to help students visualize and remember English grammar. Cooperative learning was a strategy to foster students to create mind maps effectively. The difficulties during using mind maps were composed of lack of experiences in applying mind mapping in the instruction and time-consumption when teaching through mind mapping. The most difficult aspect was planning and making details on mind maps. Besides, there was no difference in teachers' perspectives between different genders, but in case of beliefs and intention in teaching grammar through mind mapping among teachers' different years of teaching English were different at the significant level of .05.

**คำสำคัญ:** มุมมองของครูผู้สอนภาษาอังกฤษในฐานะภาษาต่างประเทศ/ แผนผังความคิด/ การสอนไวยากรณ์

**KEYWORDS:** EFL TEACHERS' PERSPECTIVES/ MIND MAPPING TECHNIQUE/ GRAMMAR INSTRUCTION

## Introduction

Today, English is an international language that is extensively used for global communication. To use English effectively, students need to possess enough language content; that is English vocabulary and grammar. Grammatical competence is one of critical parts of communicative competence; thereby, grammar can help people communicate appropriately and effectively by getting clear messages and understanding the intention of speakers (Zhang, 2009). According to Pazaver&Wang (2009), grammar is considered as difficult and less attractive than other elements of language learning since students cannot memorize grammar rules and use them correctly; however, being aware of grammar usage and error correction for grammatical structures will enhance L2 acquisition and improve levels of accuracy in the target language. For these reasons, teachers have to explore strategies to assist students to improve and develop appropriate uses of grammar and one of the teaching techniques that can help students improve English grammar effectively is using mind mapping (Buzan, 1997; Polson, 2004; Seyihoglu, 2013).

Mind mapping is certainly not a new idea used to learn English language. Casco (2009) defined that mind mapping technique can be used to learn grammar and vocabulary since it builds an obvious context before, during and after studying language. It also

organizes one's thoughts before writing. According to Casco (2009), learners use mind maps to brainstorm, learn and summarize English while teachers use mind maps as a tool to scaffold between listening and reading comprehension and to scaffold speaking and written production. The term "Scaffolding" refers to the support from teachers or peers to help them reach higher levels of comprehension and skill acquisition by themselves (Wood, Bruner and Ross, 1976). Mind mapping will not only develop students' oral fluency, assess oral production, clarify their grammar rules, but it also fosters students' self-efficacy (Casco, 2009; Hofland, 2007). Consequently, self-efficacy will further develop their autonomy (Casco, 2009).

Mind maps are more efficient than simply writing the words or sentences in a notebook because when mind maps categorize information together in themes, it will be easier to remember and understand. They are the reflection of how memory is created. However, most of teachers indicated that mind maps should be used with other English skills such as vocabulary, reading or writing rather than grammar only because there is a large number of contents in one lesson and they do not know how to use mind mapping technique with their lessons (Hofland, 2007; Taweetchai, 2012).

Mind mapping can be applied to any areas of English language since it can help increase learners' creativity in organizing contents and indicating the relations between different thoughts and concepts through branches with key words, basic ordering of ideas, images, symbols and colors on the same mind map, and encourage students to transfer information into a visual format. As a result, classrooms that used mind mapping technique had a satisfied result on students' abilities in learning (Buzan, 1997; Evrekli et al., 2010; Mento et al., 1999; Murley, 2007; Polson, 2004). Radetic, A. T. (2011) provided an example of mind maps. Key words, images and colors are used to display the usage and rule of grammar when teaching the comparison of adjective in the presentation stage. It is explained through the image on the mind map by beginning with the question "*Which animal is faster between the rabbit and the turtle?*". Then the rules of a comparative and superlative form are discussed by using the two worms on each side of the branches. The small worm refers to adjectives with one or two syllables and another one refers to adjectives with more than two syllables. The last two sections are some exceptions about adjectives. Lastly, all rules and usages on the mind map are repeated.



According to the above mentioned example, it showed that mind mapping is powerful in the ELT classroom to help learners remember new information easily and permanently and visualize the thinking process because data are classified and decoded into pictures and keywords (Hofland, 2007). According to Hofland (2007), when EFL teachers use mind mapping in teaching listening, speaking, reading, writing and vocabulary, it supports various language learning activities and stimulates students' motivation since it makes learning concepts easier to understand. Students are not pushed to learn in the traditional way, but they can express their own learning styles to analyze and especially, retains all information through mind mapping, related to lessons they have learned. Additionally, Polson (2004) claimed that most of students used mind maps to understand concepts and ideas through individual and group-generated mind maps and they indicated that mind mapping was fun and interesting since the students could use their imagination when drawing mind maps and share their own learning styles with their friends.

In addition, Hofland (2007) stated that using mind maps in ELT classroom helps teachers improve planning, instructing and evaluating lessons. This will also help teachers realize whether their students understand what they have been taught (Hofland, 2007; Keles, 2012). Mind mapping was used during direct instruction and explaining ideas and concepts through various activities; for example, completing key words or examples in mind maps to check students' understanding of the content, researching information and constructing parts of the mind maps, and discussing and reflecting students' developing ideas (Goodnough and Woods, 2002; Keles, 2012; Polson, 2004; Siriphanich, 2010). Keles (2012) indicated that mind mapping are used at the beginning of lessons as a summary of data as well as after the course. Furthermore, teachers mentioned that mind maps can be used in cooperative learning, online learning, and computer-assisted learning in order to make lessons more attractively and effectively (Polson, 2004). Apart from drawing mind maps on paper, teachers can use mind mapping software to create or customize diagrams of relationships between concepts, ideas or other pieces of information in browser and can save works in progress in an account or export them as well (Keles, 2012; Şeyihoğlu et al., 2010).

However, there may be difficulties in using mind mapping technique in teaching English skills such as listening, speaking, reading, writing and vocabulary learning for both EFL teachers and students. For example, some teachers do not know about how to apply mind maps in their lessons, and agrees that it spends a lot of time learning through mind maps (Keles, 2012; Şeyihoğlu et al., 2010). Students may be confused and have difficulties about creating and interpreting the mind maps (Goodnough and Woods, 2002; Hofland, 2007; Keles, 2012; Polson, 2004).

As stated above, there have been several studies about using mind maps to teach English. However, in particular areas like using mind maps to teach English grammar, there are few studies. Bates (2012) and Taweechai (2012) conducted the experimental research studies to investigate whether mind mapping technique was effective in teaching English grammar. It revealed that posttest mean score of students was higher than of the pretest. It also indicated that mind maps helped the students to understand better, to increase the mean score after learning and to practice from activities using mind mapping of each lesson plan. Thus, it was proven that mind mapping technique was obviously useful in grammar instruction. Furthermore, Fitriani (2011) examined whether mind mapping improved grade 10 students' grammar mastery. This study was conducted in two cycles in which the implementation of the action in Cycle I was not fully successful since only a half of the students passed the criteria. There were four stages in each cycle: planning the action, implementing the action, observing the action, and reflecting the action. After the students used mind mapping technique they made while playing games in Cycle II, all of them got the scores above the minimum passing grade. The results also showed that all students agreed that mind mapping attracted and motivated them to learn English grammar.

Although mind mapping technique is helpful in grammar instruction, English language teachers mostly use it to solve problems in learning and teaching reading, writing and speaking in primary and secondary schools (Taweechai, 2012). Then, the researcher would like to conduct the study to investigate EFL teachers' general perspectives toward using mind mapping technique in grammar instruction in terms of benefits, difficulties, teaching procedures and strategies so that it can inspire teachers to become interested in using mind mapping technique in grammar instruction more frequently and to prepare to overcome those difficulties the teachers may face with when teaching through mind mapping.

## **Objectives**

1. To investigate EFL teachers' general perspectives toward using mind mapping technique in grammar instruction
2. To examine the difficulties of using mind mapping technique in grammar instruction for EFL teachers

## **Methodology**

### **Participants**

The population of this study was 65 EFL teachers from two secondary schools, including Lomkaophittayakhom School and Lomsakwittayakhom School in Phetchabun province, Thailand. The total sample of this study was 50 EFL teachers who were selected from the simple random sampling technique. The two schools were chosen since they are

extra large-sized schools and more than half of them have experienced using mind mapping technique in teaching grammar than other schools in Phetchabun. They have used the technique to check students' comprehension. Also, they would like to help students visualize and remember the grammar concepts.

### **Research instruments**

The research instruments for the study comprised questionnaires and semi-structured interviews. The details are as follows:

EFL teachers were asked to respond to both close-ended and open-ended questions about using mind mapping technique in grammar instruction. The questionnaire was adopted from Keles (2012) and Seyihoglu (2013) to be used in the parts of teachers' beliefs toward using mind mapping technique and difficulties of using mind mapping technique in instruction. In the part of teachers' intention in grammar instruction through mind mapping technique and some items of difficulties of using mind mapping technique in grammar instruction, the questionnaire items were constructed from the findings of other previous studies (Bates, 2012; Hofland, 2009; Taweechai, 2012). Therefore, there were 26 items in the questionnaire which were divided into 5 parts including personal background, EFL teachers' beliefs toward using mind mapping technique, EFL teachers' intention in grammar instruction through mind mapping technique, the difficulties of using mind mapping technique in the grammar instruction and open-ended questions. The participants were asked to answer each item based on their own opinions and teaching experiences in the form of 5 Likert-scale ranking from strongly agree to strongly disagree to express how much they agreed or disagreed with a particular statement and select the provided choices that were relevant to their opinions together with brief comments.

To measure the content validity of the questionnaire, IOC (Item-Objective Congruency Index) was used. Three experts in the field of Teaching English as a Foreign Language were asked to validate the appropriateness of the items. After the IOC, it was found that 87% of the items were rated higher than 0.5, meaning that the validity of the questionnaire was acceptably congruent with the objectives. The questionnaire was revised according to the three experts' suggestions in terms of wording and format used in the questionnaire.

Another research instrument was the semi-structured interview, which was conducted in order to obtain deeper understanding of the EFL teachers' perspectives toward using mind mapping technique in grammar instruction. The questions of semi-structured interview consisted of 3 open-ended questions taken from major questions in the questionnaire; therefore, the interview questions were not validated through the IOC. Ten percent of the participants were randomly selected to be involved in the interview.

## Data Collection Procedures

The researcher studied principles and research results from previous studies in order to develop the questionnaire. Data collection was carried out using questionnaires and semi-structured interviews. The questionnaires were distributed to 50 EFL teachers, who were 43 Thai and 7 foreign teachers teaching English language in the two secondary schools. In the study, the qualitative and quantitative methods were used to investigate the opinions of the EFL teachers through the questionnaire. After that, in order to obtain qualitative data to support additional information, 10 percent of the participants were randomly and voluntarily selected to be interviewed about perspectives toward using mind mapping technique in grammar instruction and difficulties of using the technique during teaching. The semi-structured interviews were conducted in Thai and English and tape-recorded in order to be transcribed for further content analysis.

## Data Analysis

The quantitative data obtained from the questionnaires was analyzed using descriptive statistics with a computer program to calculate the means and standard deviation. T-test and One-way ANOVA were also used to analyze the relations between beliefs toward using mind mapping technique, intention in grammar instruction through mind mapping technique, and the difficulties of using mind mapping technique in grammar instruction and the respondents with different genders and years of teaching. The qualitative data obtained from the semi-structured interviews was analyzed using content analysis.

## Results

The respondents in this study included male (32%) and female (68%). In terms of length of teaching English, 38% of the respondents indicated 1-5 years, 32% showed more than 10 years, 16% revealed less than 1 year, and the rest, 14%, indicated 6-10 years of teaching. Lastly, 74% of the respondents used mind mapping technique in grammar instruction in their lessons while 26% did not use this technique in teaching.

The results on EFL teachers' perspectives toward using mind mapping technique in grammar instruction are shown in three different parts: beliefs toward using mind mapping technique, intention in grammar instruction through mind mapping technique and the difficulties of using mind mapping technique in grammar instruction.

The first part of the questionnaire relates to EFL teachers' beliefs toward using mind mapping technique in grammar instruction. To answer this point, close and open-ended questions and a semi-structured interview were used as instruments. The results are shown in Table 1.

**Table 1:** EFL teachers' beliefs toward using mind mapping technique

Beliefs toward using mind mapping technique	Mean	S.D.
Mind mapping is an effective tool to organize thoughts and ideas.	4.38	.530
Mind mapping makes your concepts and ideas comprehensible.	4.36	.563

Mind mapping enhances creativity.	4.18	.560
Mind mapping is useful for data summary.	4.30	.763
Mind mapping technique can be applied freely and it is easy to prepare and incorporate in your lessons.	4.22	.864
Mind mapping is effective in showing relationships of concepts.	4.24	.687
Mind mapping enables visual learning.	4.18	.523
Mind mapping technique makes learning more sustained.	4.12	.594
Mind mapping is enjoyable, interesting and colorful.	4.06	.867
Mind mapping is a good strategy for problem solving skill and for clarification questions and answers.	4.10	.863
<b>Average</b>	<b>4.21</b>	<b>.431</b>

Table 1 showed that the average score of EFL teachers' beliefs toward using mind mapping technique in grammar instruction was 4.21. The first three beliefs consisted of the statements that "mind mapping was an effective tool to organize thoughts and ideas" (mean = 4.38), followed by "mind mapping made concepts and ideas comprehensible" (mean = 4.36), and "mind mapping was useful for data summary (mean = 4.30)", respectively. The results from the first open-ended question indicated that 92% of the respondents believed that mind mapping was a useful technique. They thought that mind mapping helped students see the connection and relationship among grammar topics, details or rules and it was easier for students to understand the structures and components of each part. It was used to get students' ideas and check their knowledge and understanding based on what they learned. However, 8% of the respondents did not agree. They indicated that mind mapping should be used to explore vocabulary and creative thinking, not to teach grammar alone and not all grammar could be simplified into categories and subcategories; for example, it might not convey a progression of time when they taught verb tenses.

Furthermore, qualitative data from the semi-structured interviews showed that all five EFL teachers agreed on the benefits of using mind mapping in grammar instruction. They revealed that mind mapping technique was very useful to help students visualize and remember grammar concepts. All of the participants acknowledged that the students could see the whole concept by memorizing pictures when they started using mind maps. Participant B said, *"Colors and pictures produce a more effective visualization than text does since colors have a deeper impact on the mind in the aspect of memorization and longer retention, so the students retain the information better through mind mapping"* (B-Interv, 15/11/2014). Moreover, participant C mentioned that *"Mind mapping is better than jotting down information because it is the way that students can summarize more than one grammar points into a single page and connect all the relevant points together"* (C-Interv, 18/11/2014).

The second part of the questionnaire was EFL teachers' intention in grammar instruction through mind mapping technique. The results are shown in Table 2 as follows:

**Table 2:** EFL teachers' intention in grammar instruction through mind mapping technique

<b>Intention in grammar instruction through mind mapping technique</b>	<b>Mean</b>	<b>S.D.</b>
Mind mapping technique should be used at the beginning of a lesson in order to elicit students'	3.90	.814



background knowledge of English grammar and make them get ready before starting the new content.		
Mind mapping technique should be used during presentation stage in order to explain grammar forms and functions.	3.72	.784
Mind mapping technique should be used during activities to reinforce grammar concepts in practice stage.	3.94	.913
Mind mapping technique should be used at the end of a lesson to verify students' understanding of grammar concepts.	4.08	1.007
Mind mapping technique should be used at the end of a lesson in order to help students visualize and remember English grammar taught in the class.	4.24	.771
Mind mapping, when combined with other teaching approaches including cooperative learning, online learning, and computer-assisted learning, can be an effective strategy in teaching grammar.	4.20	.606
<b>Average</b>	<b>4.01</b>	<b>.541</b>

The table above showed that the average score of EFL teachers' perspectives toward intention in grammar instruction through mind mapping technique was 4.01. Most of the respondents considered that mind mapping technique should be used at the end of a lesson for two reasons. The first reason was to help students visualize and remember English grammar taught in the class (mean = 4.24) and the second one was to verify students' understanding of grammar concepts (mean = 4.08). In addition, they also agreed that when mind mapping was combined with other teaching approaches including cooperative learning, online learning, and computer-assisted learning, it could be an effective strategy in teaching grammar (mean = 4.20).

According to the semi-structured interview, it was found that four EFL teachers would like to use mind mapping technique in grammar instruction because grammar was something that did not appeal to students. However, the students were obligated to study it. Participant A claimed, *"Mind mapping technique draws the students' attention and increase their motivation in learning"* (A-Interv, 15/11/2014). *"Mind maps can link topics and contents together in a simple and clear display, the students then are able to see the concepts clearly and immediately"* (E-Interv, 18/11/2014). However, participant D mentioned that *"Mind mapping technique is very suitable for primary and lower secondary students. There are no opportunities to use mind maps in class as there are only 50 minutes for each class period, so it can be time-consuming when some students do not really understand mind maps and teachers need to explain more about mind maps instead of explaining just the grammar point"* (D-Interv, 18/11/2014).

In addition, there were four EFL teachers who used mind mapping technique in grammar instruction. Participants A and E indicated that they used mind maps in the introduction part of the lesson. *"I used it to review students' background knowledge and then encouraged their students to add the new contents through mind maps so that they could link the new information back with the old one"* (E-Interv, 18/11/2014). Another two participants provided sample mind maps to students and then assigned students to create their individual mind maps by summarizing grammar concepts in their own words so that it was easy to understand and memorize for the exam. Participant B commented, *"After 4 to*

5 lessons were taught, I assigned the students to create mind map for one page so that they can review it for the exam” (B-Interv, 15/11/2014).

Another two questions in this part comprised strategies which can foster students to create mind maps effectively when using mind maps to teach grammar and the familiarity with mind mapping software. The results are shown in Table 3 as follows:

**Table 3:** Strategies which can foster students to create mind maps effectively when using mind maps to teach grammar and the familiarity with mind mapping software

Which strategies can foster students to create mind maps effectively when using mind maps to teach grammar?	F	%
Students work in groups and are allowed to exchange ideas, discuss, summarize and give suggestion to their classmates in using mind mapping technique in learning grammar.	22	44.0
Teacher initially guides and motivates students to create English grammar mind maps until the students are able to create mind maps by themselves.	9	18.0
Teacher provides students more activities related to using mind mapping in learning grammar so that they can create mind maps effectively.	12	24.0
Teacher assigns students to draw mind maps instead of taking notes during the grammar instruction.	7	14.0

Table 3 illustrated that the majority of the respondents assigned students to work in groups and the students were allowed to exchange ideas, discuss, summarize and give suggestions about using mind mapping technique in learning grammar to their classmates in order to foster students to create mind maps effectively (44%). Furthermore, it indicated that most of the respondents were not familiar with mind mapping software (64%). However, the respondents, who used mind mapping software, considered FreeMind as the most well-known software (20%).

The last part of the questionnaire that the researcher would like to investigate relates to the difficulties of using mind mapping technique in grammar instruction. The average score of EFL teachers’ perspectives toward the difficulties of using mind mapping technique in grammar instruction was 3.89. It indicated that the majority of EFL teachers did not have enough experiences to apply mind mapping technique in grammar instruction (mean = 3.92) and they considered that mind mapping technique was somewhat time consuming when using it to portrait the whole content with limited time frame (mean = 3.86).

Moreover, there is another item to be explored points in grammar instruction which make the students experience difficulties when using mind mapping technique. Most of the respondents thought that mind mapping technique could make students experience difficulties in the stage of planning and making details (42%), followed by the stage of classifying general and specific concepts (30%), the stage of drawing images and symbolization (18%) and the stage of linking central idea to the main branches and further sub-details, respectively.

The qualitative data from the semi-structured interview showed that the obvious difficulty when using mind mapping technique in grammar instruction was that some students were confused about how to create mind maps and how to connect between

categories and subcategories in branches. Participant A, B and C agreed that providing sample mind maps and letting students practice making mind maps could make them understand what mind maps were. *“I provided several samples of mind maps and let students create mind maps in order for the students to grasp the idea better”* (C-Interv, 18/11/2014). One of them claimed that *“Cooperative learning is effective to solve this problem because the students can discuss and share the content based on their understanding together”* (E-Interv, 18/11/2014).

In terms of preference for using mind mapping technique in grammar instruction, it was found that 88% of the respondents from the interview would like to teach grammar through mind mapping technique. The respondents' answers were categorized and the results are shown in Table 4.

**Table 4:** EFL teachers' perspectives relating to the second open-ended question

In your opinion, would you like to use mind mapping technique in your grammar instruction? Why or why not?			
Categories	F	%	Sample Expressions
Mind maps help students learn grammar easier and understand the lessons well.	17	34	<i>“Mind maps represented the relations of contents in the big picture.”</i>
Mind mapping technique serves as motivation for students to learn difficult grammar.	5	10	<i>“Mind maps help to clarify the complex contents into the simple ones.”</i>
Mind mapping is useful for any stages of teaching grammar.	3	6	<i>“I think mind maps can be one alternative in assessing the grammar point, so I use mind map as an assessment tool.”</i>
Mind mapping is too complex in helping students understand grammar.	2	4	<i>“I have taught grammar successfully without the technique for few years.”</i>

The table 4 showed that 25 EFL teachers expressed that they would like to use mind mapping technique in grammar instruction while another 2 EFL teachers indicated that this technique was too complex to be applied in the teaching.

Furthermore, there is the comparison to find relationships of beliefs toward using mind mapping technique, intention in grammar instruction through mind mapping technique and the difficulties of using mind mapping technique in grammar instruction between the respondents with different genders. The results are shown in Table 5 as follows:

**Table 5:** Comparison of beliefs toward using mind mapping technique, intention in grammar instruction through mind mapping technique and the difficulties of using mind mapping technique in grammar instruction between the respondents with different genders

Variables	Genders	N	Mean	S.D.	t	Sig.
Beliefs	Male	16	4.17	.398	-.505	.616
	Female	34	4.24	.450		
Intention	Male	16	4.05	.458	.345	.732
	Female	34	4.00	.581		
The difficulties of using mind mapping technique	Male	16	4.16	.651	1.867	.068
	Female	34	3.76	.710		

According to the result of independent t-test in Table 5, male and female teachers' perspectives were not significantly different at a significant level of .05 ( $p > .05$ ). It revealed that both groups of the EFL teachers showed similar views on the following aspects; beliefs

toward using mind mapping technique, intention in grammar instruction through mind mapping technique and the difficulties of using mind mapping technique in grammar instruction.

In addition, the researcher would like to find out the relationships of EFL teachers' perspectives toward using mind mapping technique in grammar instruction with different years of teaching English. The results are displayed in the table below.

**Table 6:** Comparison of EFL teachers' perspectives toward using mind mapping technique in grammar instruction with different years of teaching English

Variables	Years of teaching English	N	Mean	S.D.	F	Sig.
Beliefs	Less than 1 year	8	3.91	.479	2.843	.048*
	1-5 years	19	4.34	.251		
	6-10 years	7	4.37	.394		
	More than 10 years	16	4.13	.439		
Intention	Less than 1 year	8	3.50	.729	3.259	.030*
	1-5 years	19	4.11	.506		
	6-10 years	7	4.12	.469		
	More than 10 years	16	4.10	.379		
The difficulties of using mind mapping technique	Less than 1 year	8	4.19	.651	1.401	.254
	1-5 years	19	3.76	.856		
	6-10 years	7	4.21	.567		
	More than 10 years	16	3.75	.548		

According to the result of One-way ANOVA in Table 6, perspectives among the respondents with different years of teaching English toward difficulties of using mind mapping technique in grammar instruction were not considerably different at a significant level of .05 ( $p > .05$ ). Nevertheless, there were significant differences among the respondents' views with different years of teaching English in terms of beliefs toward using mind mapping technique and intention in grammar instruction through mind mapping technique at the significant level of .05 ( $p > .05$ ). Moreover, the group of the respondents who had 6 to 10 years of experience of teaching English strongly agreed on the benefits of using mind mapping technique in teaching grammar and acknowledged that mind mapping technique could be used in various teaching stages, namely the beginning of a lesson, presentation stage, practice stage and the end of a lesson.

## Discussion

From the results, it can be concluded that the majority of EFL teachers participated in the study believed that mind maps are useful and effective tools which confirmed the study by Hofland (2007) that mind mapping is a powerful tool in the ELT classroom to help learners not only remember new information easily and permanently, but also visualize their thinking process because the data are classified and decoded into pictures and keywords. As a mind map is designed like spreading branches of a tree, it helps students to see the overview and relationship between ideas and concepts sequentially. Key words, images and colors on mind maps make them remember and comprehend necessary

information. Moreover, students can express views and transmit their thoughts in what they have learned as well.

In terms of intention in grammar instruction through mind mapping technique, the results showed that the technique should be used at the end of a lesson in order to help students visualize and remember English grammar taught in class and to verify students' understanding of grammar concepts. Mind maps not only enhance knowledge in what students have learned, but they also develop students' thinking skills since they have to categorize concepts or ideas into main and sub-points when creating mind maps and make it easier to understand in order to prolong memorization. These findings are paralleled with the study of Seyidoğlu (2013) that this technique was used for summarizing in assessment step so that students could realize whether they had sufficient knowledge in what they learned. However, the results of the current study were different from that of Keles (2012) because Keles indicated that the majority of teachers used mind maps in analyzing students' background of knowledge to evaluate their readiness for the course.

Additionally, the results showed that combining mind mapping with other teaching approaches including cooperative learning, online learning, and computer-assisted learning could make grammar instruction more effectively since technology attracted students' interests and made them enjoyed when learning through computer programs or websites. This statement is supported by Polson (2004) who states that teachers mentioned that mind maps can be used in collaborative learning and e-learning in order to make lessons more attractively and effectively. Cooperative learning helps students get better understanding after exchanging information and opinions together. Wood, Bruner and Ross (1976) indicated that cooperative learning needs various skills such as intellectual demanding, creativity, interaction, and thinking skill.

The difficulties found when using mind mapping technique in teaching grammar were lack of experiences and time-consuming issues. These results parallel with the findings of the study of Seyidoğlu (2013), which reported that teachers did not have much experience in using mind maps in teaching and that it wasted their time in preparing mind maps and explaining students how to create or use it. The main cause for both difficulties is that teachers are not familiar with this technique. Thus teachers should study the principles of mind mapping technique or participate in training program regarding using mind mapping technique in teaching English. However, in the case of time-consuming issue, it may be caused by the usage of this technique at the first time. It can be minimized in the next applications depending on the experience that students will gain.

When applying mind mapping technique in teaching grammar, planning and making details on branches and classifying general and specific concepts are significant issues. From the interview, the four EFL teachers all claimed that some students in their classroom were

confused about how to create mind maps and how to connect between categories and subcategories in the mind map branches. The result of the current study was inconsistent with the study of Keles (2012) since Keles indicated that the stage of drawing pictures and correlating general and more specific concepts were the greatest difficulty of using mind mapping in classrooms since students did not only draw pictures on mind maps, but they also had to put their thoughts and ideas into words.

In conclusion, the results were composed of 3 parts: beliefs toward using mind mapping technique, intention in grammar instruction through mind mapping technique and the difficulties of using mind mapping technique in grammar instruction, which were analyzed from questionnaires and supported by interview data. Although, mind maps were helpful and effective tools for teaching grammar, the EFL teachers indicated that there were difficulties while using it in instruction. Participants from the interview suggested that the difficulties could be solved by assigning students to practice making mind maps after learning through various samples of mind maps and using cooperative learning to help students understand better about mind maps. Though there are some difficulties in using mind mapping technique in grammar instruction, the EFL teachers try to overcome the difficulties because of the benefits of mind mapping in teaching grammar.

## Recommendation

When interpreting results from this study, it is significant to note that the present study is limited to the EFL secondary teachers in one province; therefore, the results may not be generalized to other provinces. Furthermore, it can be applied or used in the experimental research to investigate benefits, problems or difficulties when using mind mapping technique in grammar instruction. It would be interesting to examine other variables such as attitudes toward learning, achievement motivation or emotional intelligence. Although, computer software was not used in this study, it can be further option for exploring the technique in the classroom. Besides, EFL teachers are expected to join some workshops in order to be trained to use mind mapping and select mind maps with contents appropriately. This will lead to the students' learning development and the researchers will also gain insightful information from both qualitative and quantitative data that are more reliable when the researchers would like to conduct further studies.

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