THE EFFECTS OF ELECTRONIC MIND MAPPING ON STUDENTS' READING ABILITIES

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PARINDA SAMONLUX

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THE EFFECTS OF ELECTRONIC MIND MAPPING ON STUDENTS' READING ABILITIES

BY

PARINDA SAMONLUX

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Reading abilities have long been a problematic area for English as a Foreign Language (EFL) students. The objectives of this study are to investigate the effects of electronic mind-mapping on the reading abilities of students and the opinions of students on learning reading through electronic mind-mapping. The participants consisted of 42 students majoring in English at a university in Thailand. To ensure the reliability of the results, the participants were selected via purposive sampling from different academic levels and backgrounds, including 24 third-year students who were enrolled in the Critical Reading course and 18 fourth-year students who were enrolled in the American Short Story course. Both groups were taught using electronic mind-mapping. The instruments included a reading test, lesson plans, and a semi-structured interview. The data were assessed using mean, standard deviations, and t-test analysis. The results revealed the potential of electronic mind mapping to enhance the reading abilities of the students. The post-test mean scores of both groups were significantly higher than the pre-test mean scores. In terms of the interview results, the students reported that this technique assisted their reading abilities and motivated them to read.

Keyword : Reading, Reading abilities, Mind-mapping, Electronic Mind-mapping

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CHAPTER 1
INTRODUCTION

Background

Reading is an important abilities for learners around the world. Tamrackitkun (2010) stated that reading is one of the most frequently used and needed language abilities in daily life and it is routine since people have to read such a lot of information on newspapers, books, banners, text messages, billboards, and so on. Reading abilities are also essential in learning because they are abilities that people need to achieve if they want to be successful in education. Moreover, it is undebatable that reading abilities are needed for English learners because they need to explore a number of texts to improve their language.

However, English as a foreign language (EFL) student find difficulty in reading. It is hard to grab the gist of the texts, connections between the texts, and the information that they want to search for. Sometimes learners are overlooked from these problems; even though these problems are signs of reading difficulties. Thai EFL students also face these difficulties. In 2018, Thailand was ranked 74 out of 100 nations, in a very low proficiency group by Education First (EF, 2019). In addition, the EF English Proficiency Index (2019) reported that the average score of Thailand was 47.61 which was ranked 17 out of 25 countries. English proficiency of Thai students was ranked at the very low and low proficiency for over ten years (EF, 2019). Education First (2019) described that the person who was in very low or low proficiency in English is able to understand simple emails from colleagues and have a simple conversation with foreigners. This score shows that Thai people are unable to fully understand the lyrics or even a newspaper. Another report from Educational Testing Service (ETS) shows the results from the Test of English for International Communication (TOEIC) that Thailand average score was only 478 out of 990 and was ranked among the low-level group (TOEIC, 2018). More importantly, this test reveals that Thai students' reading was at the low-level group which the mean score was only 218, and this made Thailand become the last third place in Asia. Although Thai students have learned English reading for more than eleven years, their reading abilities

are still at the unsatisfied level (Abdulsata, 2012). Therefore, it is undoubtedly an urgent situation to find a more efficient technique to improve English reading abilities of the students.

Teaching method of English reading can cause boredom for students. Students' attitudes toward reading seems to be an obstruction to the learning process (Arnold & Brown, 1999). The National Statistics of Thailand (2016) shows that only 60 percent of Thai students at the age of 15-24 year old read books. This survey depicts that Thai students lack interest in reading. Hayikaleng, Nair, and Krishnasamy (2016) also state that Thai students were uninterested in learning reading in English classrooms because of inappropriate teaching methods from the teachers. That is, they had a hard time enjoying learning reading with traditional methods. Hence, English teachers need to find reading instruction that enhances students' motivation and reading abilities.

Many scholars suggest that mind mapping is one of the effective teaching techniques to teach reading. According to Ardini and Lashkarian (2015), mind mapping is a visual tool that can be used to generate ideas, take notes, organize thinking, and develop concepts. Key concepts are linked from the central topic and then connect to more details from sub branches. There are a number of studies investigating using mind mapping as a teaching technique. For example, Stankovic, Besic, Papic, and Aleksic (2011) found that mind mapping enabled students to see the connections of the main ideas and sub ideas which made mind mapping a powerful tool for teaching. Liu, Chen and Chang (2010) stated that mind mapping strategy was an effective way to improve students' text summarizing skills which helped elevate reading abilities and enjoyment while using mind mapping. Siriphanich and Laohawiriyanon (2010) discovered that students enjoyed and knew how to connect each information properly. On the other hand, employing mind mapping in a traditional form in which students draw manually by using paper and a pen or on the board might not attract students in the 21ST century. Combining mind mapping with technology might attract students in the period of advanced technology.

Electronic mind mapping is a new teaching technique for teaching reading. As young generations are surrounded by many of new electronic devices, the technology is quite reachable and familiar to them. Electronic mind mapping is a modern form of mind mapping which is created by a specialized software (Aljaser, 2017). The electronic mind mapping technique might be useful for students, as drawing a mind map helps the brain to visualize better than linear notes (Serrat, 2017). Moreover, this is an era of technology, so teaching by using electronic mind mapping strategy can be more attractive to students. Mohaidat (2018) stated that the use of electronic mind mapping stimulates the use of the two sides of the brain; the ideas are well organized so the brain can read the information and remember them more than the linear thinking. Alomari (2019) also agrees that students can benefit from using electronic mind mapping. Studies on the use of electronic mind mapping in English classroom is still limited in Thailand. Thus, this study attempted to investigate the effects of electronic mind mapping on Thai EFL students.

Objectives of the Study

The objectives of this study are as follows:

1. To investigate the effects of electronic mind mapping on students' reading abilities.
2. To study students' opinions about learning reading through electronic mind mapping.

Research Questions

This study aims to answer the following questions:

1. What are the effects of using electronics mind mapping on students' reading abilities?
2. What are students' opinions about learning reading through electronic mind mapping?

Significance of the Study

An investigation of this study can be useful for the teachers who need to find an alternative way to improve students' reading abilities. The information from this study can be used as a guideline for teachers to develop their teaching techniques to match their learners. It can also be useful for researchers to explore more of the visual aid strategy which can be helpful for their further study to improve Thai students' reading abilities. It can be guidelines for further studies about the new learning trend.

Scope of the Study

This study was limited to students majoring in English at a university in Bangkok, Thailand. It focused on the effects of electronic mind mapping on students' reading abilities and opinions related to the teaching method.

Definition of Terms

The terms used specifically in this study are defined as follows:

Electronic mind mapping refers to an online software to create and share mind mappings. It is a form of visual information organization which allows users to build connections from the central main idea to sub-topics.

Reading abilities refer to cognitive processes to understand a text. They include the abilities to identify topics, main ideas, details, guessing meaning from context, references, the author's purpose, the author's attitude and tone, inferences, conclusion, as well as fact and opinion.

CHAPTER 2
REVIEW OF THE LITERATURE

The review of literature will be divided into 5 subtopics; reading, reading abilities, mind mapping, electronic mind mapping, and related research.

Reading

Reading is considered as one of the four fundamental skills; speaking, listening, reading, and writing (Cheon & Ma, 2014). According to Barnett (1989), reading associated with an insights of diverse background knowledge from deferent fields. Reading requires background knowledge for interpreting the contents of the text to be able to thoroughly comprehend the text. Moreover, reading is defined as a process that someone looks at the text and understand the written meaning (Williams, 1984). It is a process of gaining information that requires prior schema as well.

According to Williams (1996), in reading exercise there are three phases which are pre-reading, while-reading, and post-reading. In pre-reading phases, the teacher introduces and motivates learners' interest in the topic. Teacher provides a reason to read and questions that relate background knowledge of the students' thoughts that would motivate learners' urges read the texts. The purpose of while-reading phase is to clarify students to better understand the purpose and structure of the text. For example, teacher can assign students to guess and to find the meaning of keywords from dictionary with classmates. Activities include answering comprehension questions, completing diagrams or maps, making list and taking notes. Post-reading phrase is to gather all of the piece of information in reading text together (p.51).

Reading Abilities

Reading abilities has been defined in many ways by theorists. Grabe and Stoller (2002) define reading abilities as the abilities to understand and interpret the information from printed text properly. There are abilities in the process of gaining information from writers through texts. It still plays an important role in English education as it is a significant

input in language learning. In reading a text, there is an active communication between the writer on one side and the reader on the other side. Liu (2010) stated that there is the similarity in the process of the second language reading and the first language reading. Urquhart and Weir (1998) described reading abilities as an interactive process which cognitive abilities between a person and texts. According to Goodman (2010), reading is a continuous process to gain information in which the reader can confirm, reject or refine as reading progresses.

There are many experts who proposed essential reading skills for EFL learners. According to Grabe and Stoller (2002), reading abilities include: 1) to search for simple information, 2) to quickly skim, 3) to learn from the texts, 4) to integrate information, 5) to write, 6) to critique texts, and 7) to comprehend the text generally (p.6).

Moreover, Tarigan (1983) proposes seven skills of reading which are as the following: 1) reading for details or facts, 2) reading for main ideas, 3) reading for sequence or organization, 4) reading for inference, 5) reading for classifying, 6) reading for evaluating, and 7) reading for comparing or for contrasting.

Munby (1981) advocated that reading abilities consist of nineteen skills, such as recognizing the script of a language, deducing the meaning and use of unfamiliar lexical items, understanding conceptual meaning, understanding the communicative value of sentences, recognizing indicators in discourse, basic reference skills, skimming, scanning to locate specifically required information and so forth.

From the above mention, the skills that are similar include the abilities to find topics, main ideas, details, guessing meaning from context, references, the author's purpose, the author's attitude and tone, inferences, conclusion, and fact and opinion.

In conclusion, reading is a crucial skill to receive information from the text. It can be described as a complex process which requires the processes of word recognition and comprehension. It is an activity that requires readers to interpret by drawing meaning. Reading abilities are cognitive processes to understand a text.

Mind Mapping

The mind mapping strategy is a technique for presenting thoughts in an organized way. It was established by Buzan (2006) to enable learners to arrange and classify ideas. It helps improve reading and decision-making. It is an adaptation of constructivism which involves knowledge construction activity (Buzan & Buzan, 1996). Constructivism was described as a paradigm of constructing an understanding and knowledge through doing (Honebein, 1996). It helps improve reading, and decision-making. Buzan thought that the educational systems put a spotlight on the use of the left brain, so he invented this strategy which incorporates two sides of the brain. Mind mapping are described as the webs of various information linked around one central concept with connections by using colors and images. The links from the central concept depict a clearer picture of the connection of each concept, so it is accessible to manage the order of them (Alomari, 2019) .

The mind mapping technique allows users to fully use both sides of the brain to construct information. Mind mapping utilized colors, words, and images (Siriphanich & Laohawiriyanon, 2010). The left hemisphere controls the employment of logic, language, arithmetic, sequencing, and details of any topic while the right side of the brain is responsible for creativity, art awareness, imagination, feeling visualization, rhythm and intuition (Murley, 2007).

Moreover, mind mapping activities require students to actively engage in their learning, often by connecting their prior knowledge to new schema. In constructing mind mapping period, students have interactions with teachers, classmates, and reading texts (Creswell & Clark, 2011) . Learning is not only passing knowledge from teacher to students, but also the process of participating in the active construction of knowledge and meaning through interactions with others and with the environment (Salomon & Perkins, 1998). Liu et al. (2010) pointed out that mind mapping allow the use of thinking, feeling, attention, reasoning, hearing coordination, motion sense, implementing skills, visualizing numbers and letters, reading, and analyzing.

There are many advantages of mind mapping in teaching reading. Phongploenpis and Supangyut (2018) mentioned that mind mapping benefits students as follows: 1) Keywords and concepts are easily to be focused by the students, 2) It helps students to link the related facts, 3) Students learn the hierarchy of ideas, 4) It helps decision making of complex information, 5) It helps students to find aims for meeting, presentation, or project, 6) Mind mapping supports creative thinking, 7) It can be created by individuals or groups, 8) Mind mapping improves problem solving. In sum, mind mapping technique is beneficial to use while reading because students can clearly see the whole notes at a glance because of non-linear graphics.

The implementation of the mind mapping technique in teaching procedure can be divided into three stages (Aljaser, 2017; Phongploenpis & Supangyut, 2018; Siriphanich & Laohawiriyanon, 2010; Wang, 2016). Firstly, the teacher asks students to construct mind maps in the pre-reading stage to recall their background knowledge about related vocabularies in the reading. Students construct mind maps showing the relation of each vocabulary under the reading topic. Secondly, teacher asks the students to answer reading questions after reading each section. Thirdly, students construct the mind mapping to show the connection of each information of a reading text in the post-reading stage.

Electronic Mind Mapping

Recently electronic mind mapping emerged when the technology advanced. According to Dara (2010), electronic mind mapping is designed by using specialized software unlike the traditional form which is drawn by hand. Al-Badwoi (2015) described electronic mind mapping as an extensive digital version of mind mapping because it can be either software-based mind mapping or web-bases mind mapping.

Electronic mind mapping is different from mind mapping in terms of creating process and output because the electronic mind mapping is creating in a computer and the output comes in a software file which can be PDF, jpg, and html. Some studies have shown that electronic mind mapping is more efficient and attractive to students. Al-Badwoi (2015) reported that learners reported that electronic mind mapping is more

convenient than the traditional form. In addition, Aljaser (2017) said that electronic mind mapping has more efficiency and it is more attractive than traditional mind mapping because it is created by specialized software for faster outcome which includes photos, colors, illustrations that attract the readers. Additionally, Mahasneh (2017) found that electronic mind mapping improved students thinking skills and knowledge organization.

There are a lot of electronic mind mapping available nowadays which comes with free subscription price. According to Pat Research (2020), there are 29 free electronic mind mapping software. The famous and popular ones are as follows:

1) FreeMind

FreeMind is one of the most popular mind mapping applications. It allows users to edit mind mapping. It also has features including colors options, hyperlinks, and export file. It also allows users to copy and paste.

2) Edraw Mind Map

Edraw Mind Map is a free software that has different templates, samples, maps, and charts for users to choose. More importantly, it is compatible with the applications of Microsoft. It also has a smart drawing guide and ready-made symbols.

3) Docear

Docear is a tool for literature management that allows users to take notes. Specially, it has comments and note features. It allows users to draft and write papers on its website; moreover, it provides recommended related papers for downloading from the website. It also focuses on annotations and importing PDF annotation.

4) Vue

Visual Understanding Environment (VUE) is a mind mapping or concept mapping application. It provides simple tools for users to create mind mapping and organize information. It also lets users to export file into different formats.

5) Freeplane

Freeplane is a mind mapping software application for organizing information and it allows users to connect and share it with others.

6) Coggle

Coggle is a collaborative mind-mapping software. It helps to simplify complex topics. Users can organize their mind mapping as they like and easily share with their existing contacts. It is an online mind mapping software that allows collaboration with other people. Its features include real-time collaboration, unlimited diagrams, unlimited image uploads, and full change history. It is available on internet browsers, so it does not need to be installed. It also has unlimited images and private charts.

7) Mindomo

Mindomo is a web-based mind mapping software. It has ability to transforms ideas into presentations by using colors, icons, and themes. It allows users to work and then sync the file offline.

8) MindMeiter

MindMeiter is a web-browser software for creating mind mapping. It offers users to brainstorm with unlimited number of users. Users can publish mind mapping that they create on this website to other websites or blogs.

9) Open Mind

Open Mind is a program for creating mind mapping and sharing with other users. It also has spelling check features, shapes, and charts. It provides updates and search in the application. In addition, it can be integrated in other types of multimedia.

In conclusion, there are a lot of electronic mind mapping software, and they share some similarities such as colors, hyperlinks, and exported file. However, in this study the researcher chose to implement Coggle because it allows the real-time collaboration of online mind mapping construction, and it can be shared to the instructor via email.

Related Research

There are a lot of studies about mind mapping. For example, Wang (2016) studied the implementation of mind mapping in college English reading teaching.

This study focused on the mind map teaching process which includes the preparation before class, classroom teaching and after class. The study showed that a

mind map is a method based in schema theory, so it stimulated reading motivation, understanding, and memorization of reading text.

Peng (2011) investigated the use of combining mind mapping and electronic picture-books on the fourth-grade students' reading comprehension ability and reading motivation. The result showed that electronic mind mapping increased reading comprehension level because it uses two sides of the brain: between the logical operation side and creativity side.

In addition, Malekzadeh and Bayat (2015) investigated the effects of using the mind mapping strategy on comprehending the information in EFL reading texts among Tehran students, Safir Institute. The participants had a mean age of 25 and divided into an experimental group and a control group. The findings show that mind mapping strategy enhances students' reading comprehension by the difference on the post-test scores.

Furthermore, Bawaheh (2019) compared the effects of mind mapping technique and the conventional teaching method on tenth graders' immediate achievement and retention of electric energy concepts. There were 111 randomly-selected participants divided into groups. The results showed that mind mapping technique was more effective than the conventional teaching method.

In Thailand, Siriphanich and Laohawiriyanon (2010) conducted a study on using mind mapping techniques to improve reading comprehension ability of Thai EFL university students. They found that mind mapping is an effective strategy in improving students' comprehension skills and students enjoyed using electronic mind mapping.

There were some studies about the implementation of electronic mind mapping in reading classes, and they showed the effectiveness of this method. Mohaidat (2018) investigated the impact of the electronic mind map (IMindMap) on the development of reading comprehension among ninth grade students in Jordan. The experimental group was taught using the electronic mind mapping strategy. The result showed that this technique helped students to speed their learning process, and easily to find main and sub ideas.

Similarly, Alomari (2019) explored the effects of electronic mind mapping on the development of Arabic language reading comprehension of fourth grade students in Jordan. This study used quasi-experimental research design. There were 65 participants. The results revealed that there were statistically significant differences between the experimental and control groups.

Furthermore, Sabbah (2015) examined the effect of self-generated computerized mind mapping on college students' reading achievement. This study used pre-test and post-test to excess students' development. It was found that the group taught by self-generated computerized mind mapping had higher reading achievement than the group taught by teacher-generated whiteboard mapping because of the enthusiasm and enjoyment.

Ellozy and Monstafa (2010) found that electronic mind mapping enhanced critical reading skills of the first-year Egyptian students who enrolled at the American University in Cairo. Student feedback, surveys, and assessment were used to examined the improvement. The results revealed that electronic mind mapping helps students acquire visualization skills.

Aljaser (2017) explored the effect of electronic mind mapping on the academic achievement of 30 fifth-grade students in English language curriculum. The study used quasi-experiment design with control and experimental groups. The experimental group had higher scores than control group. They favored electronic mind mapping because its attractive elements; colors, shapes, presentations, and application.

Moreover, the study of Al-Badwoi (2015) aimed to showed that electronic mind mapping is more convenient than other two technique in the learning environment. This study conducted on 29 first year students from Ibri CAS. They were divided into three group: paper and pen-based mind mapping, self-selected study technique, software-based mind mapping. The results from electronic mind mapping group had higher scores than other two groups.

In Thailand, there are some studies on electronic mind mapping. Tungprapa (2015) studied the effect of using electronic mind mapping in the educational research

methodology course for master-degree students in the faculty of education of Ramkhamhaeng University. The instruments included a test, attitude assessment, and a questionnaire. It was found that the attitudes of the students from post-study are higher than pre-study.

In term of reading, there is only one study found. Chaichompoo (2017) examined the use of electronic mind mapping to improve reading comprehension and summary skills among Thai English major students. He found that this technique enabled Thai students to understand English better. The results showed that this technique allows students to analyze and summarize the texts.

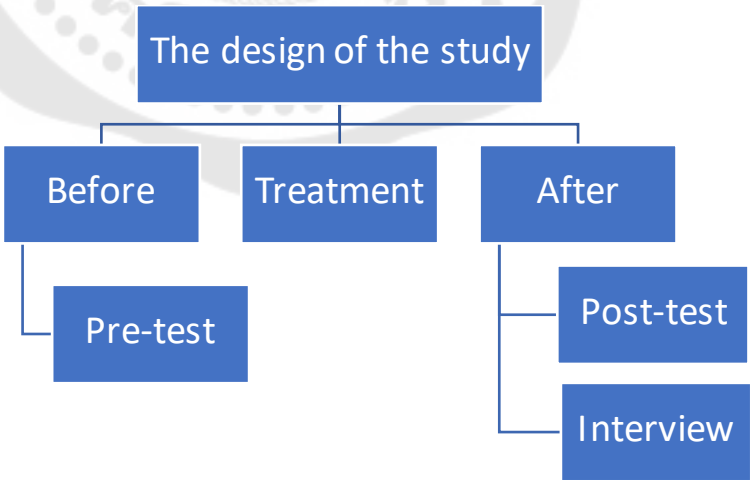
In conclusion, a number of studies pointed out that electronic mind mapping technique has positive effects on students. Even though there are many studies about the use of mind mapping, the studies about the use of electronic mind mapping on reading abilities are still limited, especially in Thailand. Hence, the researcher proposed to explore the effects of electronic mind mapping on reading abilities.

CHAPTER 3
METHODOLOGY

The purpose of this chapter is to present the research methodology employed in this study. It begins by presenting the research design, the participants, the research instruments, the data collection procedures, and the data analysis.

Research Design

This present study employed a mixed-method design. Johnson, Onwuegbuzie, and Turner (2007) defined mixed-methods as the type of research in which a researcher or a team of researchers combine elements of qualitative and quantitative research approaches (p.123). Hence, this study combines both qualitative and quantitative approaches. The quantitative data came from the reading test scores of the pre-test and post-test. The qualitative research techniques of the semi-structured interview were employed to assure the evaluations from the quantitative data. The semi-structured interview was used to explore students' opinions about the impact of electronic mind mapping. Figure 1 illustrates the design of this research.



Figures 1 The design of the study

Participants

The participants were 42 students majoring in English at Srinakharinwirot University in Thailand. They were selected via purposive sampling. Specially, they were from different academic levels and background to ensure the reliability and accuracy of the results: 24 third-year students who enrolled in Critical Reading course and 18 fourth-year students who enrolled in American Short Story course in the 2019 academic year. The reasons to choose these participants were: 1) to accomplish in these two courses, students required reading abilities 2) the students came from different academic levels, so they had experienced different number of courses which effected on their performances. Both groups were taught using the electronic mind mapping which is Coggle, the web-based mind mapping software.

Research Instruments

The instruments in this study included lesson plans, a reading test, and a semi-structure interview. The details of the research instruments are described as follows:

Lesson plans

Four lesson plans were designed by the researcher. Because students were chosen from two courses, the lesson plans were relied on contents and materials of each course. Students from both courses were taught using the electronic mind mapping. The lesson plans were merged with electronic mind mapping and they were divided into three stages which were pre-reading, while reading and post-reading. In pre-reading stage, the researcher used electronic mind mapping as an exercise to recall background knowledge and vocabulary. In while-reading stage, the researcher implemented electronic mind mapping as an exercise to organize the elements in the readings. In post-reading stage, the electronic mind mapping was used as a tool to review important information that students read in the texts. The samples of lesson plans is also shown in the Appendix B.

The Reading Test

To measure students' reading abilities, a reading test was employed to compare the scores from pre-test and post-test. The reading test was designed to study the students' progress after teaching by using electronic mind mapping. It was adapted from

Yimwilai, Srijongjai, and Puchpan (2009) reading abilities test and consisted of 30 questions, with 4 multiple choice answers in each question. The objectives of the test were to assess students' reading abilities: namely, reading for topics, main ideas, details, guessing meaning from context, references, purposes, the author's attitude and tone, inferences, conclusion, fact and opinion. This test was reviewed by experts to check validity. To determine the reliability, the test was tried out with students who were not the participants in this study. The reliability of the reading test was 0.73. The result of Cronbach's alpha value was higher than 0.7; therefore, the reading test was strong enough to evaluate students' reading abilities.

Semi-Structured Interview

An interview was designed to gain qualitative aspects. That is, it was used to study the students' opinions about experiencing electronic mind mapping in the classroom. It consisted of 4 open-ended questions. Students were asked to respond these questions to allow the researcher to obtain more information apart from the test. The purpose of this instrument was to support the results from the reading test. The questions are as follows:

1. What do you think about using electronic mind mapping?
2. Do you think this technique helps improve your reading?
3. What do you think about applying this technique to other courses?
4. Are there any difficulties with this technique?

Data Collection

This study lasted six weeks. In the second semester in the 2019 academic year, the participants from both courses were asked to sign the consent form and complete the pre-test. After the pre-test, they were taught by using electronic mind mapping for four weeks. After teaching by using electronic mind mapping, the students took the post-test. After that, five volunteer students were interviewed. The interview was conducted in Thai to avoid the language barrier that might be the difficulty to express their opinions after participating in this study.

Data Analysis

The data from the research instruments will be analyzed as follows:

Quantitative data analysis

The data from the pre-test and post-test were analyzed by mean scores, standard deviations, and a *t*-test analysis. The differences in the reading abilities of students before and after teaching by using electronic mind mapping were determined by *t*-test analysis.

Quantitative data analysis

The data from the interview were analyzed by content analysis.

Ethical Considerations

All of the participants in this study were given informed consent. The researcher told the nature and purpose of the research to participants. They were informed about all required in the study and notified that participating in the study would not disadvantage them. They were also assured that it was their right to withdraw at any stage. All data was kept securely and a coding method for students' identification was employed for confidentiality and anonymity.

CHAPTER 4
RESULTS

This study was conducted to examine the effects of electronic mind mapping on reading abilities of the students. Moreover, this study aimed to investigate the students' opinions about the electronic mind mapping. This chapter focuses on results from the data analysis of the English reading test before and after using electronic mind mapping. This chapter is divided into two parts which are students' reading abilities and the students' opinions about learning reading through electronic mind mapping. The results are shown in Table 1-4.

4.1 Students' Reading Abilities

Tables 1 Descriptive Statistic of Students' Reading Abilities Mean Score

Group	Pre-test		Post-test	
	M	S.D.	M	S.D.
Critical Reading course	18.29	4.19	21.17	5.07
American Short Story course	8.44	2.12	11.00	3.34
Overall	14.07	6.00	16.81	6.71

Table 1 demonstrates the mean scores and standard deviations from the results of the using electronic mind mapping on students' reading abilities of students in Critical Reading course and American Short Story course. The pre-test mean score of Critical Reading course students was 18.29 (*SD*=4.19), and the pre-test mean score of American Short Story course students was 8.44 (*SD*=2.12). The post-test mean score of Critical Reading course students was 21.17 (*SD*=5.07) and the post-test mean score of American

Short Story course students was 11.00 (SD=3.34). The mean scores are also presented in Figure 2.

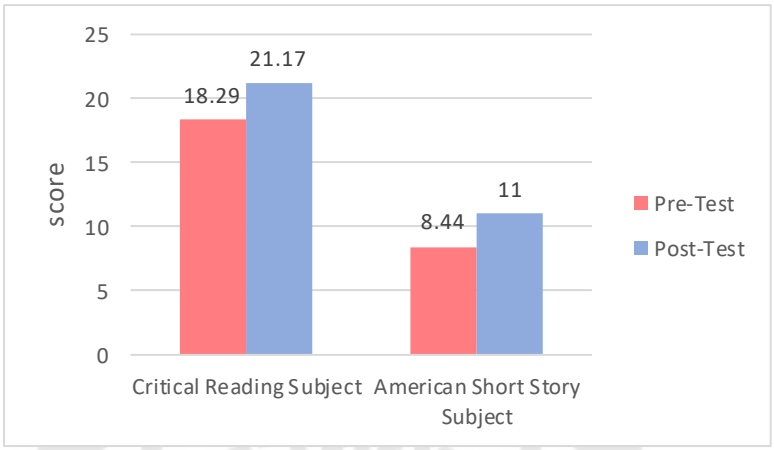


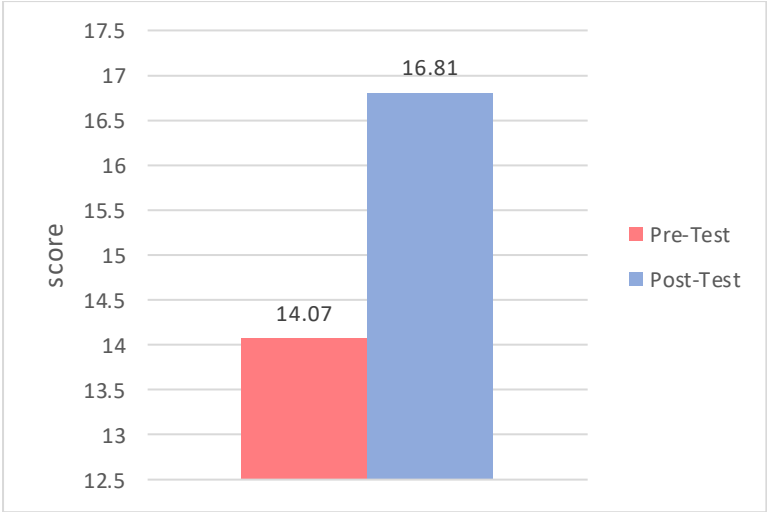
Figure 2 The Mean Scores of the Pre-test and Post-test of Students in Critical Reading Course and American Short Story Course

Table 2 The Comparison of the Pre-test Mean Score to Post-test Mean Score

Time	N	Mean	Max	Min	S.D.	*t*-value	Df	*p*-value
Post-test	42	16.81	28	7	6.71	11.71***	41	.00
Pre-test	42	14.07	24	6	6.00			

***$p<.001$

The Table 2 points out that there were statistically significant differences in the pre-test and post-test mean score of students' reading abilities (t (41) = 11.71, $p<.001$). The mean score of the pre-test was 14.07 (SD = 6.00) whereas the post-test mean score was 16.81 (SD = 6.71). The post-test score was significantly higher than the pre-test score. Hence the results indicate that teaching reading through electronic mind mapping potentially elevated students reading abilities. The results are also shown in Figure 3.



Figures 3 The Mean Scores of the Pre-test and Post-test

Table 3 The Comparison of the Pre-test Mean Score to Post-test Mean Score of The Students in Critical Reading Course

Time	N	Mean	Max	Min	S.D.	*t*-value	Df	*p*-value
Post-test	24	21.17	20	13	5.07	9.49***	23	.000
Pre-test	24	18.29	18	11	4.18			

***$p<.001$

Table 3 illustrates that there were statistically significant differences in the pre-test and post-test mean scores of students in Critical Reading course (t=9.49, p<0.001). The pre-test mean score was 18.29 (SD=4.18) whereas the post-test mean score was 21.17 (SD=5.07). Hence, the post-test mean score was significantly higher than the pre-test mean score. The results prove that teaching reading through electronic mind mapping positively affected reading abilities of Critical Reading course.

Table 4 The Comparison of the Pre-test Mean Score to Post-test Mean Score of the Students in American Short Story Course

Time	N	Mean	Max	Min	S.D.	t-value	Df	p-value
Post-test	18	11.00	16	6	3.34	6.86***	17	.000
Pre-test	18	8.44	12	7	2.12			

***p<.001

Table 4 shows that there were significantly differences in the pre-test and post-test mean score of the students in American Short Story course (t=6.86, p<0.001). The pre-test mean score was 8.44 (SD=2.12), and the post-test mean score was 11.00 (SD=3.34). The post-test mean score was significantly higher than the pre-test mean score. Consequently, the analysis points out that teaching reading through electronic mind mapping can be beneficial to the students in American Short Story course.

4.2 Students' Opinions about Learning Reading through Electronic Mind Mapping

This section provides the answer to the second research question: What are students' opinions about learning through electronic mind mapping? To explore the opinions of students upon the teaching technique, the data were collected from semi-structured interview and analyzed by content analysis. There were 5 volunteer students: 2 students from American Short Story course and 3 students from Critical Reading course. The results were as follows:

The results depicted that all students expressed positive opinions about the learning reading through electronic mind mapping. The interviewees expressed that this teaching technique assisted them to improve their information management which important for reading. Four students said that they better understood the passages while reading because they could see the relationship between each information. They thought that this technique helped them to see through the organization of the elements in reading texts better. Two students said that the hierarchy of the ideas from reading texts through

electronic mind mapping can be spotted easily. One student stated, “I could link the main idea of each paragraph to the sub ideas easily.” One student also added, “This technique enabled her to easily comprehend the texts because all of the keywords were in the electronic mind mapping.”

Furthermore, students reported that they liked to use this technique as another form of note taking. For example, two students reported that all of the keywords can be remember easier when using electronic mind mapping. They added that using various colors in electronic mind mapping helped them remember information. All interviewees said that this technique was more accessible for taking note than the traditional form. They said that it helped them a lot in reviewing lessons before the exam because it was easier to remember than linear note taking. One student also added, “Doing electronic mind mapping in class benefited her when she prepared for the test.”

Additionally, all interviewees reported that reading through electronic mind mapping motivated them to read. One student reported, “I was motivated by the exercises before reading because the whole class could brainstorm together, and this really helped to see the overview before reading.” All said that they enjoyed learning reading because they knew how to find each point in the texts. One student said, “The technique was new, and it encourages me to read.” Two students responded that they enjoyed reading complicated texts more because this technique assisted them while reading. This illustrates that electronic mind mapping provided pleasant environment for learning readings.

Moreover, the students reported that they liked learning reading through electronic mind mapping because it was more attractive for them than the traditional form. For example, one student claimed, “electronic mind mapping made the note look clean and organized than traditional mind mapping.” Two students said that it was faster to put information in the electronic mind mapping, and it allowed them to share among friends. One student said that electronic mind mapping looked more organized when printed it out than the traditional form. In conclusion, all students liked the electronic mind mapping because of its appearance and characteristics.

In conclusion, students favored electronic mind mapping. According to their responses, they all agreed that this technique benefited them to have better understanding of the texts. Moreover, electronic mind mapping boosted the students' reading abilities and motivation toward learning reading as well.

CHAPTER 5
CONCLUSION, DISCUSSION AND SUGGESTIONS

This chapter includes the conclusion of the study that describes the purposes, research methodology and results of the study. Furthermore, this chapter also provides discussion, limitation, implication, and suggestions for further study.

Conclusion

This study was conducted for the following objectives:

(a) To investigate the effects of using electronic mind mapping on students' reading abilities.

(b) To study students' opinions about teaching reading by using electronic mind mapping.

The participants consist of 42 students from fourth-year and third-year students majoring in English at Srinakharinwirot University in Thailand. They were selected by purposive sampling. They were taught reading by using electronic mind mapping. The instruments in this study include the lesson plans, a reading test, and a semi-structure interview.

The findings of the study were:

1. The results indicated that teaching reading through electronic mind mapping could effectively enhanced reading abilities of students. There were significant differences in post-test mean score and the pre-test mean score of the students in two courses taught by electronic mind mapping. Specially, the mean score of the post-test (M=24, SD=6.00) was significance higher than the pre-test mean score (M = 28, SD=6.71). The result showed that teaching reading through electronic mind mapping had positive effects on student's reading abilities.

2. The results from interview responses showed that this teaching technique assisted them to improve their information management which is important for reading. They reported that they liked to use this technique as another form of note taking. It also

motivated them to read. They liked learning reading through electronic mind mapping because it was more attractive for them than the traditional form. The interviewees all agreed that this technique benefited them to have better understand of the texts. Moreover, electronic mind mapping improved the students' reading abilities and motivation toward learning reading.

Discussion

The results of the study are discussed as related to the research questions:

1. What are the effects of using electronics mind mapping on students' reading abilities?

2. What are students' opinions about learning reading through electronic?

The purpose of this part is to present the discussion of the first research question. The present study presented that electronic mind mapping had positive effect on students' reading abilities. This is because the implementation of electronic mind mapping encourages information organizing. Mohaidat (2018) claimed that electronic mind mapping had a positive impact on students' understanding, and analyzing the texts because the information was arranged in a more organized way, so the main ideas were noticeable easily. As Bawaheh (2019) proposed, electronic mind mapping maintains an opportunity for students to learn to connect each concept, to form new relationships and to enhance retention. Likewise, Tungprapa (2015) found that electronic mind mapping assisted students in this study to perceive contents relation and better understood passages. This is in line with the study of Alomari (2019) which revealed that electronic mind mapping developed students' comprehension skills Because it helped students to focus on the basic idea and sub-ideas of the text, made use of their own experiences and came up with their own ideas.

In addition, it transformed the classrooms in this study to be more student-centered and this improved students' learning outcomes. As Mahasneh (2017) proposed, electronic mind mapping involves students' active participation in the learning process. Likewise, Alomari (2019) found that electronic mind mapping transformed the classrooms into a more ecstatic and vibrant environment, while supporting the abilities to understand

reading. Thus, students in this study developed their reading abilities. According to the nature of the two courses that encourage students to experiences varieties of reading texts, the students

According to the findings, it was found that electronic mind mapping benefit students in American Short Story course more than students in Critical Reading course. It might suggests that electronic mind mapping develops reading abilities of the students with lower proficiency more than the students with higher proficiency. Caleb and Andrew (2019), indicated that effective reading strategy can helps elevate students reading abilities but lower proficiency students require more reading technique and prior vocabulary. Furthermore, illustrations are suitable for low proficiency readers because it helps them to see through the vocabulary and structure of the content (Carrell, Devine, & Eskey, 1988). Therefore, electronic mind mapping in this study had more positive impacts on lower proficiency readers because of its strategy and illustrations.

The discussions of the second research question are contained in this part. The results from the interview reveals that the students favored learning reading through electronic mind mapping. The reason to explain is that reading through electronic mind mapping motivated students to read. Similarly, Sabbah (2015) found that the process of electronic mind mapping was full of fun and enjoyment when the students exchanged ideas and felt a sense of success when they see their organized images that they created. The results are in line with the study of Ellozy and Monstafa (2010) which investigated the impacts of electronic mind mapping on undergraduate students' critical reading skills. The results showed that electronic mind mapping created insightful visual data, analytical skills, and active discussion among course participants presented in electronic mind mapping environment (Ellozy & Monstafa, 2010).

In addition, the students reported that they liked learning reading through electronic mind mapping because it was more attractive for them than the traditional form. Aljaser (2017) found that electronic mind mapping composes of various elements of excitement, such as colors, images and shapes, which helps to create the positive attitudes and encourage students to remember well. This idea is evident in the interview

findings in which students stated that electronic mind mapping turned the note into a clear and concise form but still informative. Secondly, electronic mind mapping was more convenient for this learning environment. The results are in accordance with the study of Al-Badwoi (2015) which found that thirty-four students were interested in learning English using electronic mind mapping because it was helpful with presentation in front of the class, could develop their creativity, and most importantly could ease their boredom in classroom.

Implications of the Study

The present findings might promote teachers and educators to implement electronic mind mapping to educators to further the use in other courses. Due to the benefits of teaching reading through electronic mind mapping, this technique can be an alternative for teachers to create more positive classroom environment, promote learning motivation, and most importantly improve reading performance.

Limitations of the Study

This study has several limitations. Firstly, this study was limited to only the students in undergraduate level. Hence, the finding might not represent students in other academic levels. Secondly, reading abilities refer to cognitive processes to understand a text. They include the abilities to identify topics, main ideas, details, guessing meaning from context, references, the author's purpose, the author's attitude and tone, inferences, conclusion, as well as fact and opinion. Accordingly, the results might not be stable for other reading abilities.

Recommendations for Future Studies

The researcher suggests the following ways in which future research might build upon and strengthen these findings.

1. Other qualitative research methods, such as an observation or diary, could be used to support the qualitative data.

2. This study only conducted on students majoring in English in tertiary level. It would be more thoroughly to explore the same experiment with other academic levels with a larger sample size, so the results would be more widely generalized.

3. It might be interesting to further study how electronic mind mapping benefit students with low proficiency group more than students with high proficiency.

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APPENDICES

APPENDIX A

ENGLISH READING TEST

Pre-Post English Reading Test

Directions: Read the articles and passages and then choose the best answer for each question.

A

Crocodile ate missing man

JAKARTA: Human hands and other body parts were found in the belly of a five metre crocodile caught in Kupang Bay in eastern Indonesia, a newspaper reported yesterday.

B

NASA eyes a station on moon

Cape Canaveral, Florida – NASA said on Monday it plans to build a permanently occupied base on the moon, most likely at the lunar south pole.

C

Wild elephants kill two

RANGOON: Wild elephants intruded into villages near Rangoon last week, knocking down 42 houses, killing two villagers and gobbling rice paddy, sugar cane and bananas, a local publication reported yesterday.

D

Depression brings floods but no deaths

Prachuap Khiri Khan – Typhoon Durian, downgraded from a tropical storm to a depression yesterday, brought heavy downpours in the mountains but without any reported **fatalities**.

1. According to the news articles, which one of the following statements is true?
   1. The temporary base would be located near the southern polar region of the moon.
   2. Wild elephants do not prefer rice since they normally live in the jungle.
   3. A typhoon or a tropical storm is less powerful than a depression.
   4. The man-eating crocodile was caught in Kupang Bay.

2. We can infer from Article C that the elephants were very _____.
   1. healthy
   2. hungry
   3. naughty
   4. angry

3. Which of the following is closest in meaning to the word **"fatalities"** in Article D?
   1. difficulties
   2. disasters
   3. catastrophes
   4. casualties

4. Which is the best headline for this news column?
   1. Serious crimes & disasters
   2. Animals & the environment
   3. News in brief
   4. Weird stories

To: julia_jack_b@yahoo.com
From: jody_b@yahoo.com
Subject: _____
Date: November 2, 2007

Dear Mummy and Daddy,

How are you? My trip to Kenya is really cool! I have become the chief slayer of insects, having combated cockroaches in my sleeping bag, wash bag, pants, loo seat, hairbrush, as well as taking on a spider the size of a small elephant. I am indestructible! Moreover, I had a quarrel with a leper carrying a python this morning, but being invincible and the worldly girl I have come to be, I fought and defeated **her** at last. I am now slightly worried how contagious leprosy is. Hope you are all well and disease-free.

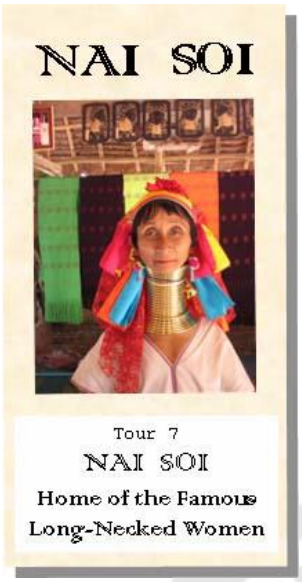
Jody

5. Which of the following is the best subject of the email?
   1. Animals and me in Kenya
   2. Illness in Kenya
   3. Survival in Kenya
   4. Kenya in danger

6. The author's intention is to _____.
   1. inquire
   2. request
   3. consult
   4. Inform

7. What is the author's attitude towards her experiences during the trip?
   1. sensitive
   2. concerned
   3. optimistic
   4. indecisive

8. The word **"her"** (line 11) refers to _____.
   1. a leper
   2. the worldly girl
   3. Jody
   4. a python



A visit to Thailand's Mae Hong Son province wouldn't be complete without a side trip to Nai Soi to see the long-necked women. Following the traditional customs of the Pa Daung tribe, the women wear brass coils to stretch their necks to unbelievable lengths. To see **them** you can take a day trip from the Bamboo Hotel in Mae Hong Son.

9:00 a.m.	Meet in the parking lot of the Bamboo Hotel. Take a minibus to Nai Soi. The road is bumpy and dusty, so bring a bottle of water.
10:00 a.m.	Arrive at Nai Soi. Purchase ticket at the village entrance. See Pa Daung women weaving cloth, sewing, and making jewelry. See traditional Pa Daung homes. Buy souvenirs.
12:00 noon	Return to the village entrance. Have a traditional Thai lunch.
12:30 p.m.	Return to the minibus for the trip home.
1:30 p.m.	Arrive at the Bamboo Hotel.
Cost:	$35 (transportation, guide, and lunch) $10 (admission to village)

9. What is the author's purpose?
   1. To persuade readers.
   2. To entertain the tourists.
   3. To improve the tourist spot.
   4. To help the Pa Daung tribe.

10. In conclusion, what does Tour 7 offer tourists?
   1. A trip throughout Mae Hong Son province.
   2. A homestay with the Pa Daung tribe.
   3. A day trip to Nai Soi village with a guide and lunch.
   4. A sight-seeing tour and an overnight at the Bamboo Hotel.

11. According to the article, the word **"them"** (line 5) refers to _____.
    1. brass coils
    2. the long-necked women
    3. the lengths of the women's necks
    4. traditional customs

12. Which is **NOT** true according to the article?
    1. It is difficult to travel to Nai Soi village.
    2. Long-necked women belong to the Pa Daung tribe.
    3. Tourists will have lunch at Pa Daung homes.
    4. The day trip to see the long-necked women is 4.5 hours long.

MTV's International Wellbeing Study asked 5,000 young people in 14 countries questions like: How satisfied are you with your life right now? What are your biggest concerns? Are you optimistic about your future?

The big surprise was that the answers told a tale of two worlds: in industrial nations like the U.S. and western Europe, young people may be used to a high standard of living, but are often dissatisfied with their own personal lives.

In developing countries, however—like Brazil, India and China—young people face greater everyday challenges but are extremely optimistic about their present lives and future. "Some cultural commentators claim there are more similarities than differences among global youth, but our survey reveals the opposite," says Graham Saxton, who helped oversee MTV's study.

13. The author's purpose in writing this passage is to _____.
    1. raise awareness of adults
    2. publish the study's findings
    3. identify the cause of youth problems
    4. argue with commentators

14. The main topic of the passage is "_____".
    1. How Well Are Youth?
    2. What Are Teenagers' Concerns?
    3. How Satisfied Are Youth?
    4. What Are Teenagers' Futures?

15. According to the passage, which is **NOT** a fact?
    1. Juveniles in industrial nations may have better standards of living.
    2. Teenagers in all nations have things in common.
    3. This study was conducted in 14 countries, with 5,000 youngsters.
    4. China is a developing country whereas western Europe is industrialized.

	Capsaicin, the active component of chillies, has produced "startling" results in tests to kill a variety of tumour cells including pancreatic cancer, one of the most difficult types of the disease to treat.
5	Dr. Timothy Bates, who led the research at Nottingham University, said his team has discovered a potential **Achilles' heel** for all cancers because capsaicin targets the energy source of tumour cells. The discovery could lead to the production of drugs to cure a variety of cancers at a fraction of the £410m cost of developing conventional medicines, as capsaicin is already consumed daily by millions of people.
10	Dr. Bates said: "**This** is exciting and may explain why people living in countries like Mexico and India tend to have lower incidences of many cancers that are prevalent in the West. We appear to have discovered a fundamental weakness with all cancer cells."

16. It can be inferred from the passage that the Mexican and Indian people are likely to less suffer from cancers because _____.
    1. they do not live in the West
    2. their traditional diets already contain a lot of chillies
    3. their conventional medicines normally contain capsaicin
    4. Mexican and Indian scientists are more intelligent than those in the West

17. Which is **NOT** true according to the passage?
    1. Pancreatic cancer is a serious disease.
    2. Capsaicin is an only effective element found in chillies.
    3. Capsaicin fights cancers by wiping out the tumour cells.
    4. The discovery could result in the decrease of cancer treatment costs.

18. The word **"Achilles' heel"** (line 5) is closest in meaning to _____.
    1. a strength
    2. a threat
    3. an opportunity
    4. a weakness

Snoring is hereditary, says study

Snoring appears to run in families, according to new research which shows that children whose parents snore have a three-fold increased risk of being noisy sleepers themselves.

The findings also indicate a link between snoring and allergies. Children who tested positive for allergies were twice as likely to snore.

Scientists in the U.S. looked at 681 infants with an average age of 12 months, and found that children with at least one parent who snored were three times more likely to snore than those without snoring parents.

Snoring is no joke, it can have serious implications. Studies of older children and adults have linked snoring to behavioural problems, mental impairment, and heart and metabolic disease.

Maninder Kalra, from Cincinnati Children's Medical Centre in Ohio, who led the research, said: "The early detection and treatment of snoring should be performed in order to reduce the incidence of morbidity due to sleep-disordered breathing in children."

19. According to the passage, the word **"This"** (line 10) refers to _____.
    1. the research's result
    2. the production of drugs
    3. the discovery of capsaicin
    4. the consumption of capsaicin

20. What is the main idea of the passage?
    1. Snoring can be passed on from one generation to the next generation.
    2. Snoring can lead to many severe mental and physical problems.
    3. Snoring may be related to allergies, especially in children.
    4. Snoring is studied extensively by American scientists.

21. What is the tone of the last paragraph?
    1. defensive
    2. aggressive
    3. suggestive
    4. persuasive

22. According to the passage, which of the following is a fact?
    1. There is no joke about snoring.
    2. Snoring cannot be treated.
    3. The subjects of the study were babies.
    4. Most children are noisy sleepers.

5	 Bullying can be defined as the use of one's strength or status to intimidate, injure, or humiliate another person of lesser strength or status. Bullying can be categorized as physical, verbal, or social. *Physical* bullying involves physical injury or threat of injury to someone, while *verbal* bullying refers to teasing or insulting someone. *Social* bullying refers to the use of peer rejection or exclusion to humiliate or isolate a victim. Bullying must be

10	distinguished from other forms of peer aggression or conflict; bullying always involves a power imbalance between the bully and the victim. According to a survey, 56% of teens in the USA and UK say they have been victims of bullying. 49% of teens have been bullied in Denmark, France and South Africa. However, a developing nation, Argentina, tops the list of kids who have been bullied – 72%.

23. The passage is mainly about _____.
    1. the definition, types and situation of bullying
    2. a survey on bullying in many countries
    3. the differences among three types of bullying
    4. the impact of bullying towards children

24. According to the passage, which of the following is **NOT** verbal bullying?
    1. Making fun of somebody's looks.
    2. Telling others that someone is not being nice.
    3. Teasing someone about the clothes he or she wears.
    4. Calling people names because of the color of their skin.

25. The tone of this passage is _____.
    1. critical
    2. informative
    3. experimental
    4. persuasive

26. According to the second paragraph, we can conclude that bullying _____.
    1. can be found in every country around the world
    2. is likely to occur in developing countries, especially in South America
    3. happens less in Europe and Africa than in the USA and UK
    4. occurs mostly in South Africa and South America

Someone recently wrote in *Postbag* that the BTS service had declined somewhat since it commenced operations. There is one area in which Thailand seems to excel, and that is the total failure to provide adequate toilet facilities for the general public. Just look at the new airport. Both the BTS and the MRTA fail to provide any such facilities for their paying passengers.

If any business or organization provides a public service they should be compelled by law to provide and maintain appropriate and adequate public toilets and other services that are needed by their customers in the course of using their services.

The BTS could also adjust the timing of the entrance/exit turnstiles so that passengers are not constantly **"shafted"**. Are they so afraid that two people might squeeze through for the price of one?

27. Why was the article written?
    1. To propose law enforcement for mass transportation.
    2. To complain about Bangkok's public transport inadequacy.
    3. To compare the facilities of the BTS, the MRTA and the new airport.
    4. To suggest solutions for the improvement of BTS' services.

28. According to the passage, what fact can readers get from the article?
    1. Thailand is good at providing inadequate toilet facilities.
    2. Two passengers often squeeze through BTS turnstiles.
    3. No toilet facilities are provided by the BTS or the MRTA.
    4. Enough public toilets will be provided if a law is passed.

29. What is the tone of the article?
    1. humorous
    2. sarcastic
    3. emotional
    4. pessimistic

30. Which of the following is closest in meaning to the word **"shafted"** (line 11)?
    1. hit
    2. passed
    3. pushed
    4. pulled

APPENDIX B

LESSON PLANS

Lesson plan 1

Course: American Short Story Level: Undergraduate

Topic: The Pedestrian by Ray Bradbury Time: 200 minutes

Lesson Overview

In this lesson, students will learn definition of setting, time and place. After that, the students will read the short story "The Pedestrian" and learn about scientific fiction. Later, the students will learn about imagery.

Objectives:

1. Students will read and comprehend the short story "The Pedestrian".
2. Students will understand scientific fiction.
3. Students will be able to identify imagery.
4. Students will learn to analyze the characters motivation and themes.

Teaching procedures

Teaching Stages	Activity Details	Materials
Pre-reading (40 minutes)	1. Ask the students to guess about the profile of citizens of 2053 and fill in the electronic mind mapping form by filling electronic mind mapping.	1.Video 2.Electronic mind mapping

	2. Discuss with students about the profile of citizens of 2053. 3. Ask them to write the answers to the following questions. 1. What do you think about the disadvantages of technology? 2. For each one, answer these questions: -Do you think it is crucial for living? -Is it good for you? Are there any advantages for overused? -Do people in your culture rely on technology all the time? 3. What is your favorite kind of technology? Why? 4. Discuss with students about their answers. 1. Ask students to look at the title of the reading "The Pedestrian" and the video and guess what the short story is about. 2. Explain about the meaning of science fiction	3.PowerPoint Slides
While-reading (100 minutes)	1. Ask students to read the story and find the answer to the comprehension questions below the	1.Electronic mind mapping 2.PowerPoint Slides

	story. Then fill in the answers in the electronic mind mapping form. 2. Give the correct answer and explain the passage by using power-point slides. 1. While explaining the passage, ask students to guess the meaning of some words and explain students how to guess meaning by using examples. 2. Ask students to do an exercise on comprehension check and give the correct answer by using electronic mind mapping. 3. Ask students to do exercise on guessing meaning by using examples. 4. Explain the term “imagery,” type of imagery, and give some examples. 5. Ask students to find a sample of each type of imagery by filling in the electronic mind mapping form. 6. Discuss with students how the use of imagery contributes to the mood and tone of “The Pedestrian”?	

Post-reading (60 minutes)	Ask students to review the lesson by filling in the electronic mind mapping.	1.Electronic mind mapping 2.PowerPoint Slides

Activities

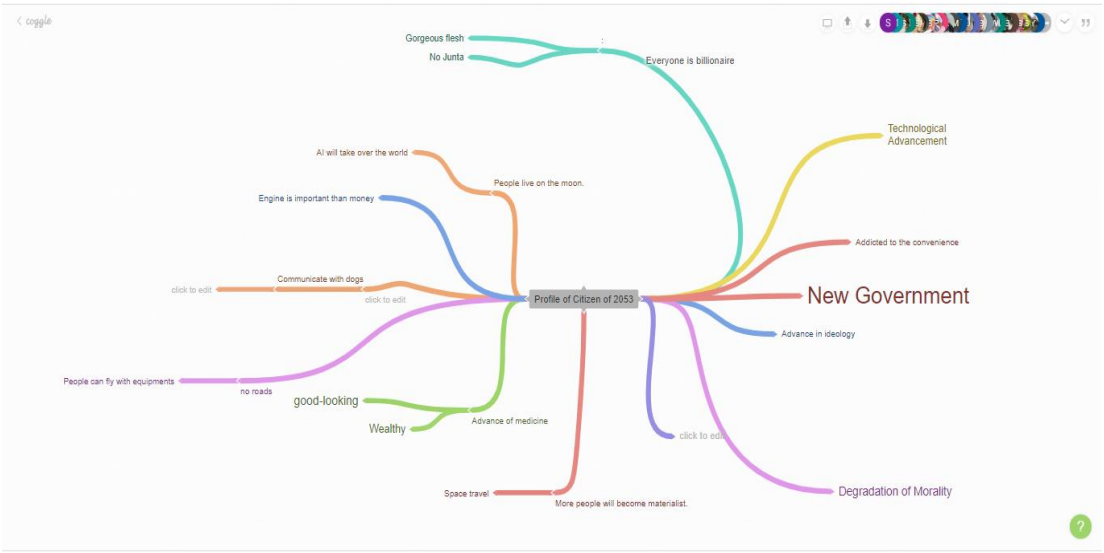


Figure 1 The profile of the citizen of 2053

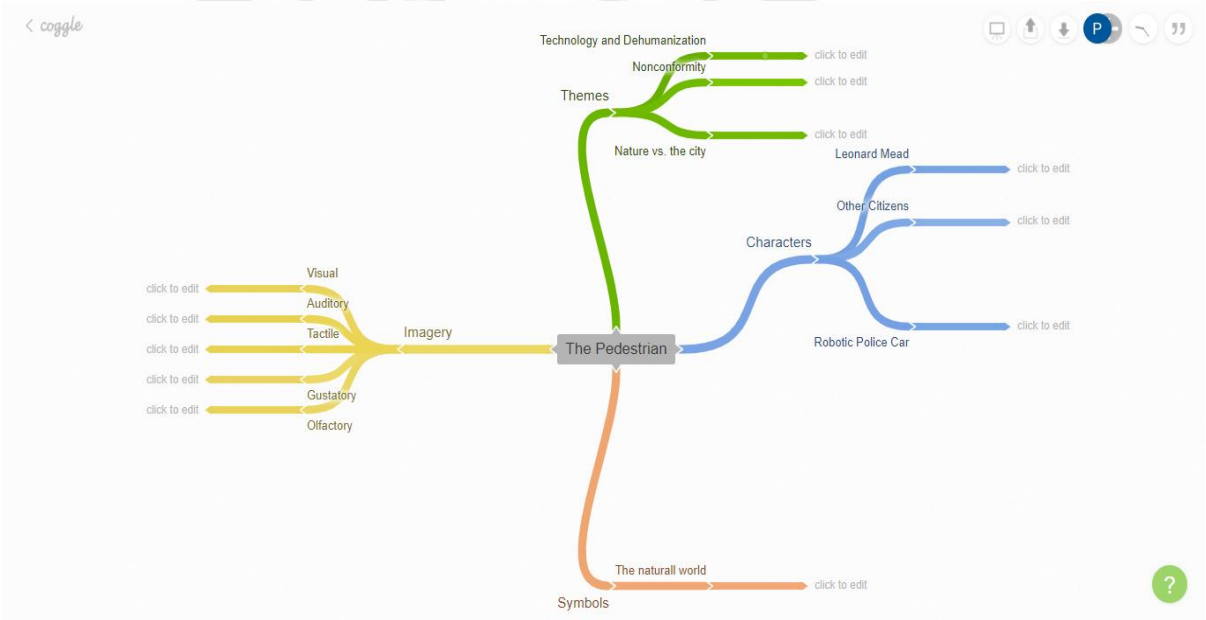


Figure 2 Key concepts of the story “The Pedestrian”

Lesson plan 2

Course: American Short Story Level: Undergraduate

Topic: Hills Like White Elephant by Ernest Hemingway Time: 200 minutes

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Lesson Overview

In this lesson, students will learn definition of theme and motif. After that, the students will read the short story "Hills Like White Elephant." Later, the students will learn about symbolism.

Objectives:

1. Students will read and comprehend the short story "Hills Like White Elephant".
2. Students will understand the definition of theme and motif.
3. Students will understand symbolism.
4. Students will learn to analyze the meaning of each symbol.

Teaching procedures

Teaching Stages	Activity Details	Materials
Pre-reading (40 minutes)	1. Ask the students to guess about the meaning of Modernism and fill in the electronic mind mapping form. 2. Discuss with students about the meaning and characteristics of Modern Literature.	1.Electronic mind mapping 3.PowerPoint Slides

	3. Discuss with students about other characteristics of Modern Literature. 4. Discuss with students about the structure of the literature works: character, plot, style.	
While-reading (100 minutes)	1. Ask students to read the story and find the answer to the comprehension questions below the story. Then fill in the answers in the electronic mind mapping form. 2. Give the correct answer and explain the passage by using power-point slides. 1. While explaining the passage, ask students to guess the meaning of some words and explain students how to guess meaning by using examples. 2. Ask students to do exercise on guessing meaning by using examples. 3. Explain the term “theme,” and give some examples. 4. Ask students to find a sample of themes by filling in the electronic mind mapping form. 5. Explain the term “motif and symbolism,” and give some examples.	1.Electronic mind mapping 2.PowerPoint Slides

	6. Discuss about the motifs and symbols in the story.	
Post-reading (60 minutes)	Ask students to review the lesson by filling in the electronic mind mapping.	1.Electronic mind mapping 2.PowerPoint Slides

Activities

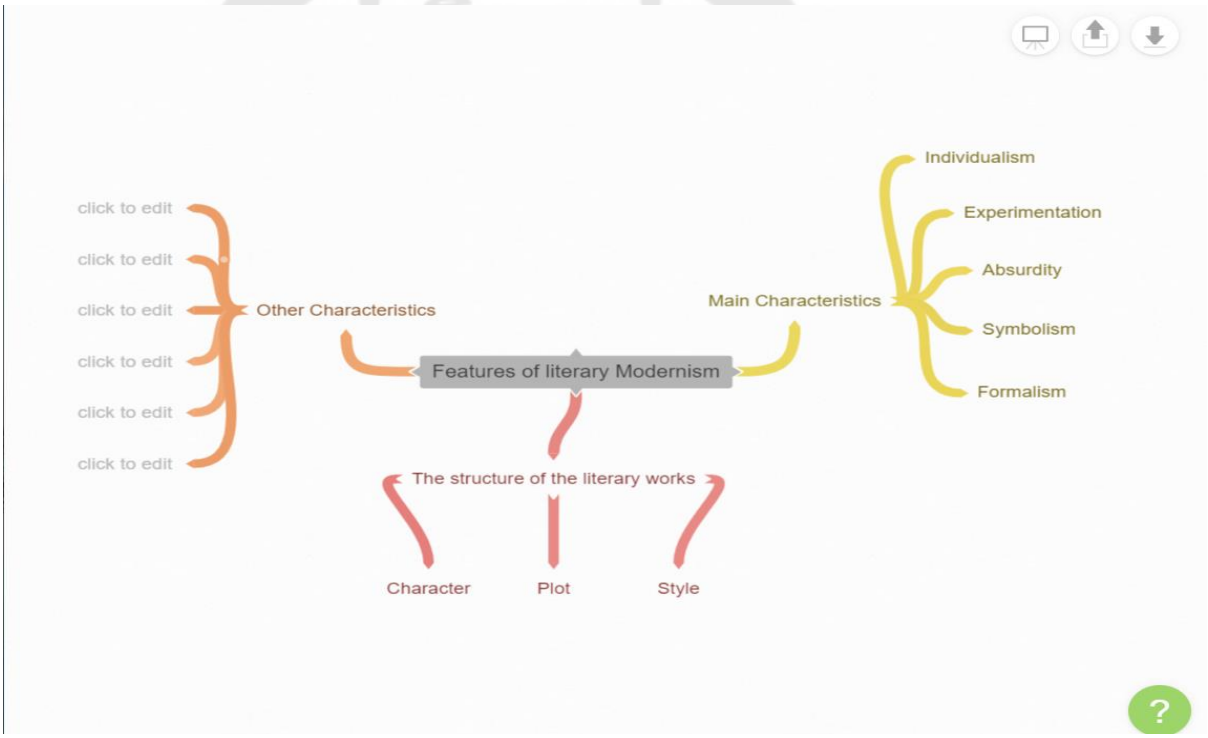

Figure 1 Definitions of Modernism and characteristics

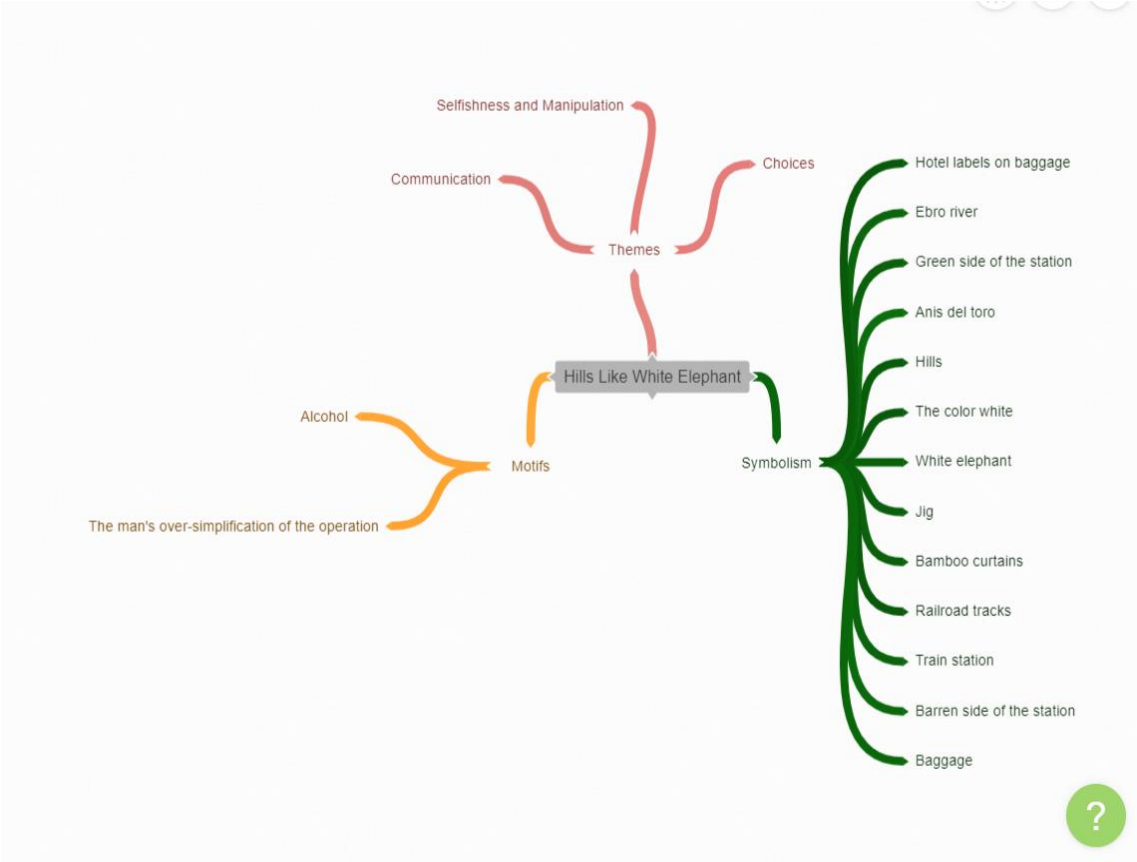

Figure 2 Literary terms of the story “Hills Like White Elephant”

Lesson plan 3

Course: American Short Story Level: Undergraduate

Topic: Eleven by Sandra Cineros Time: 200 minutes

Lesson Overview

In this lesson, students will identify point of views and characters. After that, the students will learn definitions and stages of plot. Later, the students will read the short story "Eleven" and discuss about applying plot to Eleven.

Objectives:

1. Students will read and comprehend the short story "Eleven".
2. Students will understand four stages of plot.
3. Students will be able to identify each stage.
4. Students will learn to analyze the characters, point of views and setting.
5. Students will learn to analyze conflicts, themes, and figurative language.

Teaching procedures

Teaching Stages	**Activity Details**	**Materials**
Pre-reading (40 minutes)	1. Ask the students to guess about the tone of the story. 2. Discuss with students about the tone of the story. 3. Ask the students about the definitions of plot. 4. Explain the types of plots with the students by giving examples.	1.Video 2.Electronic mind mapping 3.PowerPoint Slides

	4. Discuss about their opinion about their opinion about the plot of Eleven before reading.	
While-reading (100 minutes)	1. Ask students to read the story and find the answer to the comprehension questions below the story. Then fill in the answers in the electronic mind mapping form. 2. Give the correct answer and explain the passage by using power-point slides. 1. While explaining the passage, ask students to guess the meaning of some words and explain students how to guess meaning by using examples. 2. Ask students to do an exercise on comprehension check and give the correct answer by using electronic mind mapping. 3. Ask students to do exercise on guessing meaning by using examples. 4. Ask students to find a sample of simile, repetition, and imagery by filling in the electronic mind mapping form. 5. Discuss with students about simile, repetition, and imagery in “Eleven.”	

	5. Ask students to identify the characteristics of Racheal and Mrs. Price. 6. Discuss with students about characteristics of Racheal and Mrs. Price.	
Post-reading (60 minutes)	Ask students to review the lesson by filling in the electronic mind mapping.	1.Electronic mind mapping 2.PowerPoint Slides

Activities

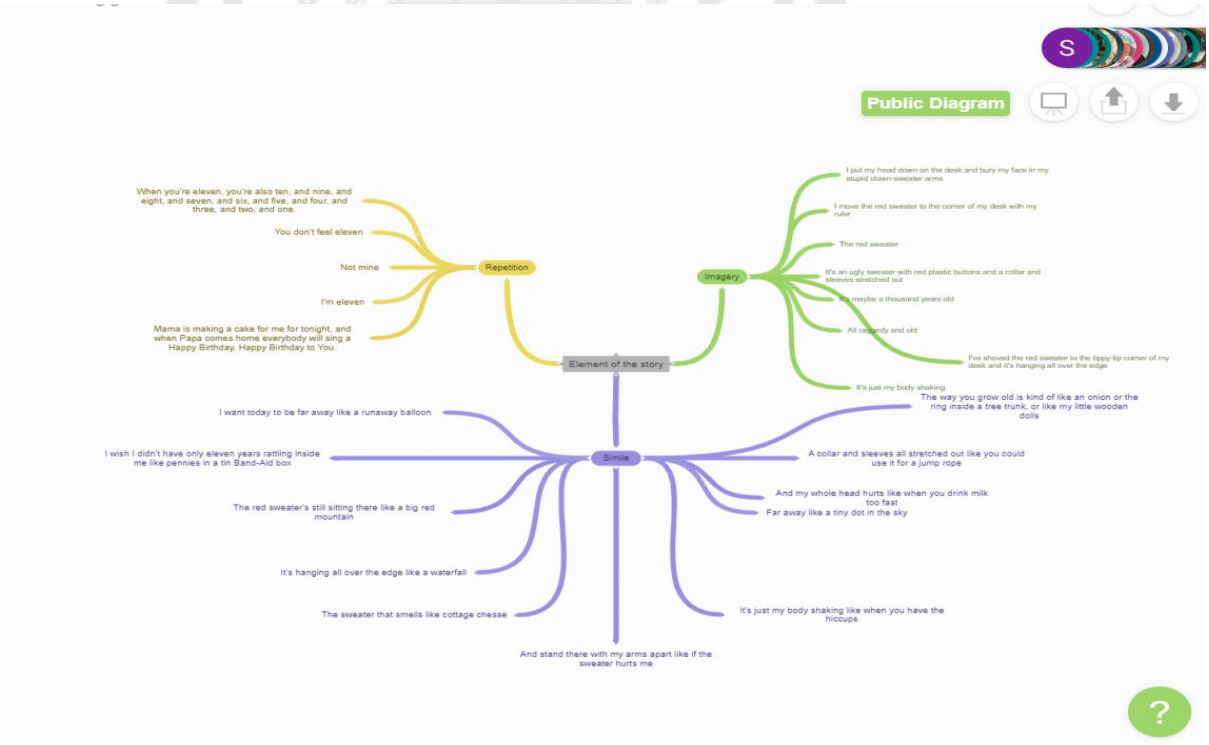

Figure 1 The elements of the story

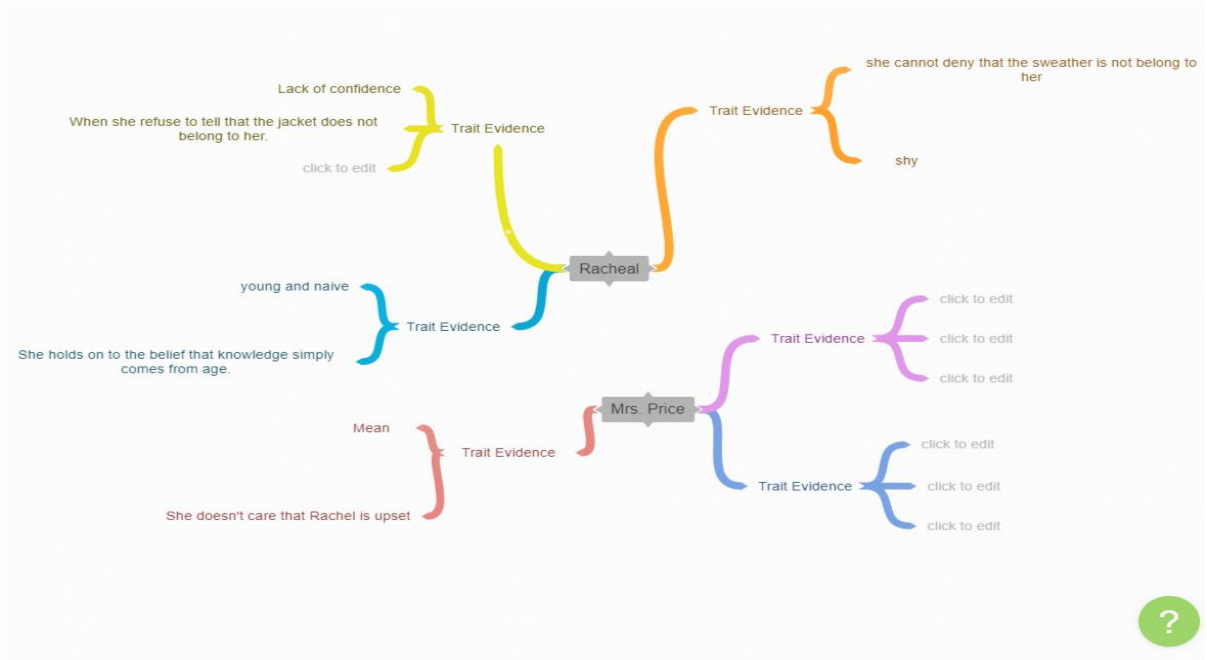

Figure 2 Characteristics

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