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Alamat Redaksi :
Akademi Sekretari dan Manajemen Mataram

Jln. Pelor Mas No.3 Kekalik Mataram, Telp (0370) 628418 / FAX (0370) 635007

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IMPROVING STUDENTS' READING COMPREHENSION BY USING MIND MAPPING TO THE SECOND SEMESTER STUDENTS OF MANAJEMEN INFORMATIKA DEPARTMENT OF STMIK MATARAM

Pathul Indriana
Sekolah Tinggi Manajemen Informatika Komputer (STMIK) Mataram
bufhatul@gmail.com
Sopian Saori
Sekolah Tinggi Manajemen Informatika Komputer (STMIK) Mataram
assauris@rocketmail.com

Abstract: The aims of the study was to improve the students' reading comprehension in learning English especially reading. This research belongs to action research. Based on the observations, the problems found in teaching reading comprehension were text difficulty and ineffective instruction. The study consisted of two cycles. The data were obtained by interviewing the students of the second semester of Manajemen Informatika at Sekolah Tinggi Manajemen Informatika Komputer (STMIK) Mataram, holding the discussion with the lecturer, and the collaborator, and doing observations in the English teaching and learning process. The instruments of the study were a pre-test and post-test, observation guidelines, and interview guidelines. Qualitative and quantitative methods were used to collect the data. The data were analyzed from the field notes, interview transcript and the result of the pre-test and post-test. The result of the study showed that the students' reading comprehension in English teaching and learning process improved through mind mapping. The result of the research showed that the mean score of post-test was higher than that of the mean score of the pre-test. The mean score of pre-test was (62.78) and the mean score of post-test was (75. 89). Thus, there was an increasing point of 13.11.

Keywords: mind-mapping, reading comprehension, teaching reading.

Abstract: Tujuan penelitian ini adalah untuk meningkatkan pemahaman bacaan siswa dalam pembelajaran bahasa Inggris khususnya Reading. Penelitian ini termasuk dalam penelitian tindakan kelas. Berdasarkan hasil pengamatan, masalah yang ditemukan dalam pembelajaran Reading adalah kesulitan bahan bacaan dan pembelajaran yang tidak efektif. Penelitian ini terdiri dari dua siklus. Data tersebut diperoleh dengan mewawancarai siswa semester dua program studi Manajemen Informatika di Sekolah Tinggi Manajemen Informatika Komputer (STMIK) Mataram, dengan cara mengadakan diskusi dengan dosen, dan kolaborator, dan melakukan pengamatan dalam proses belajar mengajar bahasa Inggris. Instrumen penelitian adalah pre-test dan post-test, pedoman observasi, dan pedoman wawancara. Metode kualitatif dan kuantitatif digunakan untuk mengumpulkan data. Data dianalisis dari catatan lapangan, transkrip wawancara dan hasil pre-test dan post-test. Hasil penelitian menunjukkan bahwa pemahaman bacaan siswa dalam proses belajar mengajar bahasa Inggris mengalami pemeningkatan dengan metode *mind maping*. Hasil penelitian menunjukkan bahwa rata-rata skor post-test lebih tinggi dari nilai mean pre-test. Skor rata-rata pre-test adalah (62,78) dan skor rata-rata post-test adalah (75,89). Dengan demikian, terjadi peningkatan nilai sebesar 13,11.
Kata Kunci: mind-mapping, reading comprehension, teaching reading.

1. Introduction

As it has already been known, teaching a language is a multidimensional task which requires different techniques and methods

compared with teaching other subjects. In order to study a language either as a first, second language or foreign language, one makes an effort to develop and integrate four basic skills which are listening, speaking, reading and writing. However, it is difficult to improve all these skills all at once in terms of teaching a foreign language since proficiency in learning a foreign language differs from an individual to another, whereas a native language can be learnt by all the members of a society to some extent. Therefore, it is necessary to make use of various methods and techniques which will minimize the differences within a classroom and help learners to participate in lessons equally. Mind mapping which is the focus of this study is one of these methods which help learners to participate in lessons equally and effectively.

The foreign language (FL) reading process involves the interplay of two language systems. When reading in a foreign language, readers have an access to their first language (L1) and often use their L1 as a reading strategy. But, frequently, it takes time and builds confusion among students. They often encounter many new and difficult words and are not able to catch the main idea of the text. Then, they will be reluctant to continue reading because of unsuccessful comprehension. Consequently, quiet discussion is the common feature in the reading class. In other words, reading in non-native language requires extra efforts and seems hard for EFL students to understand passages written in foreign languages.

Mind mapping as a technique to use the whole brain by using visual and other graphic to create a meaningful impression [2]. Mind mapping is a technique to summarize reading resources and then visualize the problems in the form of map to make it easier to comprehend [3]. This activity is used to optimize the function of the right brain and left brain. It will be very helpful to comprehend the problem quickly because it has been made in the mapping form. Mind mapping is an effective way to make a note.

Mind mapping is an important technique that improves the way we take notes, and supports and enhances our creative problem solving. By using mind maps, we can quickly identify and understand the structure of a subject and the way that pieces of information fit together, as well as recording the raw facts contained in normal notes. More than this, mind maps provide a structure which encourages creative problem solving, and they hold information in a format that our mind will find easy to remember and quick to review.

A mind mapping is a graphic thinking tool that mirrors the way the brain thinks. Mind mapping use the full range of cortical skills and can be applied to all aspects of thinking including memory, creativity, learning, and general control of the cognitive processes.

There are several steps to make mind mapping: (a) first, prepare the equipment to make mind mapping such as paper (A4/Folio/A3), pencil or pen, stabile, marker or color pen; (b) second, determine the topic, make a central image in the center of the paper, the position of the paper is landscape, draw the topic and give color to it. It can be the combination of three or four colors; (c) third, make a main branch which is the idea of the topic, make the word in the same length with the main branch, make a word per branch, write down the word with capital letters, and then give them some colors; (d) fourth, make a thin branch which is a sub-topic, add the words or pictures, add the main idea and develop it with subtopics. All the subtopics are placed in every branch separately; and (5) fifth, continue it with other ideas by making a new branch [3]. How to make mind mapping in eight steps: start with the topic in the middle of a paper; use keywords; make the branch from the main topic; use symbols, colors, words, or pictures mainly in the mind mapping; make it as interesting as possible; make it full of colors; repeat again two or three times to make it perfect; and do it by yourself [4]. Another expert devided mind mapping to be eleven steps: make a circle of mind idea in the middle of paper; make a branch from the main idea to make key points, do not forget to use a color pen to make it; write keywords or phrase in every branch and then develop them with details; give additional symbols and illustrations; do not forget to use capital letters; write down the main ideas with the bigger letter; be creative and express it freely; use the unique form to show the points or ideas; an do not forget to make it horizontally to make a wider space.

There are several benefits of using mind mapping: mind mapping is easy way to understand the content of reading materials;

mind mapping is a way to improve our concentration and our mind; mind mapping is very appropriate to recall the information which have been learned before; using mind mapping, we can summarize reading materials on one page; and mind mapping helps us to remember the information in reading materials [3]. The others benefits of using mind mapping: it is very flexible to add new information; it can make us focus on the content of reading material; it can improve reading comprehension; and it is very fun because it can make us more creative.

2. Research Method

Action research designs are systematic procedures done by teachers (or other individuals in an educational setting) to gather information about, and subsequently improve, the ways their particular educational setting operates, their teaching, and their student learning.

The steps of action research are the first is Reconnaissance: Reconnaissance also has the same meaning as defining the issue in the form of observation. There will be a whole discussion about the action research plan, the problems, what the researcher and collaborator should do during the action research, etc. the second is Planning: The research will be planned in details especially about the actions of the first cycles. It depends on the result of observation and discussion before about urgent problem that should be solved in the English teaching and learning process. The third is Actions and observation: It is about the implementation of the method or technique that has been decided in the planning of the research and after doing actions, there will be observation of the activities to know the improvement of problem solving. The fourth is Reflection: There is reflection of first cycle and about the problems during the method implementation. Then, it becomes reference to make the method implementation better in the next cycle.

3. Discussion

The processes of Cycle I are:

a. Planning

First meeting:

1) The researcher and English teacher planned to give the students a pre-test to know their basic skill in reading comprehension.
2) The researcher and English teacher asked the students to bring color pencils for the next meeting.

Second meeting:

1) The researcher and English teacher planned to deliver an example of mind mapping and teach students in general how to make it generally.
2) The researcher and English teacher planned to teach students how to make a mind map based on the reading text.
3) The researcher and English teacher planned to ask the students to make simple a mind map as an early practice.
4) The researcher and English teacher planned give a task to the students to make a mind mapping based on the reading text entitled "**Computers in everyday life**" and answer some questions based on the text.
5) The researcher and English teacher planned to discuss the answer of the questions.
6) The researcher planned to give reward in the form of additional score for the students who were participated actively in the teaching and learning process.
7) The researcher prepared observation sheets and field notes to observe and record the teaching learning process.

Third meeting:

1) The researcher and English teacher planned to return back on how to make mind map to make the students were familiar with it.
2) The researcher and English teacher planned to see whether the students understood how to make mind map well or not.
3) The researcher and English teacher planned give a task to the students to make a mind map based on the reading text and answer some questions based on the text entitled "**Computer Applications**" including questions.
4) The researcher and English teacher discussed the answers of the questions with the students.
5) The researcher planned to give reward in the form of additional score for the

students who were participated actively in the teaching and learning process.

6) The researcher prepared observation sheets and field notes to observe and record the teaching learning process.

b. Actions and observation

There were three meetings in Cycle I on October 4, 11, and 18, 2014. The first meeting was for a pre-test and the two meetings after the pre-test were the actions. In the pre-test, students had to do 25 questions of reading comprehension for 40 minutes. At the end of the pre-test, the researcher asked the students to bring color pens for the next meeting.

The second meeting was conducted by the English teacher and the researcher was the observer and made field notes. The researcher gave the example of mind mapping to the students. They were surprised because they did not know mind mapping before. The teacher gave the handouts about how to make mind mapping. Then, he explained to the students about mind mapping. The students paid attention to him. After that, the teacher asked the students to learn the example of mind mapping and they could give questions to the teacher if they did not understand. Many students asked the teacher to give more explanation about making mind mapping. Then, teacher explained more about it. Some students understood the teachers' explanation but some others seemed confused.

To know more about mind mapping, the teacher gave the students example of mind mapping of how to make mind map. The students learned how to make a mind mapping based on the reading text seriously. They were interested in making a mind map because it was a new thing for them. There were no students that were sleepy in the classroom. Then, they made it in the paper provided. The teacher asked the students to make mind map based on the reading text entitled "**Computers in everyday life**". The reading text also had some questions to be answered. The students and the teacher discussed the answers together. The teacher gave reward in the form of additional score for the students were participated actively in the teaching and learning process.

In the third meeting, the teacher asked the students whether they still remembered how to make a mind map or not. The students said that they still remembered it. After that the teacher gave them a task in the form of reading text entitled "**Computer Applications**". The teacher asked the students to do the task. Some students felt happy with the task but some others were not because there were some words whose meanings they did not understand. The teacher helped them to tell them the meaning of those words. The students made a mind map and then answered the questions based on the text. After that they discussed the answers together. The teacher gave reward in the form of additional score for the students who were participated actively in the teaching and learning process.

There were some students who still made mistakes in answering the questions. They were still confused with how to make a mind map based on the text. At the end of the meeting, the teacher summarized the material and asked them to bring dictionaries for the next meeting.

c. Reflections

Based on the observation done in Cycle I, the teacher did not get the difficulties to transfer the material about mind mapping. In the first meeting, students did the pre-test. In the second meeting, the students were enthusiastic to know about mind mapping but they still looked confused when making a mind map using symbols, images, lines and colors. It was the first time to make a mind map for them.

R: *(What do you think about making a mind map?)*

S1: *(I'm still confused to make it.)*

Interview 1

In the terms of making a mind map based on the reading text, most of the students got difficulties in getting the keywords of the text.

R: *(What do you think about making a mind map based on the reading text?)*

S2: *(It's difficult. I have difficulties in looking for the keyword)*

R: *(Why?)*

S2: *(I don't understand the meanings of some words).*

R: *(OK, it will be better if you bring a dictionary for the next meeting)*

Interview 2

In the third meeting, the students were familiar with mind mapping. Some students said they were very happy to make a mind map because it was very interesting.

R: *(What is your opinion of making mind map. Puput?)*
S3: (*I'm happy, Miss because I can use images and colors so it doesn't make me bored)*
Interview 3
R: *(What is your feeling about making mind map?)*
S4: *(I'm very happy because it is very interesting for me)*
R: *(What else?)*
S4: *(It makes me easier to comprehend the reading text)*
Interview 4
There were many students who made mistakes in answering the questions based on the text. Some students did not understand yet how to make a mind map and used it to answer the questions. During the process of making mind mapping, some students often asked the meanings of some vocabularies in the text. The students got difficulties in translating English words because they rarely used them. In addition, many students did not bring their dictionaries and rarely used them to deal with difficulty vocabularies. Hence, the researcher asked every student to bring a dictionary in the next meeting.

d. Summary I

Based on the reflection above, there were some actions that were successful but some others were unsuccessful. The researcher described the successful and unsuccessful actions as follows:

1) The successful actions
   a) The students looked enthusiastic to make a mind map to comprehend the reading text.
   b) The students were not sleepy in the classroom.
   c) The students actively participated in the teaching learning process.
2) The unsuccessful actions
   a) Some students were still confused in making mind mapping.
   b) Some students got difficulties in understanding the meaning of words in the reading text.
   c) Some students got difficulties in answering the questions based on the text.

The processes of Cycle II are

a. Planning

First meeting:

1) The researcher and English teacher planned to review the material about how to make a mind map based on the reading text.
2) The researcher and English teacher planned give a task to the students to make a mind map based on the reading text and answer some questions based on the text.
3) The researcher and the English teacher planned to ask the students to open their dictionaries when they found any difficult word.
4) The researcher and the English teacher planned to ask the students to make a group of two to do the task, so that they could share their knowledge in making mind mapping for answering the questions based on the text entitled "**Operating System**".
5) The researcher and English teacher planned to ask some students to come in front of class to show and compared their mind maps to the others students.
6) The researcher and the English teacher planned to discuss the answers of the questions.
7) The researcher planned to give reward in the form of additional score for the students who were participated actively in the teaching and learning process.
8) The researcher planned to prepared observation sheets and field notes to observe and record the teaching learning process.

Second meeting:

1) The researcher and English teacher planned to return to how to make a mind map. It could make the students understand how to make mind map well to answer questions based on the text.
2) The researcher and English teacher planned give a task to the students to make a mind map based on the reading text and answer some questions based on the text.
3) The researcher and the English teacher planned to ask the students to make a group of two to do the task, so that they could share their knowledge in mind mapping for answering the questions based on the text.

4) The researcher and English teacher planned to discuss the answers of the questions with the students.
5) The researcher and the English teacher planned to ask the students to make a group of two to do the task, so that they could share their knowledge in mind mapping for answering the questions based on the text entitled "**Application Programs**".
6) The teacher planned to give reward in the form of additional score for the students who were participated actively in the teaching and learning process.
7) The researcher prepared observation sheets and field notes to observe and record the teaching learning process.

Third meeting:

The third meeting of Cycle II was used for post-test. Post-test was one of the instruments to know whether the students' reading comprehension improved or not.

b. Actions and observations

There were three meetings in Cycle II on November 15, 22, and 29, 2014. The first two meetings were for the actions and the last was for the post-test. In the first meeting, the teacher reviewed the material about how to make a mind map based on the reading text. The students paid attention to the teacher because some of them were still confused in making mind mapping. After that, the teacher gave a task to the students to make a mind mapping based on the reading text and answer some questions based on the text. The text was entitled "**Operating System**". The teacher asked the students to open their dictionaries when they found any difficult word. In doing the task, the teacher asked the students to make a group of two, so that they could share their knowledge about mind mapping for answering the questions based on the text. After the students had finished doing their task, the teacher asked some students to come in front of class to show and compared their mind maps to the other students. The students discussed their mind maps to know whether the mind map was correct or not. After that, the teacher discussed the answers of the questions. The students participated actively in answering the questions. The teacher gave reward in the form of additional score for the students who were participated actively in the teaching and learning process.

In the second meeting, the teacher returned to the discussion on how to make mind map. It could make the students understand making mind map well to answer the questions based on the text. The teacher gave a task to the students to make a mind map based on the reading text and answer some questions based on the text. The text was entitled "**Application Programs**". The English teacher asked the students to make a group of two to do the task like that in the previous meeting. This activity helped students to make cooperation and share their knowledge. Because of this activity the students who could make the mind map well would share their knowledge to the other students who still confused in making a mind map. The last activity was the discussion of the answer of the questions with the students. The students could answer the questions well. Almost all of them answered the question correctly. The teacher gave reward in the form of additional score for the students who were participated actively in the teaching and learning process.

The third meeting of Cycle II was post-test. Post-test was one of the instruments to reveal whether the students' reading comprehension improved or not. The students did the post-test seriously.

c. Reflections

In Cycle II, the students were more interested in making mind map. They made the mind map seriously. The teacher asked them to bring dictionaries in the previous meeting so that they were ready with dictionaries on their tables. They could open the dictionary to look for the meanings of difficult words.

Interview 1

R: *(What do you think about the mind mapping technique?)*
S5: *(Good, I like it)*
R: *(What else?)*
S5: *(It is interesting because I can draw some pictures.)*
R: *(What about difficult words on the text?)*
S5: *(I bring the dictionary so that I can open it to know the meaning of difficult words on the text)*

Interview 2

The students were very happy in the reading comprehension activity because they enjoyed the teaching learning process. The group of two made the students make mind

map more easily because they could share knowledge.
R: *(What do you get from the teaching and learning process today?)*
S6: *(I get new experience because I have never made mind map before.)*
R: *(Is there any difference before and after doing this activity?)*
S6: *(It makes me confident to answer the questions related to the reading text)*

Interview 3

Most of the students could answer the questions correctly. Mind map could make them easier to comprehend other reading texts.
R: *(Did you get difficulties in answering the questions?)*
S7: *(It's not difficult because I knew the way to make a mind map.)*
R:*(Could you answer all the questions correctly?)*
S7: *(There was a mistake in my answers).*

Interview 4

There was an improvement of the teaching learning process. The students enjoyed the activity, so that they could pay attention to the lesson seriously without feeling sleepy. The use of mind mapping gave good impacts to the teaching learning process.

4. Conclusion

In fact, by the end of action research, some students still have difficulties in making mind mapping. Nevertheless, presented with instructional media, the students became more active and enthusiastic in learning English. They actively got involved in the process of teaching and learning. By applying mind mapping in the reading comprehension task, the students could enjoy the teaching and learning process. In addition, most students seemed to be enthusiastically and happily involved in the activities. In the term of quantitative data, the improvement of students' writing ability is supported by students' pre-test and post-test scores. The results of this research show that the mean score of post-test was higher than the mean score of the pre-test.

By being involved in the research directly, the English teacher got more knowledge about teaching English in the classroom especially how to improve students' reading comprehension through mind mapping. Furthermore, the English teacher got improvement in his knowledge about the reading technique. He hoped that what he got from the research could be implemented in her teaching and learning process in the future.

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