

CONCEPT MAPPING TO IMPROVE THE READING ABILITY OF THE SECOND SEMESTER STUDENTS OF ENGLISH DEPARTMENT

By
CANDRA JAYA
candrajaya_72@yahoo.co.id

ABSTRACT: The objective of the study was to develop the concept mapping strategy to improve the students' reading ability at the second semester university students. The researcher employed classroom action research which was conducted within two Cycles in which each Cycle comprised planning, implementing, observing, and reflecting. Four instruments consisting of observation sheet, field notes, interview, and test were used to collect the data in Cycle 1. Five instruments consisting of observation sheet, field notes, interview, test, and questionnaire were used to collect the data in Cycle 2.

The findings of the students' academic atmosphere from observation and field note described the students' learning interaction. Interview in Cycle I and 2 revealed the students felt comfortable, happy, and enjoyed learning reading using concept mapping because concept mapping was helpful. Questionnaire indicated 47% of the students' responses were "*strongly agree*" and 53% of their responses were "*agree*" for the benefit of concept mapping implementation. The finding of the students' reading achievement showed that out of 25 students, 19 students got the scores above 60 in Cycle 1; meanwhile, all students got the scores above 60 in Cycle 2.

Key words: concept mapping, reading ability.

I. INTRODUCTION

Reading covers the process of identifying words from the visible letters and identifying words that have different meanings in different sentences (Street, 1993 in Hudson 2007:7). Moreover, Grabe and Stoller (2002:13) propose that reading is an activity which involves the reader to search for information in the text through scanning for getting specific information and skimming for grasping general understanding from the text.

The objective of English instruction in the school system in Indonesia is to develop Indonesian students' reading skill related to English scientific text. Furthermore, the aim of teaching reading in university is to develop the students' reading proficiency

in English (Renandya, 2004 in Cahyono & Widiati, 2006:47-48).

Kweldju (in Cahyono & Widiati, 2006:50) found two reasons of the students do not have interest in reading English textbooks including (1) their limited background knowledge and (2) their incapability of understanding the content of the text and complicated organizational structure of the text.

Reading is one of the compulsory course programs in English Department at university students. The researcher found the second semester students have three problems in learning reading: (1) the students have little interest in reading text, (2) the students cannot determine the main topic and the supporting details from the reading text, (3) the students still find

it hard to grasp the outline of the information from the reading text.

To solve the students' problems in learning English, the researcher implemented Concept Mapping strategy in teaching reading. Four experts propose the ideas of concept mapping: (1) Sinatra et al. (1987:4) state concept mapping covers a graphic arrangement describing how the written works are linked with the major and minor ideas. (2) Goldsmith et al. (in Munthe, 2009:18) state concept mapping refers to the structural knowledge which involves the learner to be able to understand interrelationship of the main concepts (3) Amusable (in Munthe, 2009:17) states concept mapping is the meaningful learning which occurs when the new concept is inserted into more inclusive concept. (4) Munthe (2009:19) proposes four characteristics of concept mapping design, namely; (a) concept mapping consists of major concept placed on the top and specific concept placed beneath the general concept; (b) concept mapping is presented by using arrows to

show its relationship; (c) concept mapping can represent the description of the learners' understanding to the topic; (d) concept mapping derives from interconnection between the concepts.

Sinatra et al. (1986:5-6) propose four mapping formats that outline the pattern for written discourse in concept mapping including (1) narrative mapping format; (2) descriptive mapping format; (3) comparative and contrast mapping format; (4) classification mapping format. The classification mapping format is used in this study because the reading curriculum of the second semester deals with classification text pattern.

Classification mapping is the kind of mapping format which is suited for development with expository discourse. This configuration shows the relationships among concepts by displaying how class or examples are related. The major concept would be the main topic (Pearson and Johnson in Sinatra et al., 1986:6). The mapping format for classification is presented in Figure 1.1.

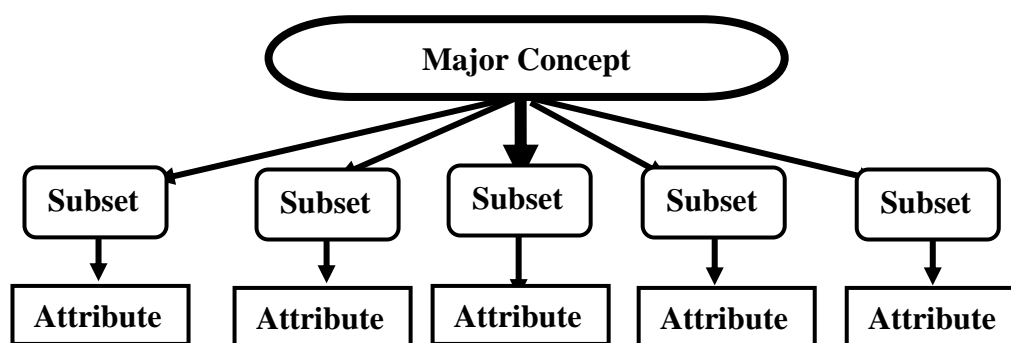


Figure 1.1. Skeleton of Classification Mapping Format (adopted from Sinatra et al, 1986: in Journal of Reading. 30 (1) 7)

Three elements in the figure that outline the mapping format are (1) major concept node as the topic of the text. (2) Subsets which link their relationships to

the topic. (3) Attributes which explain the specific type of each subset.

McWhorter (1986:103) states classification text is a common way to explain something by dividing the topic

into parts and explaining each part as well. Classification in textbook is used to explain a topic that will be grouped into several parts. Meanwhile, Jordan (1982:42) defines that classification text is the classification of something into group in accord with a criterion or several criteria.

Three reasons of using classification text in this study are (1) classification text is one of the reading

materials in the second semester program. (2) Classification text is used to classify the topic into two parts: one main part and several supporting parts (McWhorter 1986:103 & Jordan, 1982:42). (3) Classification text is based on the mapping design from Pearson and Johnson (in Sinatra et al., 1986:6). The example of classification text in classification format in concept mapping is presented in the following example.

Horticulture, the study and cultivation of garden plants, is a large industry. Recently it has become a popular area of study. The horticulture field consists of four major divisions. First, there is pomology, the science and practice of growing and handling fruit trees. Then, there is floriculture, which concerned with growing and storing vegetables. A third field, floriculture, is the science of growing, storing, and designing flowering plants. The last category, ornamental and landscape horticulture, is concerned with using grasses, plants, and shrubs in landscaping.

(Adopted from Guide to College Reading, McWhorter, 1986:103)

The paragraph above has one topic and four supporting details. The mapping

format of classification text above can be presented in Figure 1.2.

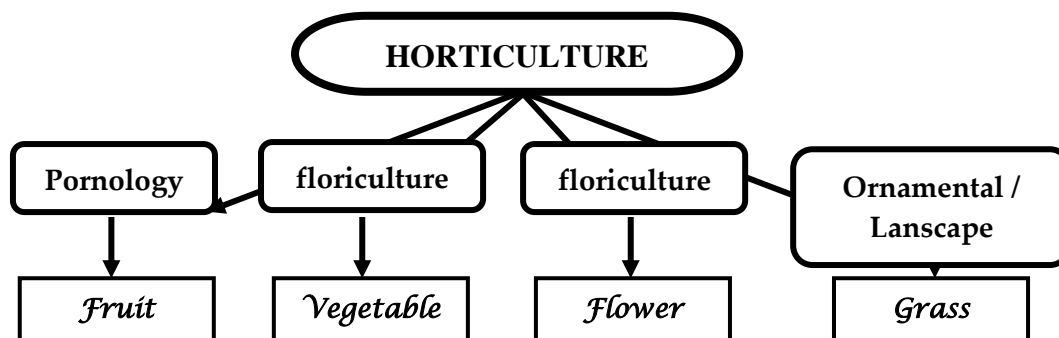


Figure 1.2. The Concept Mapping Strategy in Classification Text Pattern

Figure above comprises three elements covering the first node explains “horticulture”. The second nodes provide facts or examples to support the first node. The third nodes explain each subset such as *fruit*, *vegetable*, *follower*, and *grass*.

Four findings of concept mapping related to writing skill are (1) Amal

(2004) investigated the implementation of concept mapping in teaching paragraph writing could improve the students’ descriptive writing ability. (2) Wilujeng (2005) found concept mapping could improve the students’ writing ability, prevent from procrastinating, improve developmental essay, and aid the students

to outline a writing article. (3) Maloho (2008) showed that the implementation of concept mapping had improved the eighth grade students' writing at MTs PKB Manado. (4) Sriemulyaningsih (2010) found the implementation of graphic organizer had shown that most students enjoyed using this technique and they also felt much more relieved to produce piece of writing.

Two findings of concept mapping related to reading skill are (1) Sinatra et.al. (1986:10-12) found the implementation of the four mapping concept mapping format could improve the students' reading comprehension freshmen at St. John's University, Jamaica, New York. (2) Kusen (in Cahyono & Mukminatien, 2011:87) found the uses of graphic organizer are: (a) it could improve the students' reading comprehension in terms of paraphrasing, main idea, and inference and (b) It could raise students' participation in the class.

Two reasons of applying concept mapping at the second semester students are (1) the researcher teaches English subject in this institution. (2) The researcher found that most of the second semester students still had some problems in learning reading, namely; (a) the students have little interest in reading text; therefore, they have difficulties in comprehending the text; (b) the students cannot determine the topic and the supporting detail from the reading text; therefore, they still follow reading class through translation method; and (c) the students still found it hard to grasp the outline of the information from the reading text; therefore, they think mapping format is helpful in learning reading. Thus, because of the problems, most students' reading achievements are under the minimum passing criteria.

Based on the classroom problems and the data from preliminary study, the

researcher believes the implementation of concept mapping related to classification mapping format is one of the best learning strategies that can be used to improve students' reading ability because this learning strategy provides a guidance of mapping information which contains classification major node, subset node, and attribute nodes.

Three reasons of the implementation of classification mapping format in teaching reading are (1) classification mapping format enables the students to conceptualize the construction of mapping model. (2) Classification mapping format enables the students to think through the content and arrange the content conceptually in nodes and linking relationship to help the students' reading comprehension process. (3) Classification mapping format helps the students develop organizational development by arranging nodes which contain information (Sinatra, 1986:12).

The objective of the study is to develop concept mapping strategy to improve the reading ability of the second semester students of English department of University students.

The results of this study are expected, theoretically, to provide meaningful contribution to the development of the theory of concept mapping for classification mapping format related to teaching reading by modifying it with the pattern of classification text which is proposed by McWhorter (1986:103). Practically, this study provides meaningful contribution to English teachers for the improvement of the teaching reading using concept mapping for classification mapping format as teaching strategy. This study is also expected to be one of the references for

other English researcher who wishes to conduct similar study in the future.

II. METHOD

Two concepts of classroom action research include (1) Kemmis and Mc Taggart (1982:22) state action research refers to the development of the *self-reflective spiral*, which covers four stages: planning, acting or implementing plan, systematic observing, and reflecting. Action research is stated by collecting some initial data in the area of general interest (as reconnaissance) and some events within the practice of action research process. (2) Latief (2010:81-82) states two views concerning with the position of the researcher in classroom action research covering (1) researcher as a teacher is to increase the quality of teaching and (2) teacher as a researcher is to develop innovative learning strategy.

Four main steps of Classroom Action Research proposed by Latief (2010:81-82) are (1) planning refers to classroom learning strategy or learning scenario. (2) Acting refers to implementation of the learning scenario to solve classroom problem. (3) Observing refers to data collection to see how well this learning strategy has solved the problem. (4) Reflecting to the data analysis by comparing the criteria of success to determine whether there is next cycle.

Three considerations of choosing the second semester students university students to become research setting and subjects are first, the researcher is one the English teachers in the institution. Second, the researcher found most students had some problems of learning reading, namely; (1) the students had little interest in learning reading, (2) the students could not determine the main topic and

supporting details, and (3) the students found it hard to grasp the outline of information from a text. (3) Third, based the preliminary study, the second semester students had low ability in reading and the results of questionnaire and interview indicated three difficulties in learning reading are (1) comprehending the text, (2) following teaching and learning activity with translation method, and (3) using mapping information for learning reading.

The procedure of the research comprises four steps, namely; (1) preliminary study, (2) planning, (3) implementing, (3) observing, and (4) reflecting.

Preliminary study consisted of three activities, namely; (1) administering preliminary test to students, (2) distributing questionnaires to the students, and (3) conducting interview to the students.

The result of the preliminary test showed 1 student got score 25, 4 students got scores 30, 9 students got scores 35, 7 students got scores 40, 1 student got score 50, and 3 students got scores 60. The result of interview and questionnaire showed three difficulties in learning reading are (1) comprehending text, (2) following reading class through translation method, (3) giving opinion about concept mapping.

Planning covers two preparations including (1) learning strategy that is going to be developed, observed, evaluated, and revised. (2) Supported preparations that include learning scenario, learning media, instrument, and criteria of success (Latief, 2009:19).

Concept mapping strategy is developed in five Meetings of two Cycles covering three Meetings of the first Cycle and two Meetings of the second Cycle. In

planning stage, the teacher prepares learning scenario, learning materials to select the reading text, and design of the concept mapping diagram.

Implementing describes learning activities based on the learning scenario that has been designed in planning stage. Implementing was conducted in two Cycles covering three meetings in Cycle 1, that is, May 25th, June 1st, and June 8th and two meetings in Cycle 2, that is, June 15th and June 22nd.

Observing is to record the effect of the learning strategy that has been implemented based on the learning scenario. Latief (2010:87) states that the purpose of collecting data is to know how well the learning strategy that has been implemented is able to solve the problem.

Two kinds of information from observation are (1) numerical information that covers the students' reading test and questionnaire to students. (2) Verbal information that covers observation, interview, and field note.

Two criteria of success that are suggested by Latief (2010:88) include (1) students' achievement, that is, if the students' individual score is equal or above the minimum passing criteria, that is, 60. (2) Academic atmosphere, that is, if the students are motivated and joyful in the learning interaction.

Reflection is to analyze data to determine how far the data collected have shown the success of the strategy in solving the classroom problem by comparing the data with the criteria of success (Latief 2010:87). The data consist of the results of students' reading test, observation, questionnaire, interview, and field note. When the results of data achieved the expected target, the learning strategy has proved to solve the learning

problem. But when the data have not successfully achieved the expected target, the learning strategy will be revised for the next Cycle.

III. RESEARCH FINDINGS

The findings of the study are taken from the result of observation, field notes, interview, questionnaire, and students' reading test in Cycle 1 and Cycle 2.

3.1 Findings of Cycle 1

The findings of Cycle 1 are based on the qualitative data that reflect the students' academic atmosphere in the implementation of concept mapping strategy taken from observation, field note, and interview. Quantitative data show the students' learning achievement that is taken from the reading test.

3.1.1 Findings on the Students' Academic Atmosphere

The finding of the observation describes the learning reading interaction among the students to discuss important information to determine topic and supporting details and the students' learning reading interaction with their teacher to confirm their works with their teacher.

The finding of the field note describes the learning reading interactions between the students and the students to use the key word to complete the diagram of concept mapping and to share their ideas for determining important information from the given text.

The finding of interview to students in meeting 2 covers (1) the students' progress in learning reading

reveals that concept mapping is a quick concept to get topic, main idea, and supporting details. (2) The students' feeling after learning reading reveals that the students enjoy learning reading using concept mapping strategy.

The finding of interview to students in meeting 3 covers (1) the students' progress in learning reading reveals that students feel easy to use concept mapping in understanding a text. (2) The students' feeling after learning reading reveals that the students feel comfortable and happy in learning reading using concept mapping.

3.1.2 Findings on the Students' Academic Atmosphere

The result of the students' reading test shows that 6 students got the scores 57, 10 students got scores 60, and 9 students got scores above 65. It means there are six students who still get the scores below 60.

The finding of Cycle 1 shows concept mapping in learning reading can create joyful classroom atmosphere. The implementation of concept mapping strategy in Cycle 1 can achieve one of the criteria of success. The following Cycle was still needed by revising the learning strategy.

3.2 Revision of the Learning Strategy

Two revisions of the learning strategy cover (1) learning scenario; in Cycle 1, the hand-outs of concept mapping were distributed to the students after they did the test. Meanwhile, in Cycle 2, the hand-outs of concept mapping were distributed to the students before they did the test. (2) Learning

materials; in Cycle 1, the reading materials did not specifically train the students to find main idea and supporting details; meanwhile, in Cycle 2, the reading materials were focused on certain information.

3.3 Findings of Cycle 2

The findings of Cycle 2 comprise qualitative data that reflect the students' academic atmosphere in the implementation of concept mapping strategy taken from observation, field note, and interview. Quantitative data show the students' reading achievement taken from the reading test and questionnaire.

3.3.1 Findings on the Students' Academic Atmosphere

The finding of the observation describes the learning reading interaction among the students to discuss reading material and the students' learning reading interaction with their teacher to consult their works with their teacher.

The finding of the field notes describes the learning interaction among the students to share their ideas about the text. The students' learning interaction with the text which makes the students has full concentration on reading activity.

The finding of the interview to students comprises (1) students' motivation in learning reading reveals that the students feel happy and comfortable in learning reading process because concept mapping is effective solution in learning reading. (2) The students' opinion about concept mapping implementation in learning reading reveals that concept

mapping helps the students get outline of the information. (3) The students' perspective for the concept mapping implementation in learning reading reveals that concept mapping makes it easy for the students to comprehend a text.

“*strongly agree*” and 53% of the students gave response “*agree*” for benefit of the implementation of concept mapping strategy in learning reading. The result of the questionnaire is presented in the following Figure 31.

The finding of the questionnaire shows 47% of the students gave response

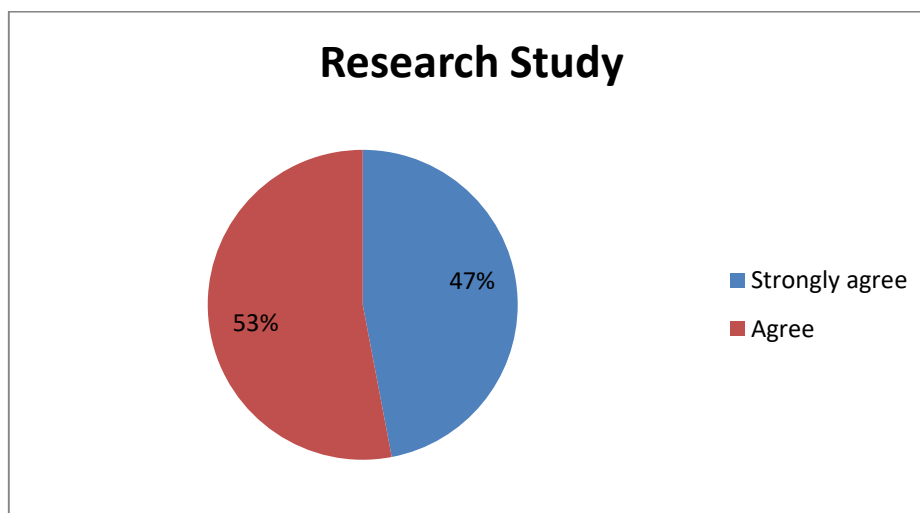


Figure 3.1. The Result of the Questionnaire in Research Study

3.3.2 Findings on the Students' Reading Achievement

The result of the students' reading test in Cycle 2 shows that 14 students got the score 66, 7 students got scores 74, and 4 students got scores 83. It means that all students get scores above 60.

The finding on the students' academic atmosphere from observation, field notes, the interviews, the questionnaires, and reading test can enhance the students' motivation and improve the students learning achievement in learning reading. In short, the implementation of concept mapping strategy can create joyful

classroom atmosphere that can enhance the students' motivation in learning reading and can improve the students' reading achievement. Cycle 2 of the classroom action research was stopped because the implementation of concept mapping strategy had achieved the two criteria of success set up.

IV DISCUSSION

Discussion deals with why the implementation of concept mapping strategy can create joyful learning atmosphere and improve the students' learning reading achievement.

4.1 Students' Academic Atmosphere

The findings of the observation that describe the students' learning interaction among them to discuss important information and the students' learning interaction to consult their works with their teacher are supported by the study by Kusen (in Cahyono & Mukminatien, 2011:87) who investigated that concept mapping implementation to raise the students' participation in learning reading.

The findings of the field notes that describe the students' interaction with their friends to share their ideas to use key-words to find the important information that happens when the students were given the hand-outs of the diagram of concept mapping. These findings are supported by the study by Sinatra et al. (1987:4) who state nodes support the findings or boxes lead the maps that draw like cycle, rectangles, or squares containing the key words or phrase.

The findings of the interviews to students in each Cycle reveal that the students feel comfortable and motivated in learning reading, concept mapping is a quick and an easy, and concept mapping is a suitable concept in learning reading for the future. The findings are affirmed by the study by Sinatra et al. (1987:4) who state concept mapping is semantic visualization, which covers graphic arrangement describing how the written works are linked with the major and the minor ideas.

The findings of the questionnaires show concept mapping can help the students find important information from the text and enhance the students' motivation to learn reading that are supported by the study by Munthe (2009:19) and Sriemulyaningsih (2010).

Munthe (2009:19) states concept mapping consists of major concept on the top and specific concept beneath the general concept that are presented by using arrows to show its relationship. Sriemulyaningsih (2010) found that concept mapping enabled the students to feel the joy of learning.

4.2 Students' Reading Achievement

The results of the students' reading achievement in the second Cycle showed 4 students got score 83, 7 students got score 74, and 14 students got score 66. The students' reading improvements are supported by the study by Kusen (2011:87) and Sinatra et al. (1986:10-12). Kusen (2011:87) found that concept mapping could improve the students' reading comprehension in terms of finding main idea, paraphrasing, and inference. Sinatra et al. (1986:10-12) investigated concept mapping to improve the students' reading comprehension because the concept mapping enabled the students to synthesize experiential information and reconstructed the nodes by filling the information with their own ideas based on the text.

The implementation of concept mapping strategy in learning reading in this present study can create joyful learning atmosphere and improve the students' learning achievement because (1) the students feel comfortable to join learning reading using concept mapping, (2) the students have good learning reading interaction among them and with their teacher (3) concept mapping provides guidance for students to understand the text in learning reading,

(4) concept mapping provides outline of information. (5) concept mapping strategy can create students' enjoyment, easiness, good interaction, and provide simple outline of information that can help the students' reading achievement improve well.

V. CONCLUSIONS AND SUGGESTIONS

Conclusions are to answer how the concept mapping strategy can improve the students' reading ability of the second semester students of university students.

5.1 Conclusions

The concept mapping strategy can improve the students' reading achievement that uses learning reading procedures covering three steps of learning activities: (1) pre-teaching reading activity, (2) whilst-teaching reading activity, and (3) post-teaching reading activity.

Pre-teaching reading activity consists of two learning scenarios covering concept mapping modeling and pre-teaching reading activity. Concept mapping modeling is to display the reading text and the diagram by using screen to explain the students how to implement concept mapping strategy in learning reading. Pre-teaching reading activity is to guess which information from the reading text refers to major classification, subsets, and attributes from the diagram of concept mapping.

Whilst-teaching reading activity is to determine the important information, display the students' works by using screen, and discuss the text and the diagram with the class. Post-teaching

reading activity is to sum up the important information from the reading text that represents to the three elements of concept mapping diagram.

5.2 Suggestions

Suggestions for the English teachers are firstly, it is suggested to use concept mapping as an alternative learning strategy. Secondly, it is suggested to use this learning strategy by some considerations (1) the type of the text should be classification text pattern, (2) the outline of concept mapping diagram should be correctly and clearly arranged, and (3) the given text should train the students' skill of finding topics, main ideas, and supporting details.

Suggestion for other English researchers to conduct a research about teaching reading with different models of concept mapping formats such as, narrative, descriptive, and comparative and contrast format or other English skills such as, writing, speaking, and listening.

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