Peta Konsep Mahasiswa dalam Penelitian Sastra: Studi Kasus Tahun Kademik 2013 dan 2014

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ABSTRAK

Penelitian pada tugas akhir atau skripsi yang dilakukan oleh mahasiswa jurusan Pendidikan Bahasa Inggris Universitas Sarjanawiyata Tamansiswa menunjukkan bahwa beberapa mahasiswa telah menggunakan peta konsep, dan beberapa tidak menggunakan peta konsep. Oleh karena itu, penelitian tentang penggunaan peta konsep oleh mahasiswa ini menarik untuk dilakukan. Penelitian ini memiliki batasan yaitu hanya pada kripsi yang menggunakan peta konsep. Penelitian ini bertujuan untuk mengungkapkan bagaimana mahasiswa mengembangkan peta konsep yang di buatnya. Metode penelitian yang digunakan adalah gabungan antara penelitian kuantitatif dan kualitatif. Objek dari penelitian ini yaitu skripsi bidang sastra pada tahun akademik 2013/2014. Tehnik kuantitatif digunakan untuk mengkasifikasikan objek penelitian yang digunakan yaitu penelitian bidang sastra. Sedangkan tehnik kualitatif digunakan untuk menganalisis dan menjelaskan penemuan. Hasil penelitian menunjukkan bahwa 16,39% dari 137 mahasiswa, menulis skripsi bidang sastra, dan 91,30% dari mahasiswa yg menulis bidang sastra menggunakan peta konsep. Peta konsep dapat diklasifikasikan menjadi dua jenis yaitu komprehensif dan parsial.
Kata kunci: mahasiswa, peta konsep, skripsi, sastra.

ABSTRACT

A preliminary observation on the students' term papers of the English language education department of Sarjanawiyata Tamansiswa University showed that, in terms of using of concept maps, some were completed with ones and the others were not. Therefore, it was interesting to do a research on this issue. However, due to time limitation, this study focused on the term papers with concept maps and the objective of the research was to find out how students developed their concept maps. The research method was a mixed-method between quantitative and qualitative techniques. The objects of the research were the term papers on literature accomplished during the academic year 2013/2014. The quantitative technique was applied in classifying the objects according to the proportion of interest, while the qualitative technique was used to analyze the findings descriptively. The results of the research showed that 16.39% of 137 students writing term papers during the academic year analyzed literary works 91.30% of which used concept maps. The concept maps could be classified into two groups: comprehensive and partial.
Keywords: students, concept maps, term papers, literature

INTRODUCTION

A few years of careful observation to the English language education department students' writing term papers on literature and of chairing term paper on linguistics and teaching examinations have provided a fact that some students put concept maps in their term papers, but the others did not. It is true then to say that developing concept maps in the term papers is optional because formally there is no statement in the *Faculty's Term Paper Writing Guide* asking the students to do so. By the way, in an experimental study among mentally retarded children, Salzberg-Ludwig (2008) found out that texts with mind maps (or similar concepts) resulted in a better knowledge recollection than bare texts. Zipp & Maher (2013) found out in a research that lack of awareness was the primary cause why mind mapping was not utilized as a teaching and learning strategy. Åhlberg (1989) concluded from his research that the most important "indicators and predictors of successful learning" lied on the number of relevant concepts and propositions in the students' concept maps.

However, what the English language education department students has been doing from time to time by developing concept maps in their term papers is interesting to be further investigated in a research. The research would investigate the students' concept maps and the problems are 1) How is the students' awareness about the importance of developing concept maps in their term papers? and 2) How do the students develop the concept maps in their term papers on literature?

The objectives of the research are 1) to find out the proportion of the students' awareness about the importance of developing concept maps in their term papers, and 2) to describe how the students develop the concept maps in their term papers on literature. So far, mind maps are still confused with concept maps (Zipp & Maher, 2013, p. 22). Therefore, it is necessary to clarify the two terms, mind map and concept map, which show some similarities and differences. The similarities are 1) both terms were introduced for the first time in the 1970s, and 2) they have been initially developed in the field of psichology and, later on, in other advanced fields like computer sciences to explore how human brain can be maximally utilized.

Mind mapping was firstly introduced by Tony Buzan, "a psychologist and brain scientist" (Meier, 2007, p. 1) in the 1970s and has since then been utilized by people around the globe "for brainstorming, note taking, project planning, decision making, and document drafting" (Beel, Gipp & Stiller, 2009: 1). Mind maps can be defined as

"diagrams used to represent words, ideas, and other concepts arranged around a central word or idea" (Wheeldon, 2011, p. 510). The main function of a mind map is to demonstrate a concept in a visualized form. The physical organization of a mind map consists of "a main study topic" which is put at the center of the diagram and is connected to relevant keywords, each of which forms a branch of the concept constituting integral components (Deshatty & Mokashi, 2013, p. 100-101).

The design of mind-mapping is created to utilize to their maximum capacity both hemispheres of the human brain "to increase memory retention and productivity" (Buzan, 1976, as cited in Meier, 2007, p. 1). One of the advantages of mind mapping is "allowing a greater access to human intelligence," therefore, a lot of multinational corporations begin to apply mind map training among staff members to improve their "retention, understanding and creative use of the information" (Buzan, 1988: 2).

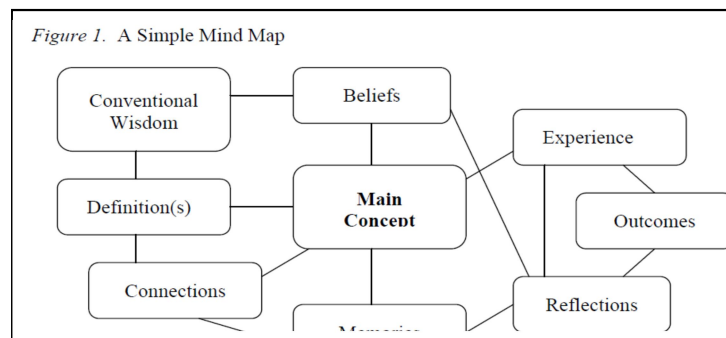Examples of mind maps are as follows.

Figure 1. A Simple Mind Map (Wheeldon, 2011, p. 511).

In a simple mind map (Figure 1), there is always a central main concept connected to all relevant ideas or aspects having something to do with the main concept. The surrounding idea(s) may develop relations to other ideas having nothing to do with the main idea. In such a mind map there is no propositions nor directions as to which the main concept is going to be followed up or elaborated. There is, too, no indications of what kind of relations exists between the main concept and its surrounding ideas.

Figure 2. A Complete Mind Map (Buzan, 1988, p. 9).
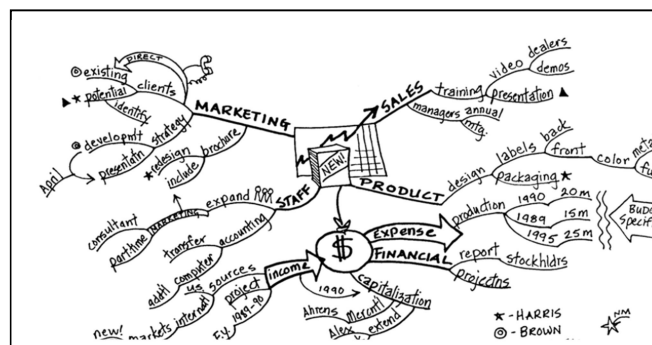
A totally different situation is found in a complete mind map (Figure 2) where arrows are used to show the directions of the conceptual flows from the main concept to its supporting ideas. Propositions are also put down there to indicate the relationships between the main concept and its derivative ideas and between ideas.

On the other hand, concept maps, "a variation on mind maps" (Novak & Govin, 1978, as cited in Meier, 2007, p. 1) were referred to by Stewart, Van Kirk & Rowell in 1978 (Wheeldon & Flaubert, 2009, p. 63) and were developed further to meet various professional needs in exploring the functions of human brain more fully, and, in 1998, after 25 years of research, were formally introduced by Novak and his colleagues (Kinchin, Streatfield & Hay, 2010, p. 53).

In general, a concept map is used to demonstrate the ways the relationships between different concepts are connected to each other under a great theme (Lanzing, 1996, as cited in Wheeldon & Flaubert, 2009, p. 69). "Concept maps are essentially graphical tools for organizing and representing knowledge" (Kinchin, Streatfield & Hay, 2010, p. 54). Such knowledge may contain several concepts that show causal and reciprocal relations. Therefore, the most important difference between mind maps and concept maps is that mind maps organize ideas around a single main concept, while concept maps organize several concepts under a bigger theme.

The most recent development of this mind mapping has resulted in Swan's "cognitive maps" which can be defined as "internally represented schemas or mental models for particular problem-solving domains that are learned and encoded as a result of an individual's interaction with their environment". This is developed over "Semantic Theory" in which "knowledge is storred in a network format where concepts are linked to each other" (Dixon, 2014, pp. 2-3).
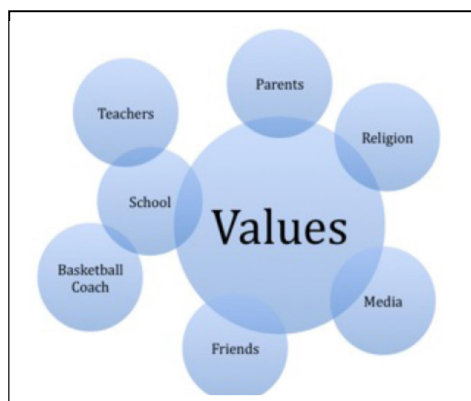
Examples of concept maps are as follows.

Figure 3. A Free-form Concept Map (Wheeldon & Flaubert, 2009, p. 70).

In a free-form concept map (Figure 3) there is the grand theme surrounded by relevant concepts. The only indication of relationship is shown in partial connections between the grand theme and its surrounding concepts. There is no proportion to show what kind of relations exists between all those concepts. However, on the other hand, a complete concept map (Figure 4) makes use of proportions and directions to show how the main concept is related to other supporting concepts. Detailed ideas of related concepts are also illustrated to help brains facilitate memory retention and recollection.
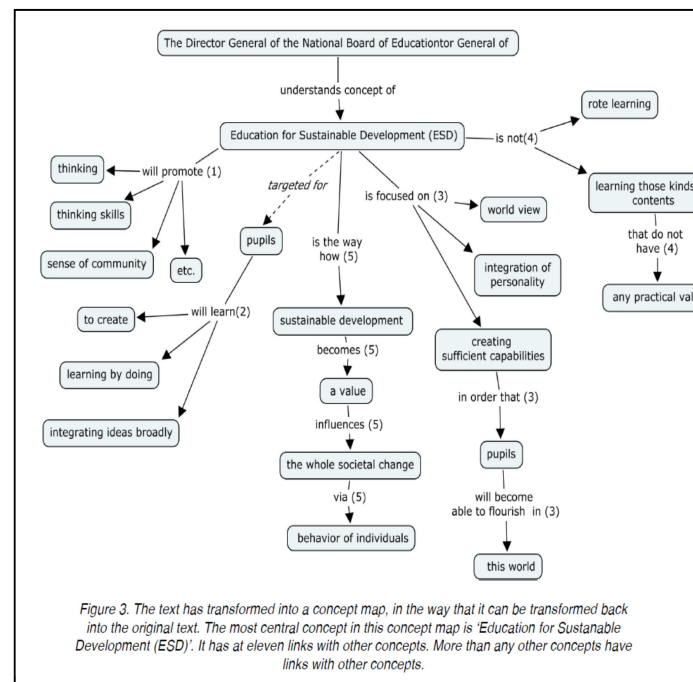

Figure 3. The text has transformed into a concept map, in the way that it can be transformed back into the original text. The most central concept in this concept map is 'Education for Sustainable Development (ESD)'. It has at eleven links with other concepts. More than any other concepts have links with other concepts.

Figure 4. A Complete Concept Map (Åhlberg, 2013, p. 32).

RESEARCH METHOD

This research applied a mixed method between quantitative and qualitative approaches of concurrent embedded type (Sugiyono, 2015, p. 538). The design of the research is illustrated as follows,
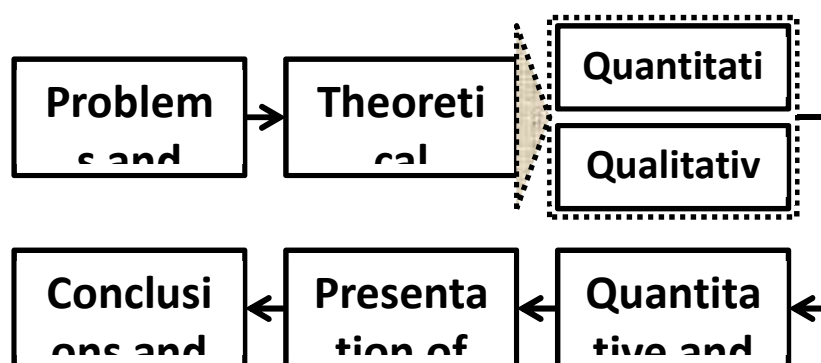

Figure 5. The Design of the Research

The research was carried out between July and October 2015. It was done at the campus of the English language education department, Faculty of Teachers Training and Education, Sarjanawiyata Tamansiswa University, Batikan street, Yogyakarta.

The research objects were the term papers on literature with concept mapping written by the students of the English language education department, Faculty of Teachers Training and Education, Sarjanawiyata Tamansiswa University, during the academic year 2013/2014. The total number of the students who accomplished their term paper writing in the academic year was one hundred and thirty three (133), but only thirty five (35) of them wrote on literature. The rest did their researches on linguistics and Engllish language teaching. Twenty one (21) of the thirty five (35) students writing on literature used concept maps in their term papers. Therefore, all the twenty one (21) term papers with concept maps were decided to be the objects of the research. The data about the term papers were taken from the administrative office of the English language education department, Faculty of Teachers Training and Education, Sarjanawiyata Tamansiswa University Yogyakarta.

As has been illustrated in the design of the research, the procedures of the research include the followings,

Step 1. Identification of existing problems and formulation of particular problem (s) to be investigated.

Step 2. Elaboration of related theories to clarify a number of terms and concepts to be used in the process of data analysis.

Step 3. The quantitative data collection was done to find out the proportion of the students writing term papers on literature with and without concept maps. Simultaneously, the qualitative data collection was carried out to find out the type of concept maps according to a certain criteria.

Step 4. The quantitative data were analyzed by using percentage, while the qualitative data were analyzed by using description.

Step 5. The presentation of research findings was done by discussing the quantitative data first and the qualitative data then.

Step 6. Conclusions were taken from both quantitative and qualitative data, and suggestions were made on each of the conclusions.

The data of this research could be categorized into 1) the number of term papers on literature (quantitative) and 2) the concept maps to be found in the term papers (qualitative). The quantitative data were collected by identifying the students writing term

papers on literature from the graduation books of November 13, 2013 and June 7, 2014 in which the lists of graduates were accompanied with the titles of their term papers. The data were then synchronized with those provided by the office of the English language education department. The qualitative data were collected from the identified term papers from the consultants both in printed forms and soft files in which the researcher tried to trace how the concept maps were developed to meet the criteria of comprehensiveness. The instruments of the research included field notes and the researcher. The data collection technique was document review in which the researcher 1) identified whether the documents (the students' term papers) were completed with concept maps, and 2) made a very careful observation on the concept maps focusing on the comprehensiveness in accomodating all the concepts they tried to use to develop their conceptual frameworks. The results of the identification and observation were put on field notes to be analyzed further.

In accordance with the two data types, quantitative and qualitative, there were two data analysis techniques: 1) the quantitative data were analyzed by using percentage, and 2) the qualitative data were analyzed by using description. The percentage of the term papers with and without concept maps provided the answer to research problem number one, which was the proportion of the students' awareness in the importance of concept mapping for a research, and the description of the concept maps provided the answer to research problem number two, which was how the concept maps were developed to meet the criteria of comprehensiveness.

RESEARCH FINDINGS AND DISCUSSIONS

The proportion of the students' interests in doing researches for term papers during the academic year 2013/2014 was shown in the following table.

No.	Interest	Number of students	Percentage
1.	Linguistics	43	31.39
2.	English language teaching	71	51.82
3.	Literature	23	16.79
		137	100

Table 1. Proportion of the Students' Interests

From the table it was clear that the most interesting theme for the students' term papers was English language teaching (ELT). This was in line with one of the missions of the

department, i.e. to prepare high school English language teachers. By doing researches on ELT, the graduates were expected to have a research competency which would be very useful in their future professions as English language teachers. However, the department also gave a chance for the students to do researches on linguistics and literature as far as educational aspects were analyzed as a research question. By researching linguistics, the graduates were expected to master one of the linguistics branches very well to support their academic competence. By researching literature, they were expected to learn certain values, particularly educational values, to strengthen their personal and social competencies beside perfecting their reading skill. Above all, since their term papers were written in English, they were expected to master writing skills better.

In regard to the students who wrote their term papers on literature, the proportion between those who used concept maps and those who did not was shown in the following table.

No.	Term papers	Number of students	Percentage
1.	With concept maps	21	91.30
2.	Without concept maps	2	8.70
		23	100.00

Table 2. Proprotion of Using Concept Maps

The table shows that almost all the students writing term papers on literature (91.30%) developed concept maps in their researches. only two students out of twenty three (8.70%) did not develop concept maps in their term papers. This also shows the students' high awareness about the importance of developing concept maps in doing their researches. The concept maps are especially important for the students to show how much they have learnt from their researches as well as how much they understand the development of a body of knowledge they try to do.

By developing concept maps, they could assess by themselves the mastery of the main concept and its supporting concepts they used particularly in Chapter II (theoretical review part) of their term papers. If they understand the concepts well, there will be no difficulties in developing concept maps and they will be able to apply the aspects of the concepts in discussing the research findings in Chapter IV (findings and discussions part). In turn, their drawing of conclusions will be there in line with what they have discussed to answer the research questions they have formulated in Chapter I (introductory part). Such

connectedness between chapters of the term papers is a very vital element of linearity which is itself the proof of academic mastery.

No.	Number of Research Object	Criteria of Comprehensiveness		Status
		Linear	Complete	
1	1, 7, 9, 10, 11, 19	√	√	Comprehensive
2	2, 3, 4, 5, 6, 8, 12, 13, 14, 15, 16, 17, 20, 21	X	X	Partial

Table 3. Criteria of Comprehensiveness

As shown in Table 3, there are two criteria of comprehensiveness (inspired by a concept map developed by Åhlberg (2013): completeness and linearity. A concept map is comprehensive when it meets the two criteria, otherwise it will be called partial. The comprehensive map shows both linearity (indication of connectedness between topic, research questions, theoretical review, research method, findings, discussions, and conclusions) and completeness (the main concept and its supporting concepts are implemented with any necessitated detailed ideas to achieve a sense of wholeness in academic thoughts).

Table 3 shows that only some of the term papers on literature with concept maps meet the criteria of comprehensiveness. The majority of the term papers develop partial concept maps. The main reason why this happens is the students are not taught how to develop concept maps in doing a research. What they did was just follow senior students' term papers. If it happened that the seniors' term papers they read had concept maps, they learnt from them and tried to apply them in their researches. In short, the six term papers with comprehensive concept maps were developed by the careful and critical students who learnt a lot from their research consultants.

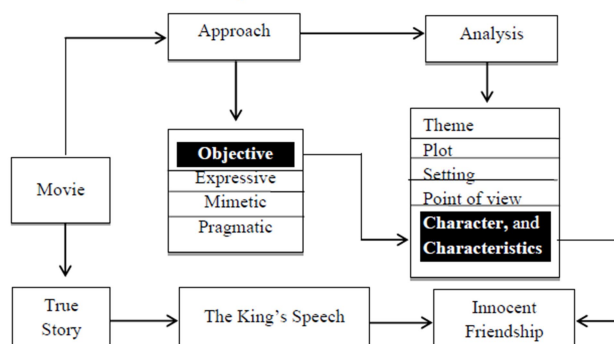Examples of the two kinds of concept maps are as follows.

Figure 6. The Concept Map of Research Object number 11 (RO 11).

The topic of RO 11 is "The Innocent Friendship as seen in *The King's Speech* Movie." The research questions are 1) What are the characteristics of the major characters in *The King's Speech* movie? and 2) How is the innocent friendship between Bertie and Lionel in *The King's Speech* movie?

The Chapter II (theoretical review part) includes theories of movie, literary approach, elements of a story, and types of friendship. The concepts and other supporting concepts developed in the concept maps consist of aspects of movie, approaches to artistic criticism, structural analysis, and friendships (psychology). The conclusions answer the two research questions straight forwardly.

From the descriptions in the preceding two paragraphs, it can be concluded that the concept map of RO 11 meets both criteria of comprehensiveness: linearity (there is connectedness between the topic, theoretical review, research method, findings, discussions and conclusions), and completeness (the main concept is supported by other relevant concepts). Therefore, it is given a comprehensive status.
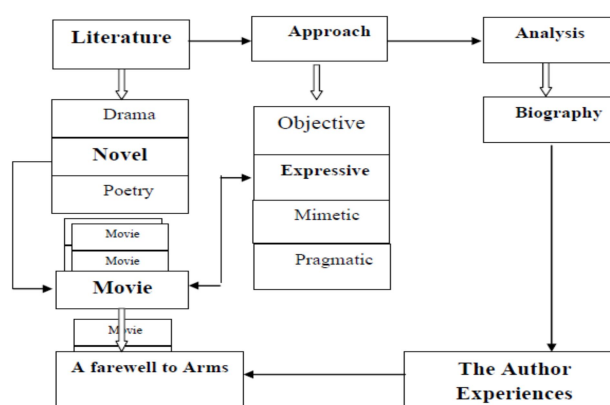

Table 7. The Concept Map of Research Object number 21 (RO 21).

The topic of RO 21 is "An Analysis of the Author's Experiences in the War as Reflected in the Main Character of Ernest Hemingway's *A Farewell to Arms* Movie." The research questions are 1) Who are the main characters of the movie, *A Farewell to Arms*? and 2) What are the author's experiences reflected through the main characters to be found in *A farewell to Arms*?

The Chapter II (theoretical review part) includes theories of literature, novel, movie, character, experience, literary approach, and biography of the author. The concepts and other supporting concepts developed in the concept maps consist of aspects of

literature, approach, analysis, and biography. The conclusions do not answer the research questions.

There is no connection between the topic and the research questions (there should be a question about parallelism between the author's biography and the story), between theoretical review aspects and the elements of the concept map. Therefore, the findings and discussions miss their linear guidance from the mis-developed concept map, and, finally, there is no conclusion because the conclusions do not answer the research questions. This kind of concept maps belongs to partial concept mapping.

CONCLUSIONS AND SUGGESTIONS

Among the students writing term papers on literature, there was a high awareness in the importance of developing concept maps. This gave a sense of academic achievement because by developing concept maps they learnt a lot from how concepts are connected to each other to build a body of knowledge. However, most term papers still belong to partial status because they did not meet the criteria of comprehensiveness (shown by fifteen from twenty one research objects). This was due to the fact that they learnt how to develop concept maps by themselves under their consultants' supervisions.

There should be a portion in the course of research the material of mind and concept mapping to help students master such an important element of academic writing. Simultaneously, there should be workshops among term paper consultants to update their knowledge about mind and concept mapping. Further researches on this topic are expected to open up more "dark rooms" in the process of teaching and learning in universities and other related institutions.

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