

The Influence Of The Use Of Mind Map On Students` Analytical Ability (Experimental Study on Demography, Geography Education Program, Universitas Samudra in Langsa City Academic Year 2016/2017)

Zukya Rona Islami

*Geography Education Studies Lecturer, Faculty of
Teacher Training and Education, Samudra
University, Langsa, Aceh, Indonesia
e-mail: rona.islami@gmail.com*

Nurlina

*Department of Economic Development, Faculty of
Economic, Samudra University, Langsa, Aceh,
Indonesia
E-mail: nurlinazm@gmail.com*

Ramdan Afrian

*Geography Education Studies Lecturer, Faculty of
Teacher Training and Education, Samudra
University, Langsa, Aceh, Indonesia
e-mail: ramdan.afrian_geo@unsam.ac.id*

Abstract- All articles must contain an abstract. The abstract text should be formatted using 10 The Mind Map was developed by Tony Buzan in 1970 as a tool for student needs in notes, remembering and understanding the subject matter. Use of Mind Maps on researching the actual workings of the brain. The use of Mind Maps allows students to balance left and right brain usage by using keywords, colors, images, and symbols when the manufacturing process takes place. This study aims to determine the effect of using Mind Maps to the power of geography analysis of Samudra University students. The research was conducted at Samudra University academic year 2016/2017, in Demography courses. The subjects of the study were students who took the subjects of Demography Unit 1 as the experimental class and unit 2 as the control class. The selected research subjects is determined based on the mean score. This research is a research experiment of quasi (quasi-experiment) with Nonequivalent Control Group Design research design. The power measurement analysis instrument is performed using a test essay. The measurement results were analyzed using t-test with the help of SPSS 16.0 for Windows program. The results show the learning power in the experimental class by using a mind map higher than the control class that does not use the mind map.

Keywords: *Mind Map, Analytical Ability.*

1. Introduction

Buzan and Barry (2004) explains A Mind Map is powerful graphic technique which provides a universal key to unlock the potential of the brain. It harnesses the full range of cortical skills – word, image, number, logic, rhythm, colour and spatial awareness –in

asingle, uniquely powerful manner. In so doing, it give you a freedom to roam the infinite expanses of your brain Opinions were also presented by Swadarma (2013) "mind map is a technique that works by using a mmencatat management system so that it can open up a whole brain potential and the capacity of the brain that are still hidden "

Tony Buzan was inspired by his experience at the time was in College, where he and his Freind feel difficulty in learning. They often have missed notes, forgot the new lessons taught, difficulty of capturing the essence of the lessons, slow in reading, and so on. (Buzan and Barry 2004).

Buzan (2010) suggests "the human brain is working to process information through observing, read, or heard about something shaped functional relationships between parts (concept, key words), not partial separate from one another nor in narrative form complete sentences ". For example, if in our minds there are words (concepts) Demographics, it will be associated with other words functionally, such as birth, death, migration, or to other concepts such as the Census of population, labor force, and with each Karak-teristiknya. Based on the statement above, Buzan learning by using Mind Folder involves the workings of the brain's natural since the beginning, so that in remembering the information the brain will be easier and more reliable than using a traditional recording techniques.

Ausubel (Ratna Wiliss Dahar, 1996) stated that learning can be classified into two dimensions. The first dimension relates to how to teach the information or materials presented on the participants learn, whether through acceptance or discovery. The second dimension concerns the participants learned how to

connect that information on existing cognitive structures. Cognitive structures by Ausubel is meant as facts, concepts and generalizations-generalities that have been studied and remembered by the participants of the study. On this second dimension, "meaningful learning" happens if participants learn can link or associate that information on knowledge (in the form of concepts and others) that had belonged to him. However, if participants are learning just dabble memorize new information without tying it with concepts that have been present in the structure of kognitifnya, then in this case just happened "learning rote"

Natural workings of the brain. According to this, Harwono (2005) mentions "there are three benefits of Mind Map, IE: stimulating works left brain and right brain synergistically, break free from the whole trapping rules when initiating a write and help someone any drain stored in the memory without a hitch ".Further Windura (2008) adds a specialized in the field of education and learning, usability and Application Folder very much Mind, among others, to summarize, review, a noted surgeon, teaching, books, presentations, research and time management.

Students are learners who are required to be able to analyze every problem encountered in the lecture. (Mulyadi and Yani: 2014) The thinking phase of analysis is a high-level thinking stage that needs to be fostered among students. However, not every student has the same skills in thinking. The high level of student's analytical skills is relative but certainly the students' analytical skills in each subject need to be improved

The demographic course studies the number, the territorial distribution and population composition and the changes and causes of the change. Because this demography course is not just "counting" more than that, students are expected to be able to analyze the change of population and the cause of the change from the demographic point of view. Based on the above description, then one of the techniques considered to help measure, improve, and evaluate the power of student analysis is a mind map technique

Bloom's Taxonomic Revision by Anderson (2010) states that the analytical power is the ability to break the material into its constituent parts and determine the relationship between that part and the relationship between the part and the whole structure or purpose. Indicators of the ability to analyze are Distinguishing, Organizing and Attributing.

High-level thinking is an important aspect of teaching and learning. Basic thinking skills in the education process. One's thinking ability can affect learning ability, speed and effectiveness of learning. Therefore, thinking skills are associated with the learning process. Students who are trained to think show a positive impact on the development of their education (Yee Mei Heong, 2011)

2. Methods

The research design used in this research is "Design of Pseudo Experiments The research design used is nonequivalent control group-design. According to Enzir (2007) this design is almost the same as the pretest-posttest control group design, only in this design the experimental group or the control group is not selected randomly. Each group is given a pretest, then treated and the last is given a posttest. In summary the research design as shown in Table 2.1

Tabel 2.1 Research Design

Design	Data collection techniques	Instrument	Implementasion
ability to analyze	Tes esai	About the essay as much as 6 questions	At the beginning and end of the study

Data analysis used in this research is inferential statistic by using t test. The calculation is done with the help of SPSS 16 For Windows with the level of significance used is 5%

3. Result And Discussion

In this study the data obtained is the value of students' analytical skills demography courses measured from the difference in pretest and posttest. The student's analytical data are grouped into two, namely 1) the score on the experimental class with the mind map, and 2) the score on the control class with lectures, discussions, question and answer and assignment

Based on the results of data analysis on the mind map learning model obtained value $(p) = 0.00$ or $(p) < 0.05$. This means H_0 is rejected and H_1 accepted or mind map affect the ability of student analyst Average gain score experiment class that is 42,81 bigger than control class with score 32,37. The data shows that learning with mind map has a significant effect on students' analysis ability.

The cause of learning using mind map requires students to generate many ideas about a concept given

by the lecturer who poured in a mind map train students have original ability because students are given the freedom to pour all ideas of ideas about a creative concept in the mind map and development of every idea flourishes elaborating ability that builds something from other ideas. After that the students presented a unique and colorful form of mind map in front of the classroom to train the students to understand the mind map he made himself and practice to unveil his gasan idea smoothly in front of the class.

Characteristics of the mind map in the form of keywords, images, curves and colors are the main factors of student success have good analytical power. The statement is in accordance with the opinion of Wycoff (2005) who said that mind mapping generates images, colors and key words which allows us to organize lessons, make associations and connect them with other materials.

The above opinion is reinforced by Buzan (2010) ie Mind Map using the brain's ability to visual recognition to get results as big as possible. The combination of colors, images and curved branches makes Mind Map more visually stimulating than traditional records that tend to be linear in one color. This will make it easier for students to remember and understand the information they receive.

4. Conclusion

Based on the results of data analysis and discussion of research results can be concluded that the use of mind map gives a significant effect on the power of student analysis. This is evidenced by the results of t test analysis using independent sample t test obtained p-level data smaller than 0.05 ($p < 0.05$) that is 0.00. The average posttest score of the experimental class is higher than the control class. This is due to the characteristics of the mind map itself.

5. References

- Anderson, L.R. & Krathwohl. 2010. Framework for Platform for Learning, Teaching and Assessment (Bloom Bloom's Taxonomic Revision). Yogyakarta: Student Literature
- Buzan, Tony & Barry. 2004. The Mind Map Book. (Understanding Mind Maps).Sindoro, A. Batam: Interaksara.
- Buzan, Tony .. 2010. Smart Book Mind mapping. Jakarta: PT. Gramedia Pustaka Utama
- Emzir, 2008, Research Methodology of Quantitative & Qualitative Education Cet. IV, PT. Raja Grafindo Persada, Jakarta
- Harwonoo, 2005, Open Mind Articles with "Mind Mapping", (Online) (<http://gurukuansing.blogspot.com/2010/05/buka-pikiran-dengan-mapping.html>) accessed January 18, 2014
- Swadarma, Doni. 2013. Implementation of Mind Mapping in the Learning Curriculum. Jakarta: PT Gramedia.
- Wicoff, J. 2005. Be Super Creative Through Mind Mapping Methods.Bandung: Kaifa.
- Windura, S. 2008. 1st Mind Map For Students, Teachers and Parents. Jakarta: PT Elex Media Kompetindo
- Yee Mei Heong, Widad Binti Othman, Jailani Bin Md Yunos, 2011, The Level of Marzano Higher Order Thinking Skills Among Technical Education Students, International Journal of Social Science and Humanity, Vol. 1, No. 2, July 2011