

Silogism Analysis of Indonesian Language Education's Students Teacher Training and Science Education Faculty (FKIP) of University of Muhammadiyah Sumatera Utara (UMSU) (Psycholinguistic Studies)

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Abstract: *This study aims to describe the ability of syllogism, both categorical syllogism, syllogism of hypotheses, alternative syllogisms and the entimem of Indonesian Language Education students in the Teacher Training and Education Faculty of North Sumatra Muhammadiyah academic year 2017-2018. The research method used is descriptive exploratory method or Description Exploration Development Research (DEDR). The population of this study amounted to 311 students with details of 160 5th semester students and 151 7th semester students. This research sample consisted of 74 students with details of 40 5th semester students and 34 semester 7 students. The results of the study were through pretest or before applying the cooperative learning model obtained mean = 60 for semester 5 students and mean = 59.53 for semester 7 students. The results of the study through posttest or after the cooperative learning model was applied, mean = 83.70 for semester 5 students and mean = 88.70 for 7th semester students. Thus, it can be concluded that the 5th semester of Indonesian Language Education is less capable in syllogism or does not reach the standard of success because the mean is <85, while 7th semester students of Indonesian Language Education are capable in syllogism because it reaches the mean > 85. the two meanings are combined or 74 students become samples, then reach a mean of $83.70 + 88.70 = 86.20 > 85$ with a success rate of > 85 as many as 48 students of Indonesian Language Education Teacher Training and Education Sciences University of Muhammadiyah North Sumatra (64.86%) 2017-2018 academic year.*

Keywords: *syllogism; descriptive explorative; cooperative models*

I. Introduction

Humans develop knowledge to cope with the needs of life and life. Knowledge can be developed by humans due to two main factors, namely humans have a language that can communicate information and the ability to think or reason. The main difference between a professor and a small child lies in reasoning. thinking process in drawing a conclusion in the form of knowledge. Thinking is an activity to find the right knowledge. What is called true for everyone is not the same, then the activities of thought processes to produce true knowledge is different. It can be said that every path of thought has criteria to truth and the criteria of truth are the basis for the process of finding truth itself. Identification is the process of finding truth where each type of reasoning has its own truth.

In general, reasoning as a thinking activity has two characteristics, namely logic and analytic. Logical characteristics mean that reasoning activity is a logical process of thinking according to a certain pattern. Definition is analytical meaning reasoning is a thinking activity that relies on analysis with tangible logic. meaning that scientific reasoning is an analytical activity that uses scientific logic. To carry out analytical activities, reasoning activities must be

filled with material knowledge that comes from a source of truth. Knowledge used in reasoning basically comes from ratios and facts. For those who argue that the source of truth is the ratio, so they develop the notion of rationalism. For those who argue that the facts revealed through experience, they are developers of understanding empiricism.

Based on experience, student reasoning is still lacking. This lack of student identification can be caused by internal factors and external factors. To prove this truth, it needs to be investigated. This is what motivates researchers to examine deductive or syllogistic reasoning in Indonesian Teacher Education students. and Education in the University of Muhammadiyah North Sumatra in the academic year 2017-2018.

With the background of the above, the formulation of the problem in this study is how is the ability of syllogism or deductive reasoning of Indonesian Language Education students in the 5th semester and 7th semester of the academic year 2017-2018 Faculty of Teacher Training and Education Muhammadiyah North Sumatra University?

This study aims to determine the deductive reasoning or syllogistic abilities of 5th semester Indonesian Language Education students and 7th semester of academic year

2017-2018 in particular, generally Teachers and Education Faculty students at the University of North Sumatra Muhammadiyah. This is done for the development of Psycholinguistics courses, Philosophy of Language and Indonesian.

II. Review of Literature

2.1. Language and Mind

Language material can be understood through linguistics (phonology, morphology, syntax, semantics). Linguistics examines language that produces language theories. Students as language learners with all their behavior, including processes that occur in themselves when learning languages cannot be understood by linguistics, but understood through other sciences, namely psychology. On this basis, a new scientific discipline emerged called psycholinguistics. Basically in communication activities there is a process of producing and understanding speech. In other words, in the use of language there is a process of changing the mind into code and converting the code into thought. The lesson is a synthesis of the process of converting concepts into codes, while understanding messages is the result of code analysis. Humans as language users can be considered as organisms that move to reach the domains of psychology, both cognitive, affective and psychomotor. The ability to use language both receptively and productively involves the three domains.

Khoyin (2013: 155) says that cognitive is the acquisition, structuring and use of knowledge. In subsequent developments, cognitive becomes popular as one of the domains of human psychology that includes human mental behavior related to understanding, consideration, problem solving, information processing, intentional and beliefs. Effectiveness is the realm of psychology which includes all phenomena of feeling such as: love, sadness, pleasure, hatred and certain attitudes towards oneself and the environment. Psychomotor is a psychological realm that is all physical charity that is concrete and easily observed, both in quantity and quality because it is open.

Sapir and Whorf in Khoyin (2013: 157) say that no two languages have similarities to be considered as the same social reality. Two hypotheses regarding the relationship of language and

mind are: 1) differences in language structure in general parallel with non-language cognitive differences. language causes differences in the minds of people who use the language.2) the structure of language influences the way individuals perceive and reason the perceptual world.

The influence of language on the mind can occur through the formal aspects of language namely grammar and lexicon (semantics). Language influences categorization in human perception which becomes the premise in thinking.

2.2. Language Identification

Language reasoning directs language into a useful language, meaning it contains it. At one time a person's language may be good and well-maintained, but at other times the language may not be good. It is very dependent on the existence of the mind when it speaks. Language as a system communication must be understood the meaning and purpose, especially for participants of communication. Therefore, damage to one's mind will affect the language. If someone's mind is chaotic, the language will be chaotic. In addition, in matters of language reasoning there is a mistake in the process of reasoning or wrong thinking. common reasoning in the way of the human mind when expressing a problem is cursory generalization, a lame analogy, all rather than a few, a mistake in a causal relationship and a mistake because it does not understand the problem. Note the following incorrect sentences.

- a. All Balinese are Hindu.
- b. All humans come from apes.
- c. Indonesia has too much debt because the lamps do not need to be implemented right because They only accumulate debts continuously and eventually the country is destroyed.

The three sentences above are logical sentences. Thus, it is clear to us that if reasoning is wrong, then the language will tend to be wrong. So that it can be said that reasoning affects the use of language (Sitepu, 2005: 45).

2.3. Language Reasoning

Language and thinking are two basic and interconnected things. These two things distinguish humans from animals. With human language communication with himself and others. By thinking, humans can solve various problems of life and life faced. Thinking is an effort made by organizing and using various concepts, considerations, habits and various rules before taking action. How Is language used in reasoning? Reasoning is a thought process that attempts to connect facts that are known to lead to a conclusion. Reasoning is a thought process to reach a logical conclusion. Reasoning cannot be done by using plain facts. But it is done by using facts that have been formulated in sentences in the form of opinions or conclusions. This kind of sentence in reasoning is called a proposition.

Dardjowidjojo (2010:62) says that the proposition consists of two parts: a) Argument which is the matter discussed b) Predication is a statement made regarding the argument. Kerap (2004:43) says that in reasoning there are terms of inference, implications and effectiveness. Inference is a derived conclusion. The implication is something that is considered to exist. Whereas efidensi is all facts that exist, all testimonies, all information or authority connected to prove a truth. Therefore, reasoning is divided into: inductive reasoning and deductive reasoning.

2.4 Silogism

Djojosoeroto (2007:153) says that logic is about the requirements of legitimate reasoning. Logic is the study of proper reasoning and reasonable forms and patterns of thought. Reasoning goes on called deductive reasoning (syllogism). Often (2004: 58) says that syllogism is a form of reasoning process that connects two different propositions to aive conclusion. Furthermore syllogism is divided into: categorical syllogism, hypothetical syllogism and alternative syllogism. The categorical logical is deductive reasoning which contains a series consists of three categorical propositions arranged so that there are three terms that appear in the series of premise statements.

For example: All motorized vehicle owners must pay taxes
My uncle owns a motorized vehicle
My uncle has to pay taxes

Among others: a) the term proposals (major, minor and conclusion premises) b) all terms and conditions, each term contained the two premises are universal, then the conclusion is universal f) if there are positive and negative premises, then the conclusion must be negative. Hypothetical syllogism is deductive reasoning which departs from an establishment that there is a possibility in propositions that do not exist or do not occur. Thus, the major proposition formula is if P then Q.

For example: If it doesn't rain, the harvest will fail.
Rain doesn't fall.
Therefore the harvest will fail.

Alternative syllogism is deductive reasoning in which the major propositions are alternative propositions or choices, while the categorical proposition that accepts or rejects one alternative. The conclusion of alternative syllogism depends on the minor premise. If the minor premise accepts one alternative, the other alternative is rejected and the minor premise rejects one alternative then the other alternative is accepted in the conclusion.

For example: Father's in's office or at home.
Father's father is in the office.
Therefore Budiman's father was not at home.

In everyday life, the syllogism appears with two propositions, one of which is omitted. Although it is omitted, the proposition is still considered in mind and is known by others. This kind of syllogism is called entimem. In other words, the enzyme is a short form of syllogism.

For example: All lecturers have a lot of knowledge.
Mr. Said Siregar a lecturer

Therefore, Mr. Said Siregar many of his knowledge. The entimem: Mr. Said siregar of many of his knowledge because he is a lecturer.

2.5. Cooperative Learning Model

Sani (2014:131) says that cooperative learning models increase learning activities with a number of students in one group. Cooperative learning activities emphasize the awareness of students (students) to help each other find and process information, apply knowledge and skills. The purpose of cooperative learning is practice social skills, criticizing other people's ideas, daring to maintain a logical mind and various skills that are useful for interpersonal relationships.

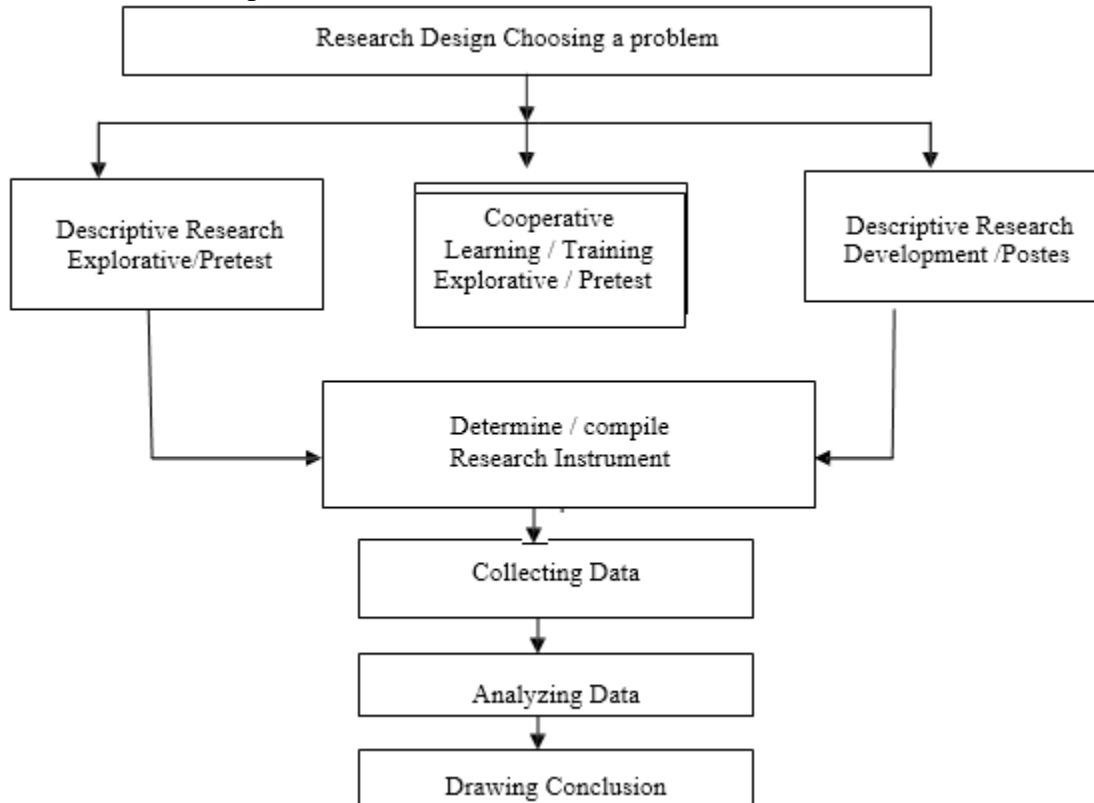
The steps of cooperative learning are as follows:

- a. Deliver the learning objectives and motivate students to learn.
- b. Present information to students.
- c. Divide students into groups (in this case there are 4 groups).
- d. Deliver topics to each group.
- e. Guiding groups in work and learning.
- f. Present the results of group work.
- g. Assess individual and / or group learning outcomes.

III. Methodology

This research is a Developmental Explorative Descriptive Research (DEDR). Descriptive exploratory research aims to describe the state or status of a phenomenon. In this case the researcher wants to know things that are related to the state of things. While descriptive developmental research aims to find a method, model or system that can be used, whether learning methods, learning models or learning systems or new subject areas that have not been applied so far. So, descriptive developmental research, testing the data is compared with a criterion or standard that has been determined in advance (Noor, 2011:109). The process of this research uses Noor's research design model (2011:109)

As can be seen in the implementation flow as follows:



The data collection technique used in this study is a test. The test results are used as a reference for new innovations in the Indonesian Language Education study program specifically and the Faculty of Teacher Training and Education or all the Faculties at the Muhammadiyah University of North Sumatra in general. Analysis of all research findings in accordance with the focus of the problem and research objectives. The data to be analyzed are quantitative data, namely the results of the pretest and posttest syllogistic abilities of students, the findings of this data will be compared with the determined performance indicators. The indicators used to show the success of learning are student learning outcomes that reach an average score of ≥ 85 . This refers to the completion criteria.

IV. Result and Discussion

The results of the research carried out in the form of pretest or before applying to Indonesian Language Education students in the 5th and 7th semester of the Teacher Training and Education Faculty of North Sumatra Muhammadiyah University can be explained as follows. For 5th semester students obtain Mean = 60, smaller than the standard of success set that is 85. 5th semester students who get grades > 85 as many as 4 people (10%), while students who get a score of < 85 as many as 36 people (90%) from a sample of 40 people. Students in semester 7 get Mean = 59.53 smaller than the standard of success set. 7th semester students who get a score of > 85 as many as 1 person (2.94%), medium students who got < 85 as many as 33 people (97.06%) from a sample of 34 people. Based on the research data, more Indonesian Language Education students in semester 5 and 7 of the 2017-2018 academic year who had not reached the success standard were 69 people (93.24%) of the sample as many as 74 students. After cooperative model learning, a posttest study was carried out. The results of posttest research on 5th semester and 7th semester Indonesian Language Education students The Faculty of Teacher Training and Education of North Sumatra Muhammadiyah University can be explained as follows. For 5th semester students obtaining Mean = 83.70 smaller than the specified success standard of 85. Students in semester 5 who get > 85 as many as 23 people (52.50%), while students who get < 85 as many as 17 people (47.50%) from a sample of 40 people. Students in the 7th semester get Mean = 88.70 > 85 (standard of success). Students in semester 7 who get scores > 85 as many as 25 people (73.53%), while students who get grades < 85 as many as 9 people (26.47%) from a sample of 34 students.

If the mean of 5th semester students and 7th semester of Indonesian Language Education Teacher Training and Education Faculty of North Sumatra Muhammadiyah University are combined, then the mean total sample is obtained = $83.70 + 88.70 : 2 = 86.20 > 85$. Students who get a score > 85 as many as 48 people (64.86%), while all students who scored < 85 as many as 26 people (35.14%) from as many samples 74 students.

V. Conclusion

The conclusions that can be drawn from this study are that there is an improvement in the quality of students in syllogism in Psycholinguistics courses, 5th semester Language Philosophy and 7th semester of 2017-2018 academic year Indonesian Language Education Teacher Training

and Education Faculty of North Sumatra Muhammadiyah University. Because on the basis of data analysis The student posttest results obtained mean = 86.20 > 85 as a standard of success.

Based on the conclusions stated above, the following suggestions are proposed:

1. Lecturer in Indonesian Language Education study program, especially Psi lecturers Colinguistics and Language Philosophy are suggested to make learning innovations so that syllogistic material can be absorbed well by students.
2. To improve the syllogistic ability of students, especially Indonesian Language Education students to continually or continuously practice syllogism.
3. Lecturers who teach in the Indonesian Language Education study program are advised to submit their subject matter related to deductive reasoning or syllogism.
4. Lecturers of Indonesian Language courses who teach in other study programs at the Muhammadiyah University of North Sumatra emphasize syllogism in relation to writing scientific work.

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