

STUDENTS' ABILITY IN TRANSLATING MATHEMATIC TEXT OF FIFTH SEMESTER STUDENTS IN MATH EDUCATION PROGRAM STKIP YPM BANGKO

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Abstract: *The aim of this research is to describe students' ability in translating mathematic text in English for teaching Mathematics Course at fifth semester of Math Education Program, Math and Sciece Department of STKIP YPM Bangko academic year 2019/2020. The course is to provide students to be bilingual teachers in math subject. The reasearch is a descriptive quantitave research. The population is 18 students of fifth semester with total sampling technique used. The researcher used written test for instruments of collecting data, consisting of translating mathematics operation, translating mathematic problem, and passage about mathematics. The students were asked to translate text from target language to source language and vise versa. In analyzing the data, the researcher used several procedures; reducing data, classifying data, describing the data, and displaying the data. The researcher used three indicators; accuracy, readability and acceptability to find out students' ability in translating mathematics text. The category were 4 level mastery; excellent, good, fair, and poor. The result of this research found that students' ability in translating mathematic text was excellent. Based on the aspect of mathematic text, mathematic passage was difficult to translate, while accuracy was the lowest indicator of all. In sum, it is suggested that students have more practice of translating the text and use the effective strategy in translation.*

Keywords: *Translation, Mathematic Text, and ability*

INTRODUCTION

English is an important language in the world because developing of era today make it happens. It means that all aspects in life needs to master English, especially in education field. English becomes a subject that learnt by

students, start from kindergarden to high education. It provides students know and master english from the early leaners to adult leaners. Even, english as a requirement for apply job, continue study, and pass competence. That is way english as a crucial thing that incudes to curriculum in

Indonesia. In high education, English also becomes a subject that must be contracted by all students in all major or department.

In STKIP YPM Bangko, English subject is learnt in some semesters for five study programs except English Education Program; in second semester as *Kemampuan bahasa Inggris subject*, in fifth semester on english for teaching that learnt by students of Math, biology, Indonesian language and Art Education Program, and english for business for Economic Program. Those are categorized into *Mata Kuliah Keahlian dan Keilmuan (MKKK)*. It means that this campus concerns to provide the students have mastery in English whether they are not english students.

Math Education Program has graduated profile; *menjadi tenaga pendidik yang profesional dibidang matematika*. English for teaching mathematics is a course that learnt by students in the fifth semester. This course provides students 1) to know about concepts and terms in geometry, algebra, statistics, etc, 2) to understand the meaning and use them english both spoken and written form,

and 3) to translate english mathematic textbook and can practice it in teaching and learning process.

Based on Rancangan Pembelajaran Semester (RPS) of English for teaching mathematics, translating text becomes a part of the material for students. It consists of tranlating mathematic operation, mathematics passage, problem of mathematics. It also devides into two categories; translate from target language to source language and source language to target languae. Based on observation of students in the early meeting, the students have low self-confident to use English, they are shy to speak english, they tend to used word by word in translating english text. They were difficult to choose meaningfull English diction.

According to explanation above, the researcher wants to do a reserach about students' ability in translating mathematic English text at the fifth semester of math education program of STKIP YPM Bangko.

REVIEW OF RELATED LITERATURE

Related Theory

The Nature of Translation

Translation is a complex

activity because it is related to someone ability in grammar, choosing appropriate words and the sensitivity in the meaningful its results. According to Serhan in Navile et al (2005: 477) translation is a great value sensitising students to contrast and compare between the grammars of their own language and the source language. It means that the students must consider many aspect; grammar, diction, and meaningful to make the quality of the translation result.

Futhermore, Basnett (2002: 13) suggests that translation involves the transfer of meaning contained in one set of language sign through competence used dictionary and extra linguistic criterion. Translation is a ability to combine the between the word meaning and the context of the text. The translators have to make sincronization between the word and the situation of the text on discuss about in order to easy to understand by the readers.

In addition, Oak (2003: 2) said that translation is an activity that needs substancial cultural knowledge. In translating activity, it needs to pay attention about cultural aspect of the text. As a good translator, how he or

she emerge to the text as having same cultural background to the original writer. Its purpose to the reader heve same meaning and situation between target langet to source of language.

Hatim&Munday (2004:6) also proposes three notions on the word translation as:

1. Translation is the process of transferring a written text from source text (ST) to target text (TT), conducted by a translator, or translators, in a specific socio-cultural **context**.
2. The written **product**, or TT, which results from that process and which functions in the socio-cultural **context** of the TL.
3. The **cognitive**, linguistic, visual, cultural and ideological phenomena which are an integral part of 1 and 2.

It can be concluded that translation is an activity how to interact with the source language and target language by using sense of context, meaning and also structure. Those aspects have to include in that activity. Because a text can not be separated to the context. In arranging the sentence by sentence it need to consider the structure or language used, beside that choosing the words

become important thing in this activity to make it natural, meaningful and clearly.

The Nature of Mathematic Text

Text is understood to be peace of written or spoken material in its primary forms. It is a stretch of language that can be understood in context. It may be simple as one or two word (such as stop sign) or a complex such a novel. It means that text is a unit of language from the small language to a complex language. According to Adam (2017) students should be able to read mathematical sources

Mathematic English text is a written material that contains to mathematics operation, terms, number, and text that has topic about mathematic. Those are the lesson or material that discuss in English for teaching class at Math education Program.

Doing mathematics and understanding concept and procedure require students to comprehend mathematical language. Mathematics is communication process with number, symbol, and word; multiple representations would be used in it. Students are learning mathematics;

they use the relationship between the daily language and the symbolic representations in order to express mathematical ideas which consist of complicated activities.

In addition, Duru et al (2016) define that symbols are tools used in mathematics as a words. Mathematical symbol provide guidance about what students should do mathematically, basic operation symbols should be understood by students in mathematics classes. Understanding the symbol provides sustainable mathematical success. It means that the students have to get ability to know about the basic language that used in mathematic classes.

Based on explanation above, Mathematical text relate about symbol, number and diagram, term and the text that contains of the mathematical topic. Mathematical English text is a material that must be learnt by students to provide them to be understood about the language used in it. It is important that they can interpret information that represent by symbol, diagram, terms, number, etc.

METHODOLOGY OF STUDY

In this research, the researcher used descriptive quantitative research.

Quantitative research used measurement to gather numeric data that are used to answer question or documentation about the result of test. In addition Iskandar (2008:24) states a descriptive research is used to collect the data in order to answer the research questions. In this case, the researcher wants to describe the students' ability in translating mathematical text

The Population of the research was the fifth-year students of math education program, Math and Science department of STKIP YPM Bangko especially they have learnt about English for Teaching Mathematics Subject. The Population consisted of 18 students. In this research used total sampling.

Written test is the instrument to collect the data, the test is an essay. Students were asked to translate mathematics text. It used to know the students' ability in translating mathematic text and also about aspect of translation. It consists of three kinds of question. Question number one consisted of four sub questions; those were about writing the mathematic operation, the students were asked to translate number,

symbol, and mathematics operation. Then they are asked to write them in English. Question number two consisted of two sub questions. Those were related to Finding the solution or problem in mathematics, the students were given the question in English about the description and the students translate it into Indonesian and directly to answer to find the solution. Question number three was translating mathematic English passage. Its passage was about geometry material, the title was Circle in English, students are asked to translate it into Indonesian.

Standard Competence	Question (Q)		
	Q1	Q 2	Q 3
Students understand how to translate text into Indonesian or into English such Number, mathematic operation, term or formula and text (passage)	Number, mathematics operation, and symbol	Sentence and mathematics term	Passage, term, and sentences

This is the classification of the question based on mathematic text:

The test was delivered in mid-term test schedule. After collecting the data, the researcher analyzed the score of students' abilities in translating

mathematics Text. The score of students based on the rubric scoring or component of translation that proposed by Zatil (2014:5), to know students' ability in translating mathematic English text is accuracy, readability, and acceptability. The criteria as follow;

Rubric scoring of translations

No	Criteria	Score
1	Accuracy	
	Accurate and clear meaning, without any omission and addition or changes meaning	3
	Correct meaning with minimum omission, addition or changes meaning	2
	Different meaning, unclear, ambiguous	1
2	Readability	
	Word, technical term, phrases, clauses, sentences or text translation can be understood easily by the reader	3
	In general, the translation can be understood, however there are certain parts that should be read more than once to understand the translation	2
	Translation is difficult to understand by the reader	1
3	Acceptability	
	Natural form, appropriate word, none of grammatical errors, read naturally	3
	Minimum inappropriate word or unnatural word	2
	Unnatural form, any inappropriate word	1

After evaluating students' answer sheets, count the student's ability in translating mathematics text in percentage by used formula:

$$P = \frac{F}{N} \times 100$$

Where P: percentage of students' personal ability

F: total score

N: maximum score

In order to know the average level mastery of students, it needs to find out the mean by the formula as follow:

$$P = \frac{\sum M}{N}$$

Where p: the percentage score of students' ability

M: the mean

N: the maximum score

After count of students score would be classify the level of students' ability in translating mathematics text into four level (Rushansah: 2013), namely:

Scale	Categories
80%-100%	Excellent
60%-79%	Good
50%-59%	Fair
0%-49%	Poor

Where the level means:

Excellent: translation is accurate and acceptable

Good : translation is less-accurate With minimum omission, addition and minimum inappropriate words

Fair : different meaning, there are some inappropriate words

Poor : unclear meaning, ambiguous, a lot of grammatical errors and in appropriate words

RESULT AND DISCUSSION

Description of students’ ability in translating Mathematic text in general

There were 18 students followed English for teaching mathematic class; all of them followed the test. The researchers classified the questions focus to mathematics text. The process of scoring based on scoring rubric of translation, namely accuracy (accu), readability (rea), acceptance (ace). The table below showed the students’ ability in translation of mathematic text:

Students’ score and level mastery in translating

Scale	Amount of students	Percentage	Categories
80%-100%	14	78	Excellent
60%-79%	2	11	Good
50%-59%	2	11	Fair
0%-49%	0	0	Poor
Total	18	100	

From the table above, it can be seen that most of the students got score in the first level (14 students or 78 %). 2 other students (11%) got score in the second level. 2 (11%) students got score in the third level. No students got score in the fourth

level. The table above showed the score of students in all mathematics text (mathematic operation, mathematic problem, and passage). It could be seen that students’ ability in translating mathematics text was excellence in 78 %, it means that translation is accurate and acceptance, 11 % was good; translation was less-accurate with minimum omission, addition and minimum inappropriate words, and 11 % was fair; different meaning, there are some inappropriate words. Besides that, students had average score in translating mathematic text is 86.8; it means that students’ ability in translating mathematic text of Math and science department of STKIP YPM Bangko Academic year 2019/2020 is in excellent.

Description of Student ability based on the aspect of mathematics text and the indicators

Students had highest ability in translating of mathematic operation was 93, the second was 86 for mathematic problem and the lowest was third aspect is 61. Base on the indicator, the highest score was 86 % for readability, the second was 77% for acceptance, and the lowest was

76% for accuracy. The data as followed :

**Students' ability in translating
mathematic text based on aspects
and the indicator**

aspect indicator	Accura cy	Readab ility	Acce ptan ce	total
Mathematic operation	92%	96%	92%	93%
Mathematic problem	73%	95%	89%	86%
Mathematic passage	63%	69%	52%	61%
	76%	86%	77%	

Based on description above, students' ability in translating mathematic text was in mastery level excellent in general. Based on its aspect; the lowest ability in mathematics passage that consists of symbol, operation, sentence and paragraphs. The students were difficult to translate the passage, it had to do some appropriate meaning, context, and chose the appropriate words. It was also found by Sari (2010) in her research, most of students were difficult to find the suitable terms with the context of the sentences. Most of them translated the without concerning on the suitable meaning with the idioms without of the target language. These difficulties existed because of the lack of the context of the text that they needed. Furthermore Vennuti

(2000:134), he states that four basic requirement of good translation; a) making sense, b) conveying the spirit and manner of the original, c) having a natural and easy form of expression, and d) producing the similar response. The good translation has to consider the all aspect, because those are the component must be included in the result of translation in order to the reader understand about it. It means that translate passage must do some appropriate to get the appropriate translation result

In addition for the indicators, the students' ability in translating mathematic text; mathematics operation, mathematic problem and mathematic passage were lowest in accuracy. It was compared to another indicators; readability and acceptance. According to Zatil, et al (2014), Accuracy is related about accurate and clear meaning, without omission and addition or change meaning. But, they omitted the some word like article, pronouns, end-s in plural no or miswritten the spelling. Therefore those changed the meaning. It supported by Zatil research, he found that the main problems of the students in translating from English into

Indonesian is pronoun, the students did not mention or omitted the pronoun in the large text.

CONCLUSION AND SUGGESTION

CONCLUSIONS

Based on the data description in previous chapter, students' ability in translating mathematic text was excellent. Because from 18 students followed the test 14 students or 78% in level excellent, 2 students or 11% in level good, 2 and 2 students or 11% in level fair. In general, their ability in translating mathematics text at the fifth semester of Math and Science Department of STKIP YPM Bangko Academic Year 2019/2020 was Excellent, it could be seen from the means score of the test result 86. From the indicator, accuracy was lowest score; they tended to omitted word and change the spelling. The aspect of mathematic text is lowest in translating passage.

SUGGESTION

Based on the result of the research, it can be submitted suggestions for the lecturer of English for Mathematics subject, it is better for to teach and train the students for understanding all components of translation and strategies in effective

translation. For the students, In order to further improve the ability in translation especially about its indicator. It also needs to practice more translate the passage or paragraph because it can improve the vocabulary and self-sense of meaning from to the text.

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