THE ANALYSIS ON STUDENTS' MATHEMATICS LEARNING DIFFICULTIES VIEWED FROM THEIR SELF-EFFICACY IN GRADE VIII ON SMP

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ABSTRACT

The difficulty of learning mathematics is still experienced by students in grade VIII SMP Muhammadiyah Ngemplak. This research aims to explain the difficulties of learning mathematics that is reviewed from the efficacy of self-esteem in grade VIII students of SMP Muhammadiyah Ngemplak. This research uses qualitative research methods. The subject of this study was 9 students of grade VIII A SMP Muhammadiyah Ngemplak year 2018/2019. Object research is the difficulty of learning mathematics reviewed from self-efficacy. The data collection techniques consist of polls, tests, documentation. The research instrument is a self-efficacy poll sheet, a math test sheet, an interview guideline, an interview recorder, and a field record. Validity of data using source triangulation. Data analysis using data reduction, data presentation, and withdrawal of conclusions. The results showed students who have difficulty studying mathematics factually 87.88%, students who have difficulty learning mathematics conceptually 41.41%, and students who have difficulty learning mathematics procedurally 25.25%. The factors that cause mathematics learning difficulties consist of 3 parts, among others: difficulty learning mathematics reviewed from self-efficacy with the magnitude aspect is the student is hard to memorize mathematical formulas. The difficulty of learning mathematics is reviewed from the self-efficacy with the strength aspect is the students are less confident and cheating the answers of friends. The difficulty of learning mathematics is reviewed from the efficacy of the generality with the aspect of the students always see an example of the problem when working on mathematical tasks.

Keywords: Learning Difficulties, Qualitative Research, Self-Efficacy.

INTRODUCTION

According to Sugihartono, et.all (2009, 149): "Symptoms seen in learners characterized by a low learning achievement or under a predetermined norm are called learning difficulties." Based on the results of observation in class VIII A SMP Muhammadiyah Ngemplak obtained the results of some students in the class VIIIA look silent when the teacher asks students to progress on the given mathematical tasks. Also, most of the students do not know how to accomplish mathematical tasks and often see their friends while working on the mathematical tasks that are given. To know the low achievement of learning and efficacy in class VIII A students then interviewed with Ibu Endang Srilestari I, S.Si., Teacher of mathematics grade VIII A with the results among other students tend to have difficulty learning mathematics. Students are still guided by Mrs. Endang Srilestari I, S.Si., to find answers. Students often ask their friends when they do the math task. Based on the results of observations in class VIII A and the results of interviews with teachers concluded that students in class VIII A SMP Muhammadiyah Ngemplak not convinced that he was able to complete the tasks given to him. Therefore, students in class VIII A SMP Muhammadiyah Ngemplak can be said to have low self-confidence.

Self-confidence or commonly called self-efficacy. According to Bandura in Winataputra, Udin S (2008, 4.2) Self-efficacy is a person's judgment of self-ability in regulating and implementing a series of actions required to obtain a pre-defined work result Usually called self-efficacy. Self-efficacy or self-efficacy is divided into three aspects, namely the magnitude aspect, strength aspect, and generality aspect.

Based on research conducted by Pajares and Miller in Kurniawati, Annisa Dwi (2014, 37) that the relationship of self-efficacy with the difficulties of learning is very relevant because the students who have

high self-efficacy then students are confident to complete the task and confidently with his ability, otherwise, the student who has a low self-efficacy then the students feel unsure of his ability. It is reinforced by D. Philips in Ormrod, Jeanne Ellis (2008) that the self-efficacy is very related to learning difficulties because with high self-confidence then students learn and excel more than in students who have self-efficacy that Low.

Therefore, research needs to be done on "The Analysis On Students' Mathematics Learning Difficulties Viewed From Their Self-Efficacy In Grade VIII On SMP Muhammadiyah Ngemplak Sleman Regency". The problem formulation of the research is how is the difficulty of learning mathematics that is reviewed from the efficacy of the students at Junior High School VIII A Muhammadiyah Ngemplak? With research aims to explain the difficulties of learning that is reviewed from the efficacy of self-graded VIII students SMP Muhammadiyah Ngemplak.

METHOD

This type of research uses qualitative research methods. The research site is in SMP Muhammadiyah Ngemplak Kabupaten Sleman. The study was conducted on 06 October 2018 until 10 May 2019. The subject of this study is 9 students of grade VIII A SMP Muhammadiyah Ngemplak taken in purposive sampling. The object of this research is the difficulty of learning mathematics reviewed from self-efficacy. The data collection techniques used are documentation, self-efficacy polls, mathematical tests, and interviews. The research instruments used are self-efficacy poll sheets, mathematical test sheets, documentation guidance sheets, and interview guidelines.

In the first step, the student fills in the provided self-efficacy questionnaire. Then, the results of self-efficacy in the calculation to determine the students are on the efficacy of themselves with the magnitude aspect, strength aspect, and generality aspect. In the second step, students work on the mathematical tests that have been provided. Furthermore, the mathematical test results in the analysis to determine the difficulty of learning mathematics factually, conceptually and procedural. Thereafter, the results of the self-efficacy poll and the results of the mathematics test combined and grouped by the efficacy of the magnitude, the aspect of strength and generality aspects and the difficulty of learning mathematics in factual, conceptual and Procedural. After that, selected 3 students who have a magnitude aspect, 3 students who have a strength aspect and 3 students who have a generality aspect to interview alternately and repeatedly to get the data that is saturated.

The validity of the data in this study is conducted with credibility testing i.e. triangulation source. Then conducted data analysis according to Miles, Mathew B and A. Michael Hiberman (2014, 14) that is data reduction, data presentation and withdrawal of conclusions until the data is obtained saturated.

RESULTS AND DISCUSSION

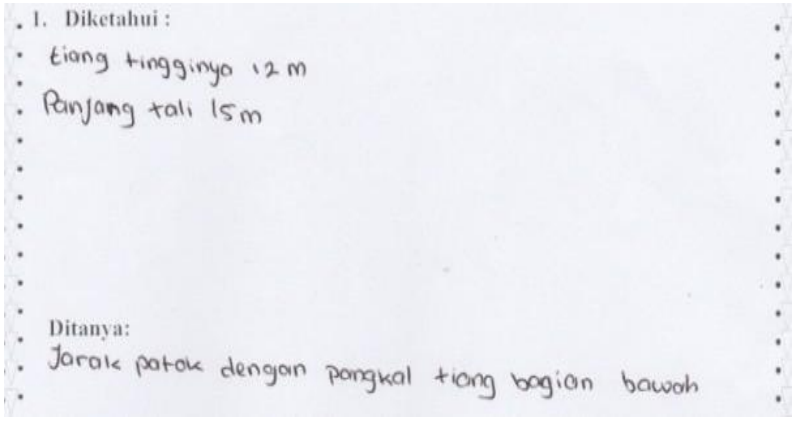
Retrieval of research data using self-efficacy polls, mathematical tests, and interviews. Self-efficacy poll is used to obtain the data of self-efficacy students of class VIII A SMP Muhammadiyah Ngemplak. The data retrieval was conducted on 03 April 2019. Based on the results of A self-efficacy poll of 33 students of grade VIII A SMP Muhammadiyah Ngemplak acquired self-efficacy data students who have an aspect of magnitude 39.47%, strength aspects of 21.05%, and generallity aspects of 26.32%.

The mathematical test is used to gain difficulty in factual, conceptual and procedural mathematics. The data retrieval was conducted on 03 April 2019. Based on the results of the mathematics test of 33 students in class VIII A obtained mathematics learning data as follows: The difficulty of learning mathematics factually 59.60%, conceptual 41.41% and procedural 25.25%. Furthermore, among the data on self-efficacy and learning difficulties math data from 33 students of class VIII A combined and made one so that obtained the following data: The difficulty of learning mathematics factually reviewed from the efficacy of themselves with aspects 57.78 magnitude%, the difficulty of learning mathematics conceptually reviewed from the self-efficacy with the magnitude aspect as much as 40%, the procedurally learning math difficulties that are reviewed from self-efficacy with magnitude aspects as much as 25.55%. The difficulties of learning mathematics in a factual review of the self-efficacy with a strength aspect of

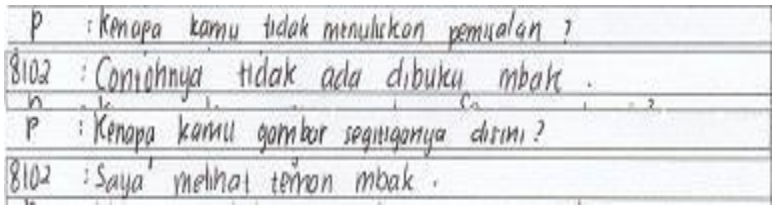
62.50%, conceptual mathematical learning difficulties are reviewed from the efficacy of self with a strength aspect as much as 37.50%, learning difficulties Procedural mathematics which is reviewed from self-efficacy with a strength aspect as much as 20.83%. The difficulty of learning mathematics factually reviewed from the efficacy of self with generality aspect as much as 60%, the difficulty of learning mathematics conceptually reviewed from the efficacy of self with generality aspect as much as 46.67%, learning difficulties Procedurally reviewed from the efficacy of a generality of 23.33%.

After the results of the self-efficacy and mathematical test results, then interviews with 9 research subjects in-depth to get detailed information about math learning difficulties reviewed from self-efficacy. In-depth interviews are conducted by the interview guidelines but are non-binding or semi-structured, so questions can be developed unstructured according to the oral answers and the behavior of the student interviewed. This interview was conducted to find out the cause of learning difficulties students mathematics in factual, conceptual and procedural. The following are math test results and student interviews on learning difficulties that are reviewed from self-efficacies, such as:

1. Magnitude
   a. Factual



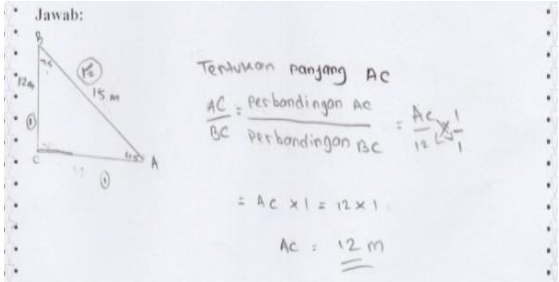
Picture I. Quotation Answers Factual to Subject 8102



Picture II. Quotation Interview Factual to Subject 8102

Students who have a magnitude aspect have factual difficulties that do not know if to write a misspelling because students are accustomed to working without writing and hesitating in drawing because students have memorized about triple Pythagoras

   b. Conceptual

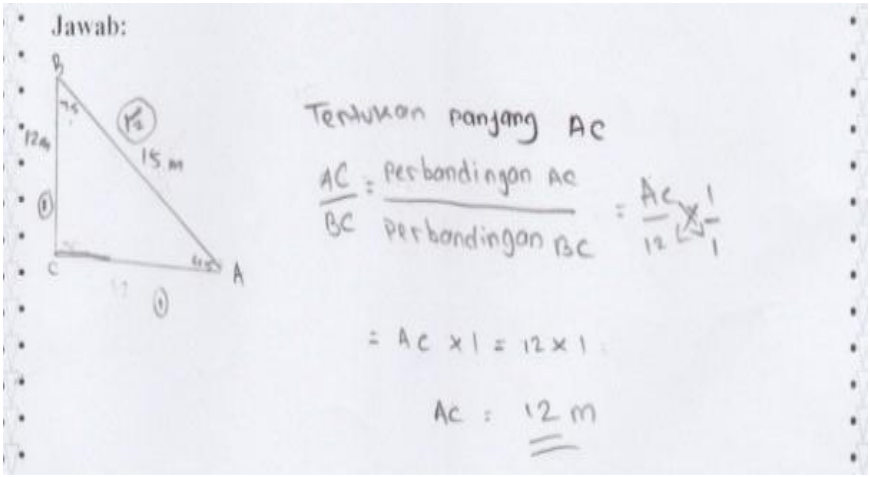


Picture III. Quotation Answers Conceptual to Subject 8102

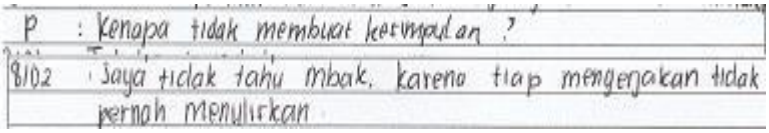
Picture IV. Quotation Interview Conceptual to Subject 8102

Students who have a magnitude aspect have conceptual difficulties that are forgotten because students are hard to memorize the formula.

c. Procedural



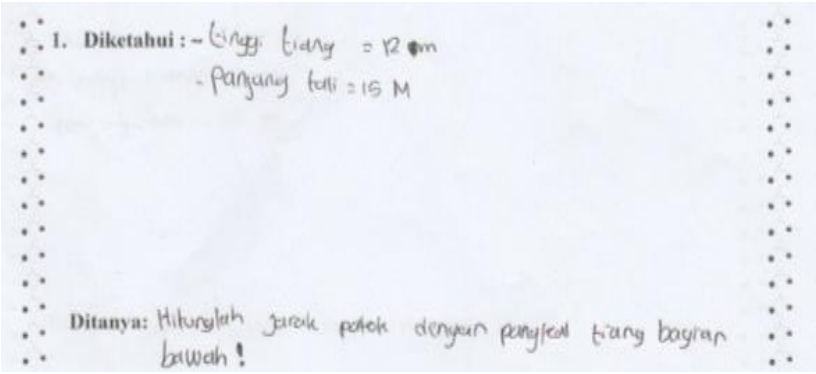
Picture V. Quotation Answers Procedural to Subject 8102



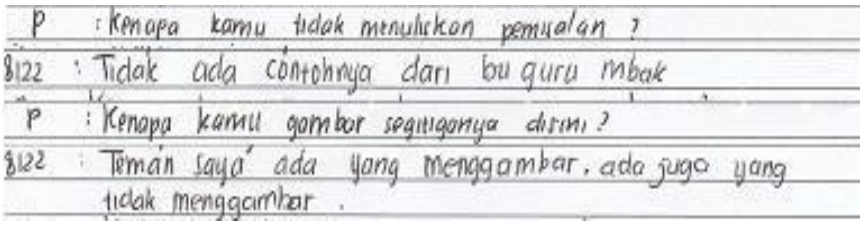
Picture VI. Quotation Interview Procedural to Subject 8102

Students who have a magnitude aspect have procedural difficulties are confused at not knowing about the conclusion.

2. Strength
   a. Factual



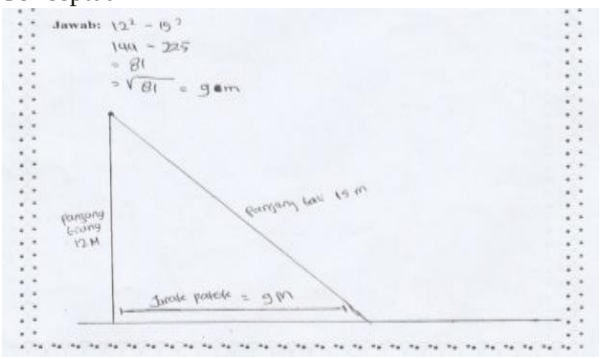
Picture VII. Quotation Answers Factual to Subject 8121


P : Kenapa kamu tidak menuliskan pemyalan ?
S122 : Tidak ada contohnya dari bu guru mbak
P : Kenapa kamu gambar segitiganya dirimi ?
S122 : Teman saya ada yang menggambar, ada juga yang tidak menggambar.

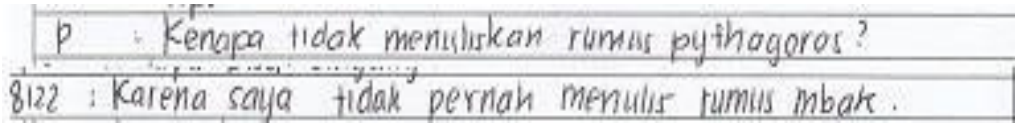
Picture VIII. Quotation Interview Factual to Subject 8121

Students who have a strength aspect have factual difficulties that are forgotten because the teacher never gives an example and hesitate to follow his friend.

b. Conceptual



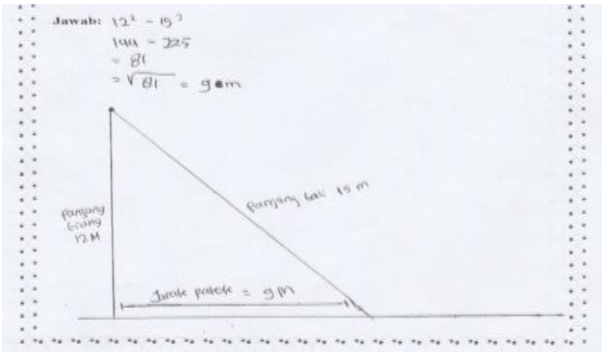
Picture IX. Quotation Answers Conceptual to Subject 8121


P : Kenapa tidak menuliskan rumus pythagoras ?
S122 : Karena saya tidak pernah menulis rumus mbak.

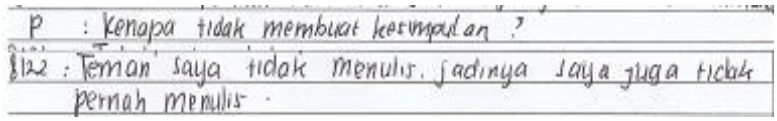
Picture X. Quotation Interview Conceptual to Subject 8121

Students who have a strength aspect have conceptual difficulties that are confused because they do not know where to write them.

c. Procedural



Picture XI. Quotation Answers Procedural to Subject 8121

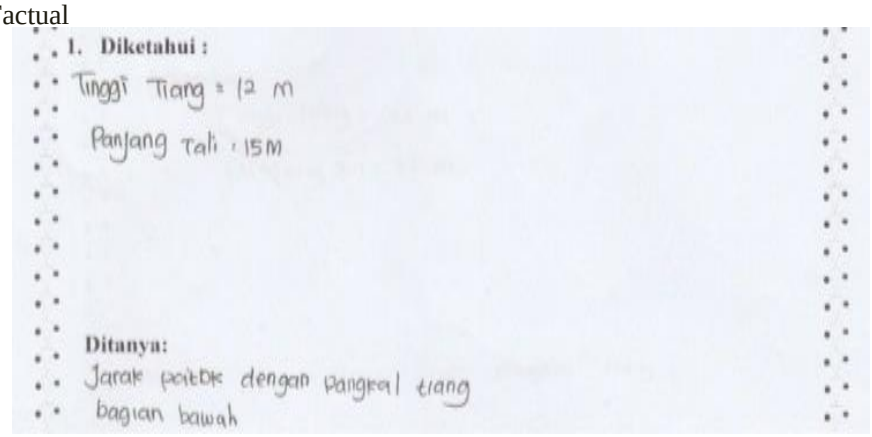

P : Kenapa tidak membuat kesimpulan ?
S122 : Teman saya tidak menulis, jadinya saya juga tidak pernah menulis.

Picture XII. Quotation Interview Procedural to Subject 8121

Students who have a strength aspect have procedural difficulties i.e. not knowing because they follow their friends.

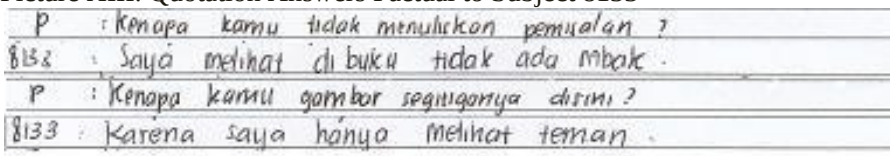
3. Generallity

a. Factual


1. Diketahui :
Tinggi Tiang = 12 m
Panjang Tali = 15 m

Ditanya:
Jarak poitDk dengan pangkal tiang bagian bawah

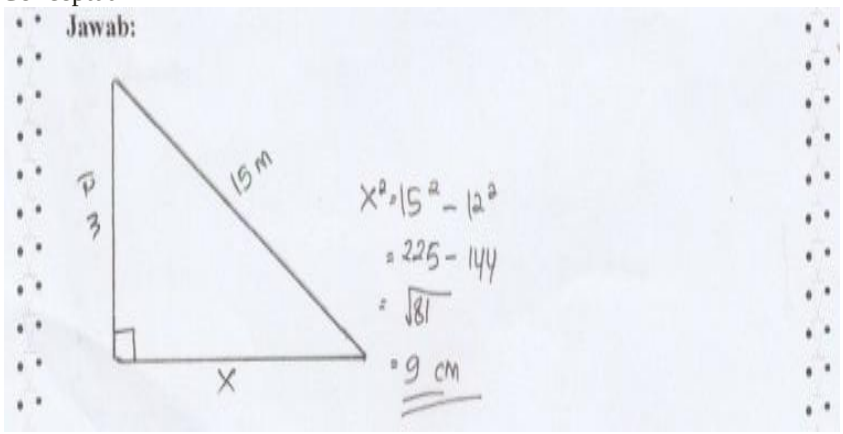
Picture XIII. Quotation Answers Factual to Subject 8133


P : Kenapa kamu tidak menuliskan pemisalan ?
8133 : Saya melihat di buku tidak ada mbak.
P : Kenapa kamu gambar segitiganya disini ?
8133 : Karena saya hanya melihat teman.

Picture XIV. Quotation Interview Factual to Subject 8133

Students who have a generality aspect have factual difficulties that are confused because in the book there is no example and doubtful of not knowing the actual image.

b. Conceptual



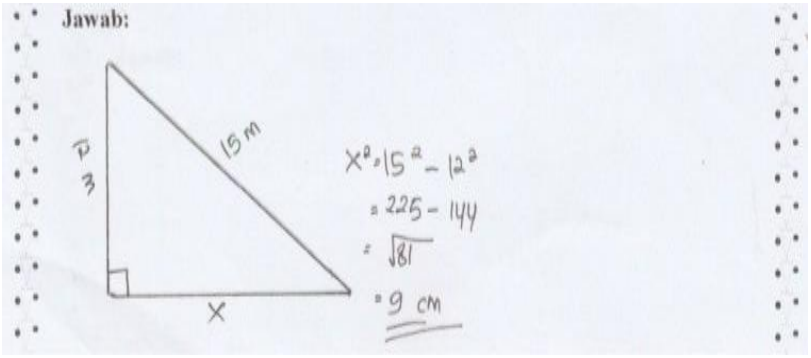
Picture XV. Quotation Answers Conceptual to Subject 8133


P : Kenapa tidak menuliskan rumus pythagoras ?
8133 : Ada 'simbol-simbol mbak, saya tidak hafal mbak.

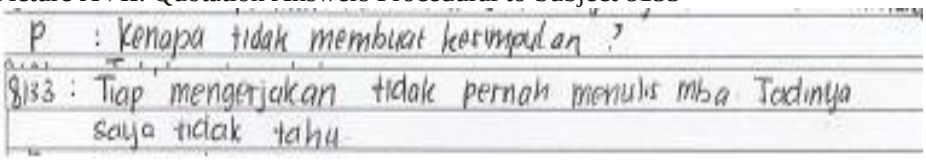
Picture XVI. Quotation Interview Conceptual to Subject 8133

Students who have a generality dimension have the conceptual difficulty of forgetting the formula because there are symbols.

c. Procedural



Picture XVII. Quotation Answers Procedural to Subject 8133



Picture XVIII. Quotation Interview Procedural to Subject 8133

Students who have a generality aspect have procedural difficulties i.e. not knowing because they never write when working on mathematical tasks.

CONCLUSION

Based on the results of the study and the discussion of the conclusion is the cause of difficulty learning mathematics in students of grade VIII A SMP Muhammadiyah Ngemplak divided into 3 aspects. The causes of difficulty learning mathematics in students are:

1. The cause of difficulty in learning mathematics in students who have self-efficacies with factual magnitude aspects is not knowing because it is accustomed directly to answer without writing a transcribe and already memorized about a triple Pythagoras. While it is conceptually forgotten to write a formula, Pythagoras because it is difficult to memorize the formula and procedurally that is confused because never write conclusions.
2. The cause of difficulty in learning mathematics in students who have self-efficacies with a factual aspect of the strength is forgotten because there is no example and follow other friends. While conceptually confused as it never writes the formula and procedurally that is not knowing because it follows another friend.
3. The cause of difficulty learning mathematics in students who have self-efficacy with aspects of generality factual is confused because in the book there is no example and do not know the actual image. While it is conceptually forgotten because there is a symbol – its symbols and procedurally is not knowing because it never writes conclusions every work.

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