An analysis of the cause factors of unreachable standard minimum criteria on mathematics learning

Y F Aziiza¹*, T Herman²

¹Program Studi Pendidikan Matematika, Pascasarjana, Universitas Pendidikan Indonesia, Jl. Dr. Setiabudi No. 229, Bandung 40154, Indonesia
²Departemen Pendidikan Matematika, Universitas Pendidikan Indonesia, Jl. Dr. Setiabudi No. 229, Bandung 40154, Indonesia

*Corresponding author’s email: yushilatufa@upi.edu

Abstract. Abstract. The study aim knows the factors cause the learning outcomes of students unreachable the standard minimum criteria (KKM) on mathematics learning. The method used in this study was descriptive. The subjects research used the purposive sampling method. Data collection tools are questionnaires about the factors that cause students to unreachable KKM. Techniques data analysis uses a percentage formula. The conclusion of this research is the main cause of the students to get the value below KKM on mathematics teaching is the lack of motivation that exists in the students, the skill in learning mathematics is still very low, the health of students very influential about the learning process. In addition to the internal factors, there are also external factors, the external factor consists of the teachers and aspects of the parent. Students feel motivated to learn if the teacher uses media or mathematical aids. Another external factor is parents, parents have given cell phones to their children. These two factors cause students unreachable the KKM math subjects.

1. Introduction
Mathematics is one of the important subjects that must be present in school learning. Mathematics is a subject that is often considered have a high level of difficulty. Learning Mathematics is a complex endeavor in order to get to have a numeric capabilities. The survey proves that some of the adults do not have numeric capabilities, for example when their calculating the price changes. Therefore, everyone is expected having mathematical skills, for making the right decisions in daily life, and also for having other aspects that relate to one’s psychological and physical [1] and [2]. Mathematics learning in the 2013 curriculum aims to emphasize aspects of modern pedagogic by using scientific approaches [3].

Achievement of goals needs to be completed by an assessment or evaluation. Learning success is the overall achievement of the examination to find out how far someone reach the learning objectives [4]. Students are considered have result the standard competencies, if they have mastered the indicators beyond KKM (standard minimum criteria). Assessment or evaluation basically have some consideration based on certain criteria. Student are categorized have mastered mathematics learning, through competencies standard and basic competencies that include in daily test, mid test and final test [5].

KKM (standard minimum criteria) is the minimum criteria of mastery learning determined by educational institution. KKM is determined by student’s characteristics, subject characteristics, and
educational institution. Standard minimum criteria of mastery learning are set at the beginning of the school year by education units based on MGMP (Discussion forum of teachers in a certain subject).

Standard minimum criteria of mastery learning plays an important role in determining learning sustainability of the students. Students who successfully passed the test are student that attain the determined minimum criteria of mastery learning. If the students have not reached the KKM, then they can join to the remedial process [6].

In learning mathematics students are influenced by their prior knowledge and affective factors; self-concept, confidence, etc. In addition, student learning achievements are influenced by school facilities, economic status, social culture, and school environment. Learning outcomes are facts about what is expected to be known, done and can be demonstrated by learners at the end of learning. These learning outcomes are often regarded as achievements through the learning process [7]. Teaching and learning process without the readiness of learning is less effective and subsequently becomes a serious threat to improve educational achievement among students [8].

Based on result of researcher’s observation at one of the State Junior High School in West Bandung, most students assume that Mathematics is a difficult subject, so the students feel worried about the incompleteness of to pass examinations. This case is reinforced by the data of midterm examination result of Class VIIIB. The total students were 32, with the highest examination score was 92 and the lowest was 25 so that the percentage of completeness of the mathematics examination was 35.29% the maximum percentage of KKM specified in achieving basic competency 100. In this school determines the KKM score is 68. The KKM is considered not high from the expected national completeness target which is at least 75 [10].

Table 1. List of Class VIIIB Grade Even Semester School Year of 2018/2019

|                          | Total students who attend examination | Average Score | Students who pass | Students who fail |
|--------------------------|--------------------------------------|---------------|------------------|------------------|
| Daily Test 1             | 31                                   | 64            | 4                | 25               |
| Daily Test 2             | 29                                   | 42.89         | 18               | 13               |
| Mid Term Examination     | 31                                   | 58.52         | 12               | 19               |

Source: Teacher’s document

Table 1 shows the average scores from daily test 1, daily test 2, and midterm examination that have not reached the minimum completeness criteria. In the midterm there are 61% students who did not complete the mathematics subject. Because the KKM has been well considered, so the KKM which has been determined is convenient with the KKM criteria. Therefore, it is not the KKM score that is too high as the cause of achievement of the student learning outcomes in mathematics, but it is caused by other factors.

The success of learning activities can be influenced by how learning activities are planned, carried out and evaluated. To find out the factors that cause students unreachable KKM score, so the researcher wants to analyze the factors that cause the students unreachable KKM in mathematics. The purpose of his research is to determine the factors that cause the students unreachable the KKM in mathematics learning.

2. Method

This research was conducted in one of the junior high school in west Bandung. The percentage of completeness of the mathematics examination was 35.29% from the maximum percentage of KKM specified in achieving basic competency 100. The approach used in this research is the descriptive method. The technique used was purposive sampling technique, which is the samples were students who unreach the KKM in the midterm examination. From total 32 students of class VIII B, 19 students were taken as the samples.
Table 2. Questionnaires about the cause factors students of unreached KKM

| Factor    | Aspect                                      | Indicator                                      | Positive | Negative | Total |
|-----------|---------------------------------------------|-----------------------------------------------|----------|----------|-------|
| Internal  | Motivation                                  | Attention, conformity, confident, and satisfaction | 1,2,4    | 3,5,6,7  | 7     |
|           | Interest                                    | Feeling, attention, attraction                | 8,9,10, 13 | 11,12,14,15 | 8    |
| External  | Teacher (media, class management and method)| Physical condition                            | 16,17,18 | 19,20,21 | 6     |
|           | Parents (way of parents in educating, economy)|                                                | 22,23,25 | ,27,28,24 | 3     |

Table 2 shows the questionnaire grid that will be given to students to find out internal and external factors that cause students unreachable KKM. Questionnaire consists of 30 items with alternative answers very often (Vo), often (O), rarely (R), and never (N). To find out the causes of these aspects, the formula used:

$$Df = \frac{F}{N} \times 100\%$$  \hspace{1cm} (1)

Explanation: Df is percentage, F is frequency, and N is total sample.

3. Result and Discussion

Data collection used an instrument in the form of a questionnaire. Each instrument was given to students as research respondents. The data were tabulated and analyzed using descriptive analysis which aims to describe the research data. In processing research data, the following is an overview of aspects that affect the achievement of values under the KKM as shown in table 3.

Table 3. An overview of internal and external factors

| Factor    | Aspect                                      | Very often | Often  | Rarely | Never |
|-----------|---------------------------------------------|------------|--------|--------|-------|
| Internal  | Motivation                                  | 36.84%     | 26.32% | 31.58% | 5.26% |
|           | Interest                                    | 42.11%     | 42.11% | 10.53% | 5.26% |
|           | Physical (physical condition)               | 45.61%     | 26.32% | 19.29% | 8.77% |
|           | Teacher (media, classroom management and methods) | 36.84%     | 21.05% | 31.58% | 10.53% |
|           | Parents (the way parents educate, economics) | 45.00%     | 35.00% | 15.00% | 5.00% |
| Average   |                                            | 39.47%     | 28.95% | 23.68% | 7.89% |

Table 3 illustrates internal and external factors that cause students unreachable KKM. Internal factors in terms of aspects of interest, motivational aspects, and physical aspects. The results of the study show that the dominating aspects of students’ lack of completeness are motivational aspects. From the internal aspect of student is motivation, it shows that almost half (36.84%) have low motivation.

Motivation is an essential factor in mathematic learning, because it is a factor to encourage students to learn to get something new in the form of behavior change as a result of the experience itself. Motivation is a process that considers the process, direction, and effort to achieve the desired goals. By referring to psychological forces that move people, bring them into action, and keep them on purpose.
The low abilities children in elementary school will affect the ability of mathematical skills in getting a job as an adult. The motivations from influences and beliefs are very important in learning and understanding mathematics [9]. Motivation is an important aspect of effective learning in school. Motivation is very much related to the individual, the effect of motivation affects how they behave. Therefore, a person, from the point of psychology can be seen as an academic person depending on the goals to be achieved. Students assume that mathematics is still difficult, so students do not understand mathematics and feel unhappy in learning mathematics. Teaching and learning activities will succeed if students always have the motivation to learn.

The description of the state of interest towards achievement of scores under the KKM shows that a small proportion of students (15.79%) have low interest. Interest has a great influence on mathematics learning takes place. Even interesting lessons are lessons that can attract students' interest because by attracting students' interest it can be easier to remember and save because interest can improve learning outcomes [10,11]. Students' interests in mathematics related to arranged work, consisting of skills, personality, and self-concept. It can be concluded that the majority of students are quite interested in learning mathematics.

The importance of interest in learning to create conditions students always need knowledge and have a sense of learning. At school, there are often exam-oriented learning, heavy math homework and boredom which decreases students' interest in learning mathematics. The situation of students' interest in mathematics learning is lacking, there was 42.11% who very often and often, 10.53% was rare and 5.26% felt they never had happy feelings when the teacher gave an award and felt happy in the presence of the teacher.

Physical aspects (physical conditions) illustrate that most students (45.61%) have a large problem in learning if health is impaired. The condition of the students can be seen from their physical condition and psychological condition. Physical condition is faster than the psychological condition. If the physical condition of students is stunted students will easily feel tired, easily sleepy, and difficult to receive lessons. There was 45.61% choosing very often to feel that physical factors would influence learning outcomes. The learning process will be disrupted if the physical condition is disrupted, 52.6% of students will do math assignments if their body is healthy, 12% of students will very often feel the lesson is hampered if their body is sick. And only 21.05% of students can learn long and the body stays fresh. A person's health is very influential on the results of his learning and a person's learning process will be disrupted if a person's health is disturbed.

The external factors causing the achievement of KKM in mathematics learning was viewed from the aspects of teachers and parents. Almost some students (10.53%) felt that the teacher had never used mathematics learning media, 89.47% of teachers explained the lesson using the lecture method. 32.69% was motivated if the teacher would use props. And a small number (10.52%) of students stated that the teacher did not pay attention to students. It can be concluded that almost some students have a response that the teacher's attitude is very influential in mathematics learning. In the teaching and learning process, it is expected that the teacher is responsive in finding obstacles in students. The results of this study indicated that almost a portion of students (48.65%) felt the influence of learning media, classroom conditions and the use of methods in learning success.

In the teaching and learning process, there are things that are needed to make learning mathematics interesting. The need to use methods/strategies and materials/media that will provide an active, inventive, and adventurous. The method must be an important method in building student motivation in learning mathematics. For example, using media that is around students. The teacher should be able to provide activities (game activities) that contain mathematical problems. Students will be trained from the easiest questions to the most difficult questions [12].

The causes of students’ unreachable KKM from parents were mainly 36.84% of students had been allowed to use mobile phones, 60.57% lack of parental attention to students' learning outcomes and the economy parents who were middle to lower economies. Based on research [13] there are significant relationship between social support of parents and learning outcomes obtained by students. The support given by parents to children one of which provides the facilities needed by children to learn. Learning
facilities are one of the various factors that affect children's learning outcomes. These facilities can include the provision of stationery, textbooks, and other facilities. This means that the higher the social support of parents, the learning outcomes will be high and vice versa if the social support of parents is low, the learning outcomes will be low.

The education supports the formation of an independent personality and good self-confidence. Negative parenting/parenting patterns, often giving harsh words, giving excessive punishment, and not taking time for children, children will feel unaccepted, not loved, even he will always have doubts or it could even be a rebellious child who lacks confidence [12].

4. Conclusion
Based on the results of the research and discussion on the factors that caused the lack of attainment of minimal completeness criteria in mathematics class VIII at one of the State Junior High School in West Bandung, the general conclusion that can be drawn is that there are internal and external factors that cause KKM inaccuracy in mathematics subject. The main causes of students getting scores below KKM in mathematics subject is the lack of motivation that exists within students, students think mathematics is too difficult to understand, and the curiosity / sense of self-motivation in learning is still very low. The causative factor of the aspect of interest is the lack of attention in learning mathematics is still very low. The causative factor of physical aspects is the influence of the students' condition on the learning process and results. Besides internal factors there are also external factors, external factors consist of aspects of the teacher and aspects of the parent. Students feel motivated to learn if the teacher uses media or mathematics teaching aids, but in practice the teacher still uses the lecture method to explain the lesson. Another external factor is parents, parents have given cell phones to their children, this is one of the factors causing the failure of reaching the mathematics' KKM in Middle School.

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