ISSN 2502-5872 (Print)
ISSN 2622-3627 (Elektronik)

Volume 9 Nomor 2, May 2024, 513-528

THE OBSTACLES OF STUDENTS AND TEACHERS IN IMPLEMENTING THE 2013 REVISED CURRICULUM IN MATHEMATICS LEARNING: A PHENOMENOLOGY STUDY

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ABSTRACT

This research aims to examine and describe the obstacles faced by students in implementing the 2013 revised curriculum in 2018 in mathematics learning, as well as to examine and describe the obstacles faced by teachers in implementing the 2013 revised curriculum in 2018 in mathematics learning. The research instruments used in this study include data collection methods such as observation, in-depth interviews, and documentation. During the observation process, the researcher observes students and teachers during mathematics learning activities, while in-depth interviews are conducted to obtain interview results that will be analyzed using the ATLAS.ti 8 application, and documentation is carried out to capture images such as photos or videos during the observation and interview processes. Obstacles faced by students in implementing the 2013 revised curriculum in 2018 in mathematics learning include: students feeling less focused and concentrated during mathematics learning; students experiencing difficulties in understanding material, calculating, and memorizing mathematical formulas; incomplete and undetailed textbook content; the use of language in textbooks being too advanced; students often feeling sleepy during mathematics learning; students' mood affecting their learning activities; teachers not delivering the material in detail, too quickly, or too elaborately; classrooms being noisy; and inadequate facilities and infrastructure. Meanwhile, obstacles faced by teachers in implementing the 2013 revised curriculum in 2018 in mathematics learning include: language used by teachers being difficult for students to understand; low basic skills of students; students having different characteristics; students having low motivation and varying abilities.

Keywords: Mathematics Learning, Curriculum 2013, Student Learning Obstacles, Teacher Teaching Obstacles

How to Cite: Ilmi, S. A. N. T., Ismunandar, D., & Sudirman, S. (2024). The Obstacles of Students and Teachers in Implementing The 2013 Revised Curriculum in Mathematics Learning: A Phenomenology Study. *Mathline: Jurnal Matematika dan Pendidikan Matematika, 9*(2), 513-528. http://doi.org/10.31943/mathline.v9i2.522

PRELIMINARY

Mathematics is a science that plays a very important role in the world of education, such as being able to recognize and apply ideas in everyday life in society (Kang et al., 2020). The success of education greatly influences students, whether at the classroom level or in specific subjects (Batty & Reilly, 2023) Furthermore, education should also be able to

enhance students' abilities in developing competencies (Viro et al., 2020 Therefore, this is what drives educators to have an effective role in developing and improving the student learning process (Guven & Gokdag Baltaoglu, 2017). Torres-Molina et al., (2019) explain that learning and understanding mathematics is difficult, complex, and intimidating because it requires students to think logically, meticulously, perseveringly, systematically, and must make a genuine effort to learn it, leading students to describe their identity towards mathematics as 'math haters.' It is generally perceived as a subject that is difficult to understand or makes students uninterested, resulting in negative perceptions about the subject (Cosby et al., 2022). This is due to the fact that many students still face obstacles when dealing with mathematical problems (Akhter & Akhter, 2018). Additionally, students' dislike of mathematics hinders or makes it difficult for them to learn mathematics (Rayhan & Juandi, 2023). Student learning barriers include low precision, skills, and slow thinking speed, which cause students to have difficulty understanding, lack focus, and are unable to arrange appropriate tasks, greatly affecting the learning process (Grey et al., 2018). Furthermore, parents and peers are the main influences in the student learning process, and adequate teacher understanding is an important role in ensuring students can pass with satisfactory results (Cosby et al., 2022). However, some teachers consider these difficulties related to the student's inherent nature, while others consider them related to learning abilities in the classroom (Kaufmann & Ryve, 2022). The role of teachers in accompanying students can have an impact on student learning outcomes, either due to changes in student behavior or in the learning process (Goldhaber et al., 2020). Therefore, teachers must have the ability to create innovations in teaching and learning in the school environment (R. Msimanga, 2020). Additionally, teachers must also have extensive knowledge, good teaching methods, a desire to improve themselves, and effective communication skills (Bozkurt & Ozdemir, 2018). This can be seen when teachers have more preparation and teaching experience, they tend to perform highly, have high qualifications, and strive to improve the quality of service to students, thus resulting in achieving good learning outcomes (Morita-mullaney et al., 2022).

Lee et al., (2018) state that despite the importance of the teacher's role, teachers also face obstacles such as the learning delivered is still difficult for students to understand, not only in the learning activities themselves but can also affect students' skills and learning outcomes. Education at various levels has shown that obstacles for teachers impact the learning process, such as low student motivation, lack of support from fellow teachers or colleagues, and ineffective classroom conditions (Obrad, 2020). Quality

teachers are crucial for the education system, including improving various skills and reflecting to meet needs, thus being able to maintain teacher workforce innovation and proving to influence student learning achievement (Cosby et al., 2022). Therefore, teachers as sources for selecting certain teaching materials, teaching methods, confidence, fostering student interest in learning, and being able to apply the curriculum effectively (Tuithof et al., 2021).

The current curriculum development requires teachers who are able to use knowledge to solve problems, think analytically, able to model the problems faced using open mathematical reasoning to present objectives (Bilgili & Ciltas, 2018). As well as helping students in the appropriate learning process in solving the mathematical problems they experience (Tohara et al., 2021). So that they can utilize ideas from the curriculum applied to learning and possibly depend on the future as expected (Narvekar et al., 2020). Jones (2022) explains that curriculum changes have provided potential opportunities to improve the learning process that strengthens students to think critically, creatively, consider various environmental problems, and make decisions based on information. Curriculum design is very important in shaping progress-oriented curriculum, especially since it needs to be guided for proper development in supporting and improving the student learning process (Koglbauer, 2022). In the 2013 curriculum revised in 2018, teachers are required to develop creativity in arranging materials in conducting the learning process according to the conditions of the students, this makes teachers who are accustomed to long-applied learning methods will find it difficult to create more varied methods, thus implementing the 2013 revised 2018 curriculum demands teachers in developing enjoyable learning creativity in accordance with the students' condition (Ismunandar, 2018; Yusmawati et al., 2020). This can encourage meaningful changes in the teaching and learning process (Korhonen et al., 2022). Tsiane & Motebang (2022) show that teachers must be the standard of success in implementing education by having innovation to change teachers in trying to learn the curriculum and how to overcome it. Therefore, with the curriculum being able to increase broader competencies in empowering individuals, realizing potential, whether it concerns the ability to display certain behaviors or in performing certain tasks and focusing on students' capacity to adapt to creativity and solve problems (Bayley, 2022). This encourages researchers to conduct research aimed at examining and describing student and teacher obstacles related to implementing the 2013 revised 2018 curriculum in mathematics learning at SMA Negeri 1 Indramayu. This study uses a qualitative phenomenology approach.

METHODS

This research uses a qualitative approach with a phenomenology study design focused on meaning or describing a phenomenon from what is experienced or the experiences that occur (Sulistiyo et al., 2020). Participants were taken using purposive sampling based on age. Researchers used purposive sampling because the age distribution of students in class X ranged from 15 to 16 years. This was done to represent the student population at high school level, class X. There were 8 participants consisting of 6 students and 2 mathematics teachers. This research shows the characteristics of the participants in the research. The research participants or data sources studied were 6 students of class This research was carried out at SMA Negeri 1 Indramayu.

Table 1. Student Characteristics

Level	Number Of People	Gender	Age
X IPS	6	3 male students	About 15 years old (Before May 1, 2023)
		3 female students	About 16 years old (After May 1, 2023)

Table 2. Teacher Characteristics

Teaching Experience	Number Of People	Gender	Age
More than 10 years	2	2 male teachers	Around below 35 years old About more than 30 years old

The data collection method in this research is by using observation, interviews and documentation methods. Observation instruments are used to see the condition of the class during learning. Interview instruments were used to obtain data. Interview instruments are divided into two, namely interview instruments for teachers and interview instruments for students. Meanwhile, documentation is used to ensure that research activities from start to finish are carried out correctly and the results of the documentation are used to ensure that the researcher actually conducted interviews with research subjects.

Observation Guidelines

The observation or observation carried out was observing the interview process with data sources regarding student and teacher obstacles in implementing the 2013 revised 2018 curriculum in mathematics learning at SMA Negeri 1 Indramayu: Phenomenology Study. The observation process includes the following:

A. Purpose

To obtain information and data regarding both physical and non-physical conditions related to the process of carrying out research on student and teacher barriers in implementing the 2013 revised 2018 curriculum in mathematics learning.

B. Observed aspects:

1) Class Conditions
2) Teacher Condition
3) Student Condition

Figure 1. Observation Guidelines

Figure 1 is an observation guide used by researchers to collect data during research. This observation and interview guide has been discussed with the research team and has been stated to be able to be used to collect data.

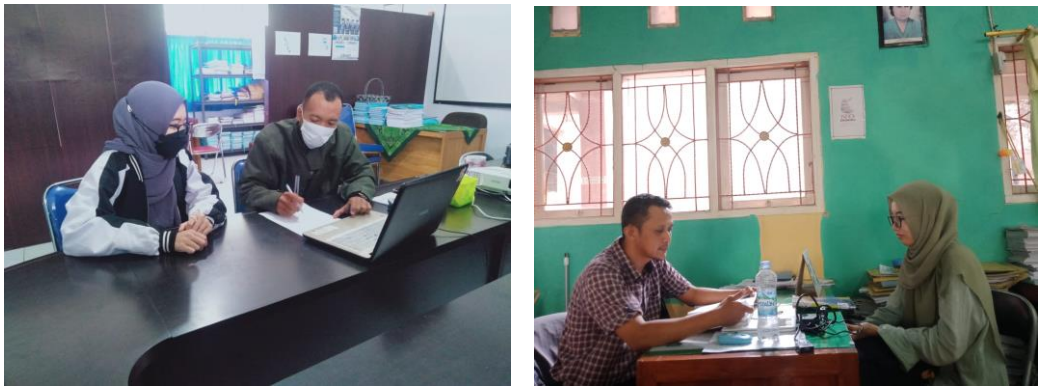


Figure 2. Instrument Validation Process

In Figure 2, the research team discusses to obtain a valid instrument. Researchers conducted discussions with the aim of the instruments used to make it easier for students and teachers to understand questions during interviews. Apart from that, the research team also discussed steps for data validation or data validity after the data was collected.

Triangulation in research can be directed at evaluating data that is examined and checked from various data sources in various ways and at different times, thus dividing triangulation into source, technique and time triangulation. The validity of the data in this research uses technical triangulation, technical triangulation is used to test data which is done by finding out and searching for the truth of the data from the same source through different techniques, these are techniques such as observation, interviews and documentation which are then combined into one to reach a conclusion and produce valid

data (Alfansyur & Mariyani, 2020). In this research, the data analysis process can be seen in the following this figure.

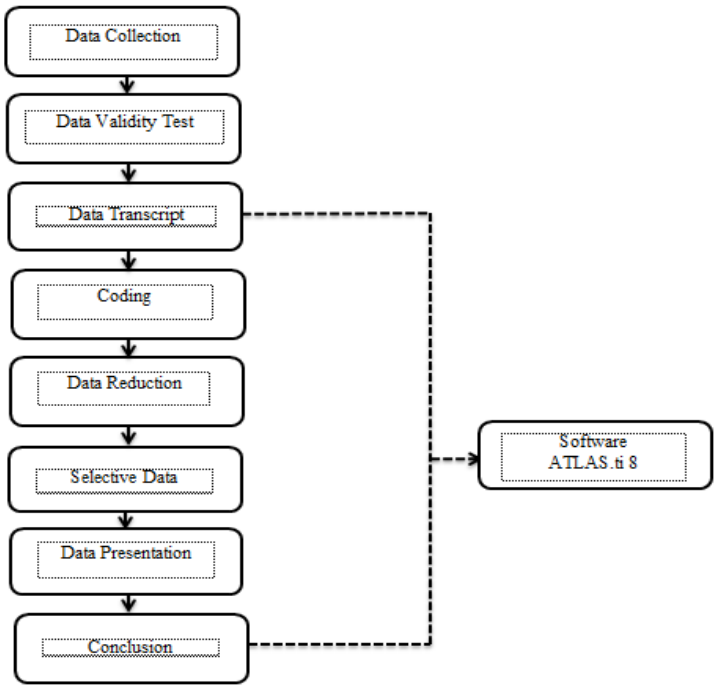


Figure 3. Qualitative Data Analysis Process

Figure 3 shows the steps of this research. In the initial stage the researcher collects data, then the data obtained is validated or the validity of the data is checked. Valid data is then transcribed, coded, reduced, selected and presented. The final step is to conclude.

RESULT AND DISCUSSION

In this study, Figures A1, A2, A3, A4, A5, and A6, are class X IPS students. Meanwhile, the description of R1 is a 36 year old mathematics teacher with 16 years of teaching experience and R2 is a 33 year old mathematics teacher with 13 years of teaching experience. When the researcher came to the school to meet the participants, all participants were willing to be interviewed and documented. The following will explain the research results as follows:

After conducting observations on students and mathematics teachers, the researchers obtained 6 participants from class X IPS students who were selected based on age and 2 participants from mathematics teachers based on more than 10 years of teaching experience. The following is a table of participants as follows:

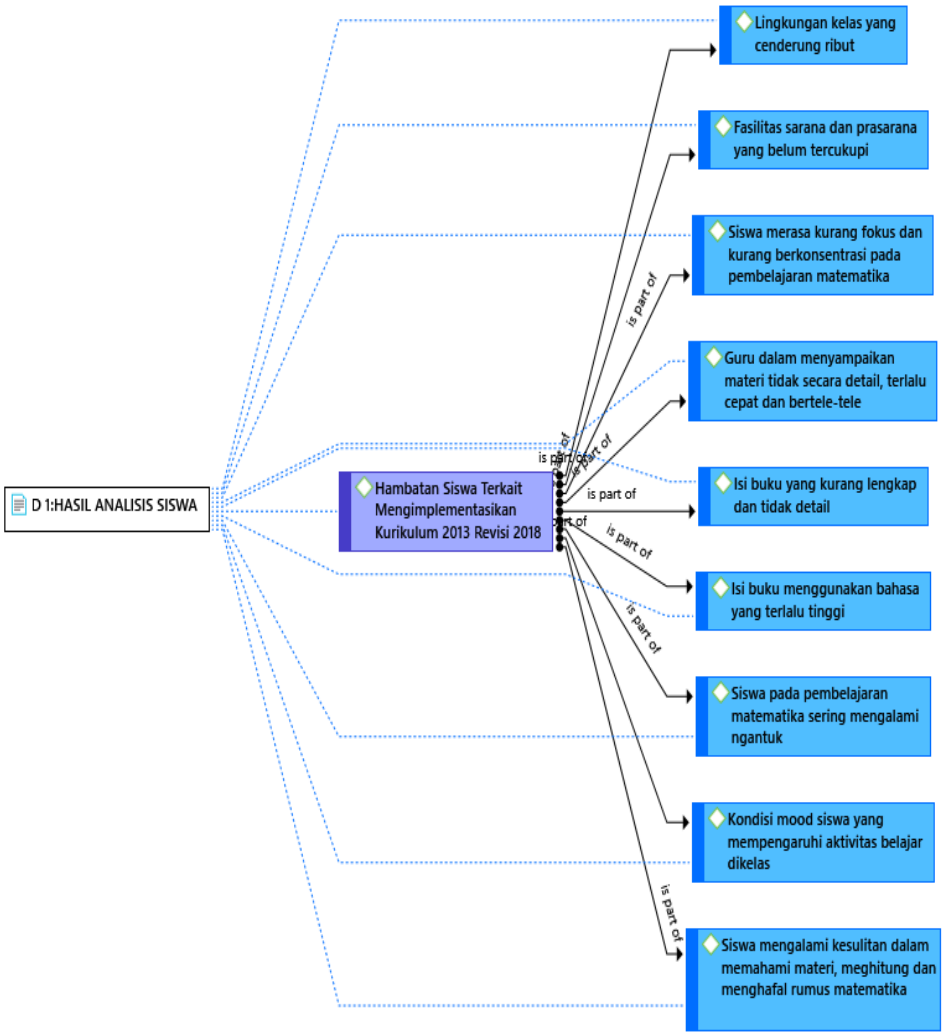
Table 3. Student Participants

No.	Student Initials	Gender	Age	Information
1.	FF	Male	16 years old	About 15 years old (Before May 1, 2023)
2.	AY	Male	15 years old	
3.	IL	Female	17 years old	
4.	KA	Female	15 years old	About 16 years old (After May 1, 2023)
5.	NZ	Female	16 years old	
6.	RB	Male	16 years old	

Table 4. Mathematics Teacher Participants

No.	Teacher's Initials	Gender	Age	Teaching Experience More Than 10 Years
1.	AM	Male	36 years old	16 years
2.	DA	Male	33 years old	13 years

Based on the analysis results obtained by students A1, A2, A3, A4, A5, and A6, it can be concluded that the student obstacles related to implementing the 2013 revised 2018 curriculum are as follows:



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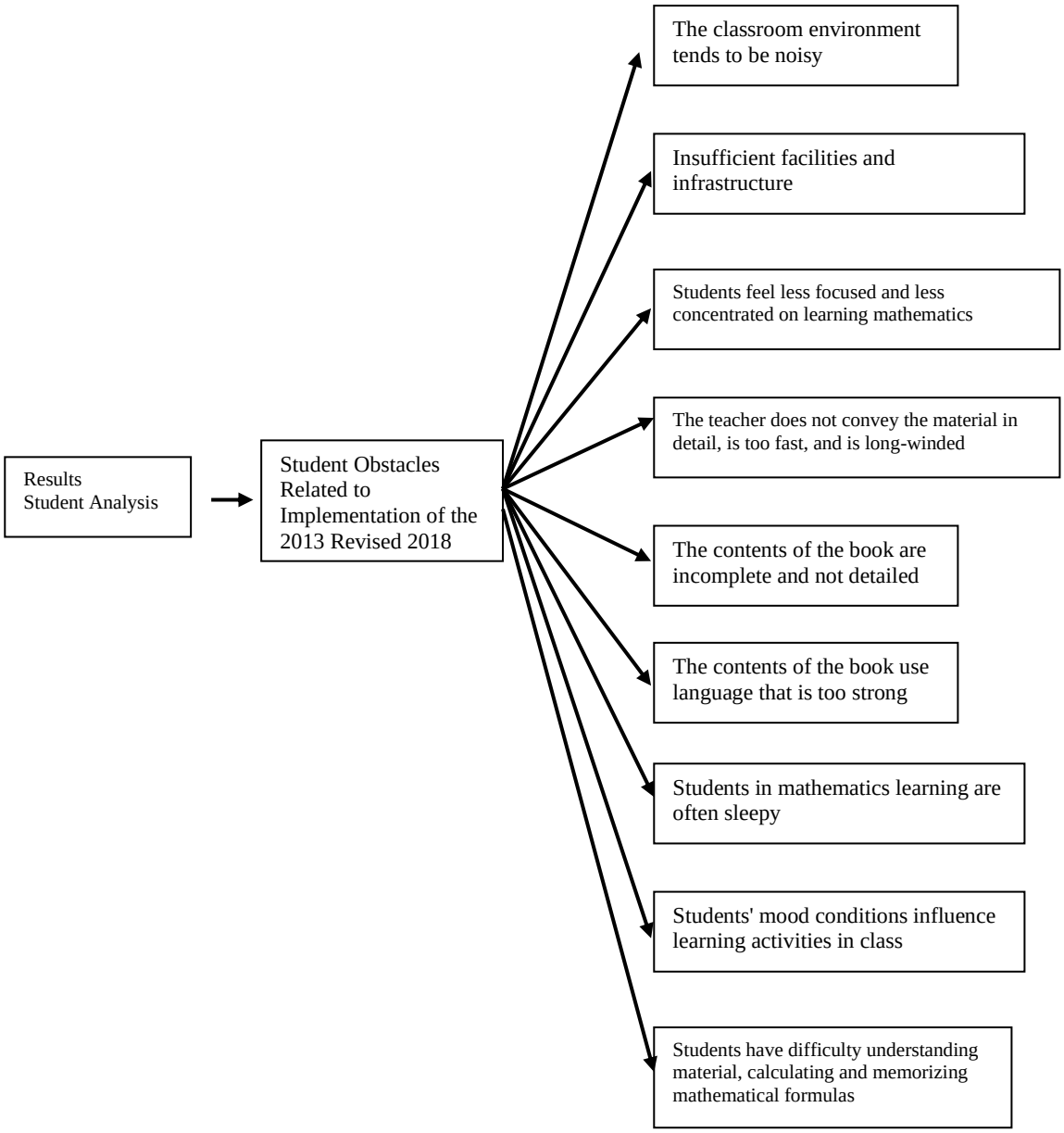
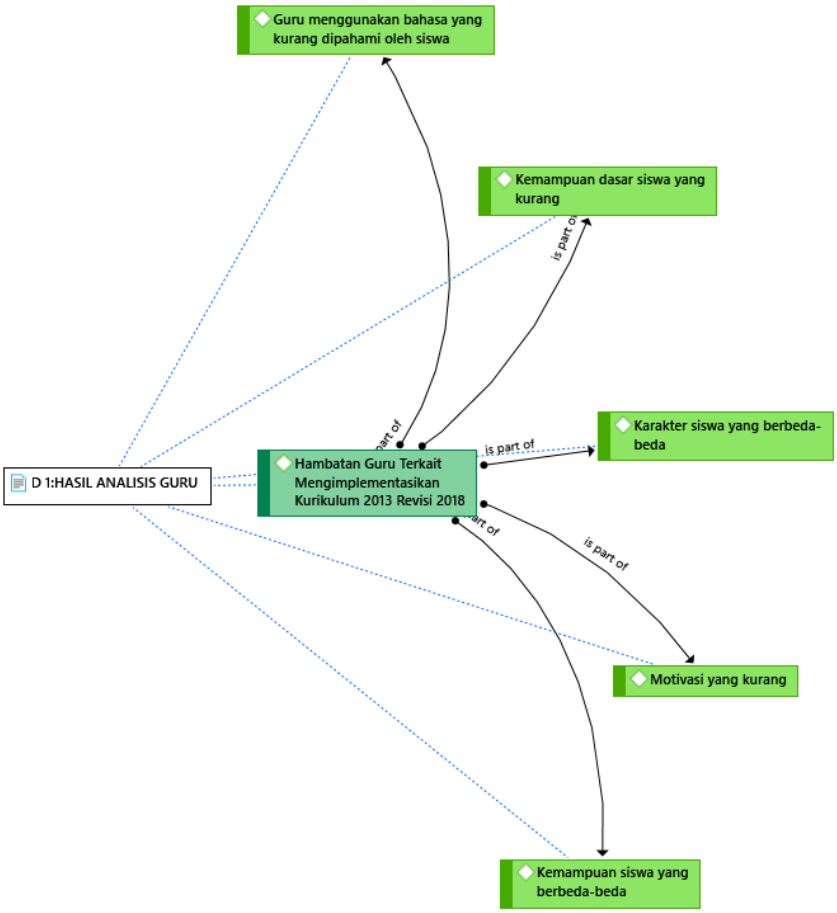


Figure 4. Conclusion Analysis of Student Results

Based on the analysis results obtained by teachers R1 and R2, it can be concluded that the teacher's obstacles related to implementing the 2013 revised 2018 curriculum are as follows:



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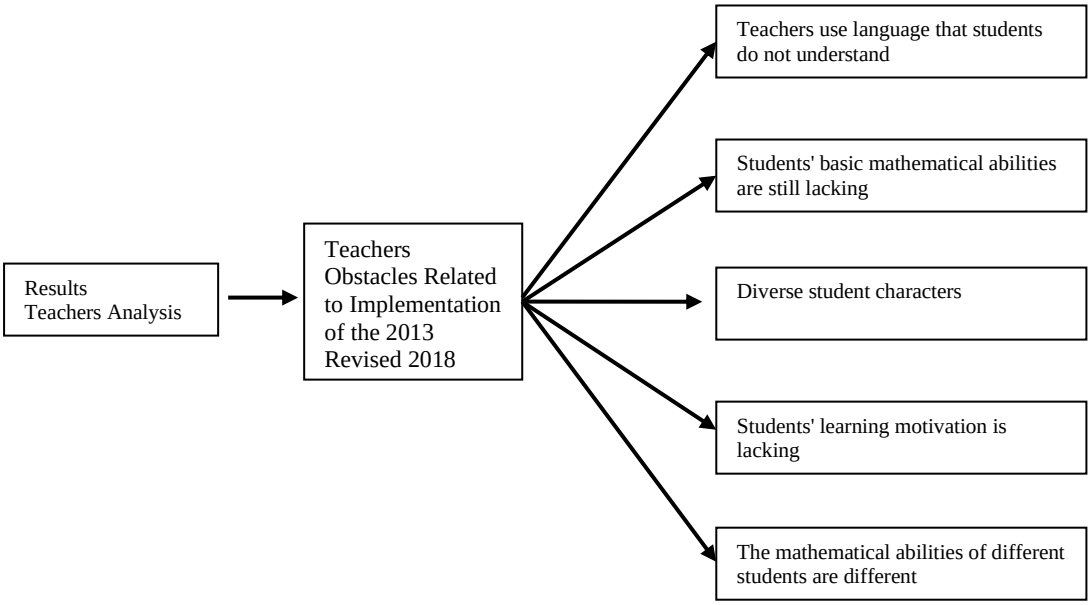

Figure 5. Conclusion Analysis of Mathematics Teacher Results

Based on the data presented, it shows that student and teacher barriers related to implementing the 2013 revised 2018 curriculum in mathematics learning at SMA Negeri 1

Indramayu are: Student obstacles related to implementing the 2013 revised 2018 curriculum in mathematics learning include: students feel less focused and less concentrated on learning mathematics ; students have difficulty understanding material, calculating and memorizing mathematical formulas; the contents of the book are incomplete and not detailed; the contents of the book use language that is too high; students in mathematics learning often experience sleepiness; students' mood conditions that influence learning activities; the teacher does not convey the material in detail, is too fast and long-winded; classroom environments that tend to be busy; inadequate facilities and infrastructure.

Based on the results of observations and interviews, students felt less focused and less concentrated because students experienced difficulties in the mathematics learning process such as understanding the material. In the learning process using the 2013 curriculum, teachers deliver material too quickly and not in detail, calculating and memorizing formulas which are quite complicated and you have to really understand them. Another obstacle to implementing the 2013 curriculum is that the contents of the book are incomplete and the language in the book is too high so that students feel confused and lack learning resources from the book, therefore students look for other sources, one of which is via the internet. In the learning process, students often experience sleepiness in class when the teacher provides material, this occurs because the students' mood conditions can influence students' learning activities. A busy classroom environment can disturb students' concentration and make them unable to focus on the learning process. The existing facilities and infrastructure in schools are not yet adequate, this really supports the learning process in the classroom.

The results of this research are supported by the results of other research which states that facilities are another important factor in implementing the teaching and learning process, such as student books and others. Therefore, most schools implement a policy that students must download books from the internet and other books that are downloaded so that they can be used as a guide for the teaching and learning process. Apart from that, the alternative is for teachers to design teaching and learning processes that will be in accordance with the new curriculum independently (Retnawati et al., 2017). The material provided by teachers to students during the mathematics learning process is not detailed enough and is delivered too quickly. Apart from that, several research results support this research, namely that students feel that this has a big influence on students' effectiveness in learning, especially in learning mathematics, students' perceptions are unpredictable or

there is a lack of variation in the way teachers deliver material during the process of learning activities in class (Perdana & Chu, 2023). Apart from that, teachers must have competent and detailed material, must create concepts and points that will be implemented in the teaching and learning process and teachers must interpret how much the teacher understands in teaching ideas to students (Retnawati et al., 2017).

As for the factors that influence students in their learning process when students lack focus and concentration on learning mathematics, the results of this research are supported by the theory which states that this is caused by classmates or a noisy classroom environment and also a boring learning process so that the learning process is not conducive (Rohman & Karimah, 2018). Another thing happens because students often experience sleepiness during the mathematics learning process, because students often sleep late at night or in the middle of the night. The results of this research are supported by the theory which states that students who are sleepy during the learning process will cause ineffective learning conditions so that students do not fully absorb the material (Suprapti, 2021). Based on the opinions above, it can be concluded that students who experience obstacles or difficulties in the mathematics learning process are caused by several factors, namely internal factors, namely from within themselves and external factors, namely from outside themselves, this has a big impact on the learning process and learning outcomes. students in class.

Meanwhile, teacher obstacles related to implementing the 2013 revised 2018 curriculum in mathematics learning include: (a) the language used by teachers is difficult for students to understand; (b) students' basic abilities are still low; (c) students have different characters; (d) students have low motivation and students have different abilities. The results of this research state that the difficulties experienced by teachers during the mathematics learning process are that the language used by the teacher is difficult for students to understand, so students find it difficult to interpret the material presented by the teacher during the mathematics learning process. The results of this research are supported by a theory which states that the low achievement of learning outcomes is caused by the teacher's delivery of the material being fixed and boring, in addition to that, in delivering the material the teacher uses language that is difficult for students to accept (Setyabudi, 2023). Apart from that, students' low basic abilities greatly influence their basic mathematics skills (Chotimah et al., 2018). This is very necessary for students, such as having the ability to think creatively to be able to adapt to various changes and find new

ideas, search for information carefully, analyze existing information or data, and think of superior ways to solve problems (Runisah, 2021).

Another difficulty factor experienced by teachers during the mathematics learning process is that students have different characters, this greatly influences the learning process. This theory directs that different student characters are formed based on the results of family upbringing which then becomes an inhibiting factor in implementing learning (Zulyan et al., 2021). Boredom for students can lead to their lack of motivation to learn and pay attention to the teacher during the learning process (Senjaya et al., 2017). Therefore, motivation plays a very important role in the learning process. With motivation in students, students are able to improve their skills and competencies well, this is shown by the theory which states that teacher expectations may have a more direct and stronger impact on student motivation, because this is the beginning of actions that influence student achievement. , for example studying hard and facing difficulties (Hornstra et al., 2018). Based on the above, it can be concluded that the obstacles or difficulties experienced by teachers greatly influence students because teachers play a very important role in improving the basic abilities of students who have different characters so that they are able to apply and understand the material in the mathematics learning process in accordance with the desired expectations.

CONCLUSION

A summary of the research results and discussion is as follows: (1) Student obstacles related to implementing the 2013 revised 2018 curriculum in mathematics learning include: students feel less focused and less concentrated on learning mathematics; students have difficulty understanding material, calculating and memorizing mathematical formulas; the contents of the book are incomplete and not detailed; the contents of the book use language that is too high; students in mathematics learning often experience sleepiness; students' mood conditions that influence learning activities; the teacher does not convey the material in detail, is too fast and long-winded; classroom environments that tend to be busy; inadequate facilities and infrastructure. (2) Meanwhile, teacher obstacles related to implementing the 2013 revised 2018 curriculum in mathematics learning include: the language used by teachers is difficult for students to understand; students' basic abilities are still low; students have different characters; Students have low motivation and students have different abilities.

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