

CONFERENCE PAPER • KICE 2026 • YOGYAKARTA, INDONESIA

Analysis of Teacher and Student Difficulties in Learning Mathematics during Implementing the Semester Credit System (SCS) at Kedu Residency

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Proceedings of the Kalijaga International Conference on Education 2026

Abstract. The implementation of mathematics learning during the implementation of SCS at Kedu Residency, Central Java still contains difficulties for both mathematics teachers and students. Therefore, it is necessary to analyze the difficulties of teachers and students in learning mathematics while implementing SCS at Kedu Residency. This research aims to determine the difficulties of teachers and students in learning mathematics while implementing SCS at Kedu Residency as well as strategies for overcoming these difficulties. This research includes qualitative research with a phenomenological approach. The participants in this research were 20 mathematics teachers and 61 high school students who applied for SCS at Kedu Residency. The data collection techniques used were interviews, observation, and documentation. The data analysis technique used is the Bogdan and Biklen technique. The results of this research show that there are still several difficulties in implementing mathematics learning with SCS. Difficulties that occur come from mathematics teachers, students, mathematics material, environment, and time. Some material that is difficult according to mathematics teachers and students is three dimensions and trigonometry. In addition, mathematics teachers and students have strategies to overcome these difficulties.

Keywords: *difficulty analysis, mathematics learning, semester credit system (SCS).*

INTRODUCTION

Differences in individual abilities within the school are something that is of great concern because these differences become a challenge for teachers to carry out learning. According to [1], individual differences are the main differences in academic preparation and ability, and accommodation of these differences can be done by tracking abilities. In line with [2] who states that each person is different from one another and no one has the same characteristics. Each individual has different characteristics from other individuals. These individual differences are a natural human trait, so individual differences require an appropriate learning process.

Policy in Indonesia has attempted to develop students' abilities to be tailored to their needs. However, education in Indonesia currently, both at the primary and secondary education levels, still uses a package system, where all students receive the same portion of learning as determined by the school. This is considered less appropriate to students' abilities, talents, and interests. Students who have a higher intellectual level and skills will be hampered from completing their study program. On the other hand, students who are weak in their intellectual abilities and skills will find it difficult to keep up with students who have high abilities [3]. This is strengthened by the opinion of [4] who states that the implementation of learning is difficult to facilitate students' different interests, talents, and speeds and is a challenge for teachers in integrating students according to the students' mental and emotional abilities. Therefore, to make all this happen, schools can implement the Semester Credit System (SCS). In line with research from [5], the government provides alternatives for schools to accommodate students' needs according to their talents, interests, and abilities with the Semester Credit System (SCS) in school administration.

According to Minister of Education and Culture Regulation No. 158 of 2014 concerning the Implementation of the Semester Credit System in Primary and Secondary Education Article 1 states that the Semester Credit System, hereinafter referred to as SCS, is a form of education implementation in which students agree on the amount of study load to be followed and/or study strategies each semester in the educational unit according to their talents and interests, and learning ability/speed. SCS is organized through organizing varied learning and flexible management of study time [6]. It is hoped that this SCS can truly provide education according to each student's abilities.

Currently, SCS has been implemented in several high school level schools in Kedu Residency. Kedu Residency was an administrative unit that existed in Central Java during the Dutch East Indies colonial period and several years after. Currently, the Kedu Residency has been abolished but is still used to assist the administration of the provincial government. Kedu Residency covers the areas of Magelang City, Magelang Regency, Temanggung Regency, Kebumen Regency, Purworejo Regency, and Wonosobo Regency. SCS is not a new issue, it's just that recently it has emerged again amidst the current secondary education problems. The number of lessons that students must receive each week is by the school package. Not to mention the pressure to get maximum marks in each lesson, lots of textbooks, and the addition of piling up homework will create a feeling of boredom and ultimately lead to a feeling of being lazy about studying. Especially in mathematics lessons, students still find it difficult to learn. In line with research conducted by [7] which states that students still experience difficulties in learning mathematics.

Mathematics learning needs to be designed so that it can accommodate various student characteristics [8]. Students who experience learning difficulties can have various symptoms of learning difficulties. Obstacles that prevent students from understanding the mathematical concepts they absorb are usually called learning difficulties [9], [10]. Learning difficulty factors can be learned from internal or external factors, the more learning difficulty factors experienced by students tend to cause students to experience learning difficulties. Learning difficulties can be experienced by students in high, medium, and low-ability groups [11], [12]. Improving thinking skills in mathematics is very necessary because the need for understanding and using mathematics in life and in the world of work is greater and continues to grow [13]. This is in line with what was conveyed by [14] who said that improving thinking skills has become one of the priorities in school mathematics lessons. Therefore, in learning mathematics, students need to get used to providing arguments for each answer and responding to answers given by other people [15]. Due to the many things learned in mathematics, it is not uncommon to find students who find it difficult to understand mathematics.

According to research from [16], students experience difficulties in carrying out mathematics learning, both in understanding concepts, calculating, and solving story problems. The factors that cause difficulties in learning mathematics include the abstractness of objects and patterns in mathematics, there are many formulas, and the limited space for interaction that occurs between teachers and students [17]. The subject of mathematics is known to be difficult, so students views of mathematics consider it a difficult subject because of the abstractness of the objects and the large number of formulas used as a result, which is difficult for students to understand and understand [18]. Teachers also find it difficult to implement mathematics learning in class in implementing SCS. Awareness of the difficulties experienced by students in their learning process is an important first step for teachers to design and manage mathematics lessons [19], [20], [21], [22]. By research conducted by [5], teachers still experience difficulties in facilitating three types of learner groups, namely fast learners, normal learners, and slow learners. Therefore, at the beginning of the semester, teachers have not divided student types and are still using the 2013 curriculum learning.

Based on the problems above, it is necessary to analyze the difficulties of teachers and students in learning mathematics while implementing SCS at Kedu Residency, especially at the high school level. The aim of analyzing teachers' and students' difficulties in learning mathematics while implementing SCS at Kedu Residency is to find out the difficulties teachers and students have in carrying out mathematics learning while implementing SCS at Kedu Residency because this can provide input as well as solutions for the future. The aim of this research is also to find out teachers' and students' strategies for overcoming these difficulties.

METHODS

The research method used in this research is qualitative research with a phenomenological approach. The time of this research was carried out from July 2023 to September 2023 which was carried out at high schools in Kedu Residency, Central Java which implemented SCS. 6 high schools implemented SCS in Kedu Residency, namely Wonosobo State High School 1, Wonosobo Muhammadiyah High School, Wonosobo Takhasus Al Quran High School, Kebumen 1 State High School, Kebumen 2 State High School, and Purworejo 1 State High School. Data collection techniques in this research are observation, interviews, and documentation. The data sources in this research were 20 mathematics teachers and 61 high school students in Kedu Residency who implemented SCS. The instruments used were observation and interview instruments.

In this research, qualitative data analysis techniques were carried out using the Bogdan and Biklen analysis technique model. Data analysis was carried out by determining the relationship between themes to gain understanding using the Bogdan and Biklen model [23]. The stages include: 1) data reduction, 2)

presenting it in tabular form, and 3) verifying the data. The interview results were then reduced and presented in table form and subthemes were searched for and then connected the subthemes to the theme. In this research, the relationship between themes is used to gain an understanding of the results of the analysis of the implementation of mathematics learning during the implementing of SCS, the difficulties of mathematics teachers and students in learning mathematics during the implementing of SCS, and the strategies of mathematics teachers and students in overcoming difficulties in learning mathematics during implementing SCS at Kedu Residency.

The grid for interview guidelines can be seen in Tables 1 and 2. In table 1, the grid for interview guidelines for mathematics teachers is explained as follows:

Table 1. Interview guide grid for mathematics teachers

No	Aspect	Indicator
1.	Difficulty learning mathematics with the Semester Credit System	<ul style="list-style-type: none"> Explain the difficulties faced when implementing mathematics learning using the Semester Credit System
		<ul style="list-style-type: none"> Mention the types of difficulties that mathematics teachers often face in teaching mathematics using the Semester Credit System
		<ul style="list-style-type: none"> Explain the factors that cause difficulties in implementing mathematics learning using the Semester Credit System
2.	Strategy for overcoming difficulties in learning mathematics with the Semester Credit System	<ul style="list-style-type: none"> Explains teachers' strategies for overcoming difficulties in learning mathematics using the Semester Credit System

Then the interview guideline for students can be seen in table 2 as follows:

Table 2. Interview guideline for students

No	Aspect	Indicator
1.	Difficulty learning mathematics with the Semester Credit System	1. Explain the difficulties faced when implementing mathematics learning using the Semester Credit System
		2. Mention the difficulties faced when studying mathematics using the Semester Credit System
		3. Explain the factors that cause difficulties in implementing mathematics learning using the Semester Credit System
2.	Strategy for overcoming difficulties in learning mathematics with the Semester Credit System	4. Explain students' strategies for overcoming difficulties in learning mathematics using the Semester Credit System

RESULTS AND DISCUSSION

The process of learning mathematics is not free from difficulties in implementing it. According to [24] the characteristics of students with learning difficulties appear in 1) attention disorders; 2) failure to develop and mobilize strategies for learning, organizing learning, active learning frameworks, and metacognitive functions; 3) weak movement ability between good and gross movement coordination; 4) perception problems, among others, differentiation of auditory, visual, auditory closure and frequency, and visual stimuli; 5) spoken language difficulties; 6) difficulty reading; 7) difficulty writing language; 8) mathematical difficulties, including quantitative thinking, counting, time, space, and calculating facts; and 9) inappropriate social behavior.

The difficulty of learning mathematics for schools that implement SCS in Kedu Residency is quite varied. These difficulties will be seen from the perspective of mathematics teachers and students. Based on the results of data analysis, there are seven sub-themes obtained for the theme of difficulties faced by mathematics teachers in learning mathematics with SCS in Table 3.

Table 3. Reduction Results Related to Difficulties Faced by Mathematics Teachers in Learning Mathematics with SCS

No	Sub-theme	Relationship between sub-themes
1.	Students' levels of ability vary when learning mathematics with credits.	Difficulties faced by mathematics teachers in teaching mathematics with SCS.
2.	Different UKBM at one time in class when learning mathematics with SCS.	
3.	Determining fast, medium or slow learners in learning mathematics with credits.	
4.	Students' motivation is still low in learning mathematics and the views of students who feel mathematics is difficult.	
5.	In one class there are two study groups for students who have completed 2 years and students who have completed 3 years of	

No	Sub-theme	Relationship between sub-themes
	mathematics learning with credits.	
6.	There is a gap in ability in the class when learning mathematics with credits.	
7.	The focus of mathematics teachers is divided when implementing mathematics learning with credits.	

The difficulties that mathematics teachers face when implementing mathematics learning with credits are mostly due to the different abilities of students, the difficulty of determining fast, medium, or slow learners, and there are 2 study groups in one class for students who have completed 2 years and 3 years. The existence of gaps in ability in the classroom also makes mathematics teachers find it difficult when they want to teach mathematics to students. When students have different abilities in understanding mathematics material in one class, it is also difficult for mathematics teachers to focus on teaching. Therefore, mathematics teachers find it difficult to implement mathematics learning with credits more because of the different abilities of students, not because of the mathematics teachers themselves. Then, based on the results of data analysis, there were seven sub-themes obtained for the theme of difficulties faced by students in learning mathematics with SCS in Table 4.

Table 4. Reduction Results Related to Difficulties Faced by Students in Learning Mathematics with SCS

No	Sub-theme	Relationship between sub-themes
1.	Not mastering the mathematical material being studied.	Students' difficulties in learning mathematics with credits.
2.	Fast time is not accompanied by fast understanding by students when learning mathematics.	
3.	Difficulty in memorizing mathematical formulas by students.	
4.	Difficulty in understanding mathematical problems and how to apply mathematical formulas to these problems.	
5.	The mathematics teacher's mood and the mathematics teacher's explanations are unclear.	
6.	Mathematics teachers are too fast in teaching their students.	
7.	The difference between example questions and practice math problems is what sometimes makes students difficult.	

The difficulties that students face in learning mathematics with credits, most of the 61 students are related to poor understanding of mathematics material, lack of understanding related to mathematics problems, teachers' teaching methods that are not suitable or too fast, difficulty in memorizing formulas, and fast time for students who graduated 2 years. Apart from that, to find out more about difficulties in learning mathematics, questions were asked regarding whether there was any mathematics material that made mathematics teachers and students difficult in learning mathematics. Based on the results of data analysis, there are seven sub-themes obtained for the theme of difficult mathematics material in learning mathematics with SCS in Table 5.

Table 5. Reduction Results Related to Difficult Mathematics Material in Mathematics Learning with SCS

No	Sub-theme	Relationship between sub-themes
1.	Mathematical material that is difficult to demonstrate in real life.	Mathematics material that is difficult for students to accept is based on the opinion of mathematics teachers in learning mathematics with credits.
2.	The material on trigonometry limits and integrals is certainly difficult for students to accept.	
3.	The third dimension is material that is quite difficult for students to accept because it requires a strong imagination.	
4.	Logarithms, geometric transformations, and probability are also difficult material for students to accept.	
5.	There is a lot of material that students have not mastered, such as limits, series, arithmetic sequences and geometric shapes.	Students' difficulties in some mathematics material when studying mathematics with credits.
6.	Students find logarithms, three dimensions, trigonometry and geometry difficult.	
7.	Students still find it difficult when facing material that requires strong analysis.	

From several mathematics teachers' answers regarding topics that become difficult when applying SCS to mathematics learning, there are topics of trigonometry, geometric transformations, logarithms, trigonometric limits, probability, and three dimensions. However, 10 mathematics teachers answered that there were no particular topics that became difficult when applying SCS to mathematics learning. Then for the answers from 61 students, all of them answered that there was material that made it difficult to learn mathematics, such as three-dimensional material, trigonometry, limits, logarithms, algebra, geometry, probability, trigonometry limits, and arithmetic series. However, most students have difficulty with three-dimensional material and trigonometry. Just as the mathematics teacher said, the third dimension requires a strong imagination in solving problems related to spatial figures such as calculating distances between points, lines, planes, and angles between lines and planes. Trigonometry material is also mentioned as difficult material because much of the material in it is difficult for students to memorize. According to tests conducted by TIMSS (Trends in International Mathematics and Science Study), it is known that Indonesian students' achievement in working on geometry content questions is still low. In 2007 Indonesian students

obtained a score of 432, while in 2011 students experienced a decrease of 415 and in 2015 they also experienced a decrease of 405 [25]. This low geometric ability is influenced by students' low ability to understand objects or images of three-dimensional spatial shapes [26]. Strengthened by several research results regarding students' difficulties related to material in learning mathematics, it is shown that students experience difficulties in solving three-dimensional problems, understanding trigonometry material, solving trigonometry problems, and solving story problems on trigonometry function limits [27], [28], [29], [30], [31], [32].

The two materials that has been explained is material that creates difficulties in learning mathematics during the implementing of SCS at Kedu Residency. This difficulty is also caused by many things, such as difficulty understanding mathematics material, students' lack of interest in learning mathematics, lack of focus, mathematics is in the last hour, lack of practice questions, laziness, lack of enthusiasm, and teachers are sometimes unclear in explaining mathematics material. Many factors cause difficulties in learning mathematics during the implementing of SCS at Kedu Residency. Based on the results of data analysis, there are nine sub-themes obtained for the theme of the influence of difficulties faced by mathematics teachers and students in learning mathematics with credits in Table 6.

Table 6. Reduction Results Related to the Effect of Difficulties Faced by Mathematics Teachers and Students in Learning Mathematics with SCS

No	Sub-theme	Relationship between sub-themes
1.	Difficulties faced by mathematics teachers influence the mathematics learning process with SCS.	The difficulties faced by mathematics teachers influence mathematics learning with SCS.
2.	Sometimes the time available is limited while there is a lot of mathematics material presented.	
3.	The packaging of mathematics material needs to be considered when implementing mathematics learning with SCS.	
4.	The mathematics teacher explained it well, but it was difficult for the students to understand it.	The mathematics teacher's explanation is difficult for students to understand when learning mathematics with SCS.
5.	Mathematics teachers do not teach students one by one, but only in front of the class.	
6.	Mathematics teachers explain material that is difficult for students to understand.	
7.	When students have difficulty learning mathematics, they feel that mathematics becomes a burden in learning.	The learning burden faced by students when they find it difficult to learn mathematics with SCS.
8.	Students do not understand mathematics material because they have difficulty understanding it.	
9.	Complicated math problems and laziness in learning mathematics.	

The difficulties faced by mathematics teachers do influence the mathematics learning process. In connection with this, students also sometimes find it difficult to get explanations from mathematics teachers. Opinions regarding the mathematics teacher's explanation resulted in 25 students feeling that it was not difficult to understand or easy to understand, 12 students felt that it was difficult to understand, and 24 students felt that sometimes it was easy to understand, sometimes it was difficult to understand the explanation from the mathematics teacher. Difficulties learning mathematics faced by students are sometimes a burden on students and sometimes not a burden on students. The difficulties that students face in learning mathematics become a burden in learning, because if they don't understand the material they will have difficulties in the future, the more complicated the questions become, the more they are lazy to learn, and sometimes they are afraid of being left behind by their other friends. There were 50 out of 61 students who stated that the difficulties faced in learning mathematics were a burden, but 11 out of 61 students stated that the difficulties faced in learning mathematics were not a burden. The difficulties that occur in these students must be based on causes. Based on the results of data analysis, there are twelve sub-themes obtained for the theme of the causes of difficulties faced by students in learning mathematics with SCS in Table 7.

Table 7. Reduction Results Related to the Causes of Difficulties Faced by Students in Learning Mathematics with SCS

No	Sub-theme	Relationship between sub-themes
1.	Students' difficulties are because they find it difficult to understand and feel complicated in learning mathematics.	Causes of difficulties faced by students in learning mathematics with SCS.
2.	Lack of interest in studying mathematics.	
3.	Inappropriate math lesson times, such as in the last hour of school.	
4.	The mathematics teacher's explanation method is poor and it is difficult to remember mathematical formulas.	
5.	Students feel lazy and afraid when they want to learn mathematics.	
6.	Students are not enthusiastic about learning mathematics.	
7.	The influence of the pandemic on students' way of thinking in learning mathematics.	
8.	Students' poor mood or condition in learning mathematics.	
9.	Students feel less focused in learning mathematics.	
10.	There are too many mathematical formulas and large numbers in	

No	Sub-theme	Relationship between sub-themes
	learning mathematics.	
11.	Students find it difficult to learn mathematics because of the mathematics material.	Mathematics material is one of the causes of students' difficulties in learning mathematics with SCS.
12.	Mathematics material is not entirely the cause of students' difficulties in learning mathematics.	

Some of the causes of student's difficulties in learning mathematics are difficulty understanding mathematics material, students' lack of interest in learning mathematics, lack of focus, mathematics being in the last hour, lack of practice questions, laziness, lack of enthusiasm, and teachers not being clear in explaining mathematics material. The causes of these difficulties are quite varied, but difficulty understanding the material, lack of interest in mathematics, and unclear teacher explanations pretty much dominate students' answers. Mathematics learning activities sometimes experience obstacles because cognitive abilities and everything are different for each student [33]. Judging from the diversity of mathematics subject matter, one subject is related to one or more other subjects. This means that students' difficulties studying one part of mathematics can have an impact on students' difficulties in studying other parts of mathematics [34]. Research conducted by [35] shows that the percentage of difficulty in the concept understanding indicator is 61,59% and is classified as high difficulty.

Mathematics material plays quite a role in making it difficult for students to learn mathematics. Apart from these causes, some factors cause these difficulties. These factors have been confirmed through mathematics teachers and students, so the answers are relevant to those faced with learning mathematics with SCS at Kedu Residency today. Based on the results of data analysis, there are thirteen sub-themes obtained for the theme of factors that cause mathematics teachers to have difficulty in learning mathematics with SCS in Table 8.

Table 8. Reduction Results Related to Factors that Cause Mathematics Teachers to Difficulty in Learning Mathematics with SCS

No	Sub-theme	Relationship between sub-themes
1.	Cell phone facilities are not allowed to be used in mathematics learning.	Factors that cause mathematics teachers to have difficulty in teaching mathematics with SCS.
2.	Excessive student activity means that learning mathematics becomes unfit.	
3.	Students do not understand the meaning of learning mathematics.	
4.	A less motivating environment in mathematics learning.	
5.	Students find it difficult to learn mathematics.	
6.	Students who are moody when studying mathematics.	
7.	Lack of student interest in learning mathematics.	
8.	Mathematics teachers find it difficult to divide their time in implementing mathematics learning.	
9.	Difficulty in packaging mathematical material.	
10.	Many mathematics teachers still have not mastered the learning methods when implementing mathematics learning in the classroom.	The origin of the factors that cause mathematics teachers to have difficulty in learning mathematics with SCS.
11.	The diverse abilities of students make learning mathematics difficult.	
12.	The environment is one of the factors causing difficulties in learning mathematics.	
13.	Mathematics material is a causal factor in learning mathematics.	

Factors that cause mathematics teachers to have difficulty in conveying mathematics learning to students are cell phone facilities, lots of student activity, not understanding the meaning of learning mathematics, a motivating environment, students' dislike of mathematics, students' difficulties in mathematics, students' mood, students' interests, and fast time. Then the difficulty factor can come from the mathematics teacher or the students. Based on research from [36], the factors of difficulty experienced by high school students in solving mathematics problems are: students are not careful, rush to do the questions, forget, lack time to do the questions, give up quickly, get fooled, and are anxious. Factors that cause students to have difficulty learning mathematics include physiological factors, social factors, emotional factors, intellectual factors, and pedagogical factors [37].

The difficulty factors that mathematics teachers face come from students, mathematics teachers, environment, time, materials, and learning methods. Opinions regarding the difficulty factor in learning mathematics from students are also strengthened. Based on the results of data analysis, there are ten sub-themes obtained for the theme of factors that cause students to have difficulty in learning mathematics with SCS in Table 9.

Table 9. Reduction Results Related to Factors that Cause Students to Difficulty in Learning Mathematics with SCS

No	Sub-theme	Relationship between sub-themes
1.	Lack of mastery of the mathematics material studied by students.	Factors that cause students to have difficulty learning mathematics with SCS.
2.	Students are sleepy and bored when learning mathematics.	
3.	The room is not conducive and there is less focus for students in learning mathematics.	

No	Sub-theme	Relationship between sub-themes
4.	Lack of concentration and teachers who are unclear in conveying mathematics material.	
5.	Students sometimes hate mathematics.	
6.	The physical and mental condition of students is not good in learning mathematics.	
7.	Students are lacking in practicing math problems.	
8.	Students feel that the difficulty factor originates more from themselves in learning mathematics.	The origin of the factors that cause students to have difficulty learning mathematics with SCS.
9.	Students feel that the mathematics material presented is also too complicated.	
10.	Students feel that mathematics teachers are also a factor causing students to have difficulty learning mathematics.	

The difficulty factor is that it originates more from the students themselves, but 21 out of 61 students answered that it does not mostly originate from the students themselves, but more from outside the students themselves, for example from mathematics teachers, materials, and the environment. There were 10 out of 61 students answered that sometimes yes, it was more from themselves but also sometimes no because it came from outside the student. Then as many as 30 out of 61 students agreed that the difficulty factor came more from the students themselves. In general, the difficulty factor in learning mathematics with credits at Kedu Residency comes more from the students, but there are also factors from the mathematics teacher, environment, time, and mathematics material. These difficulties certainly have certain strategies to overcome them. These strategies come from mathematics teachers and students because each has their strategy for overcoming difficulties in learning mathematics. Based on the results of data analysis, there are eleven sub-themes obtained for the theme of mathematics teacher strategies for overcoming difficulties in learning mathematics with credits in Table 10.

Table 10. Reduction Results Related to Mathematics Teachers' Strategies for Overcoming Difficulties in Learning Mathematics with SCS

No	Sub-theme	Relationship between sub-themes
1.	Mathematics teachers share with the MGMP forum regarding difficulties faced in learning mathematics.	Mathematics teacher strategies for overcoming difficulties in learning mathematics with SCS.
2.	Do ice breaking first before carrying out mathematics learning.	
3.	Mathematics teachers take a personal approach to students in overcoming difficulties in learning mathematics.	
4.	Providing motivation to students in learning mathematics.	
5.	Provide positive affirmation to students in learning mathematics.	
6.	Following students' learning styles in mathematics learning.	
7.	Sharing with other subject teachers.	
8.	Have a clear matrix in implementing mathematics learning.	
9.	Mathematics teachers convince students that mathematics is important.	Special strategies used by mathematics teachers to overcome difficulties in learning mathematics with SCS.
10.	Communication with students is further strengthened in mathematics learning.	
11.	Taking students' hearts and praying for students in learning mathematics.	

Multimedia-assisted learning has been developed recently and has proven its benefits in helping teachers in teaching and helping students understand concepts and subject matter more easily. The results of research by [38] showed that after using interactive multimedia, test scores increased by 42% and there was a significant difference before and after using multimedia learning materials at the 95% confidence level. The advantages of multimedia with computer aids make learning more meaningful because multimedia can present an interactive learning model [39].

Based on research results from [37], the efforts made by mathematics teachers when facing difficulties in learning mathematics are that in each lesson the teacher aSCS students about the material they do not yet understand, fosters student activity in learning helps improve students' study habits, motivates students in each lesson. mathematics, and using learning media. Teachers must try to overcome problems or difficulties experienced by students and make students understand the material they are studying. [40] believes that in developing students' creativity and competence, teachers should be able to present effective and efficient learning by the curriculum and students' mindset. In teaching mathematics, teachers must understand that each student's abilities are different, and not all students have to like mathematics subjects.

The strategies used by mathematics teachers in overcoming difficulties in learning mathematics with credits based on the results of the interviews mentioned above are the use of learning media or teaching aids as well as mathematics software to support mathematics learning, a personal approach to students, sharing difficulties with the MGMP forum for good mathematics teachers. school and district level, conduct ice breaking before mathematics learning begins so that students feel interested and not sleepy, follow students' learning styles, share with other teachers, and have a clear plan for implementing the

strategy. Therefore, there is quite a variety of strategies that mathematics teachers have in dealing with difficulties in learning mathematics with credits at Kedu Residency. Apart from that, students also have strategies for overcoming difficulties in learning mathematics with credits. Based on the results of data analysis, there are sixteen sub-themes obtained for the theme of student strategies for overcoming difficulties in learning mathematics with SCS in Table 11.

Table 11. Reduction Results Related to Student Strategies for Overcoming Difficulties in Learning Mathematics with SCS

No	Sub-theme	Relationship between sub-themes
1.	Ask friends who understand easily in learning mathematics.	Student strategies for overcoming difficulties in learning mathematics with SCS.
2.	Students hold discussions with their friends to solve math problems.	
3.	Students try to sit in the front seats so they don't get sleepy and practice lots of questions.	
4.	Study with your deskmate or in front of him in mathematics learning.	
5.	Passionate about seeing future goals.	
6.	Taking lessons at the tutoring school.	
7.	Look for mathematics references via Google or YouTube.	
8.	Increase practice on math problems.	
9.	Gather good intentions and mood when studying mathematics.	
10.	Divide your time studying mathematics well and focus on studying mathematics.	
11.	Strategies for overcoming difficulties in learning mathematics need to be carried out by students.	The need for strategies to overcome difficulties in learning mathematics with SCS.
12.	Students feel the need to use strategies to overcome difficulties because it makes learning mathematics easier.	
13.	Strategies for overcoming difficulties need to be implemented because many students feel the benefits.	
14.	Consider the mathematics teacher as the most extraordinary teacher in the student's life.	How to grow student motivation to overcome difficulties in learning mathematics with SCS.
15.	Throw away the thought that mathematics is difficult and boring.	
16.	Watch motivational videos and remember parents' messages.	

The strategies used by students in overcoming difficulties in learning mathematics are asking friends who already understand the mathematics material, tutoring in the tutoring, sitting in the front seat, practicing more questions, peer tutoring, being indifferent to the nature of the mathematics teacher, and studying the material via the internet such as YouTube. as well as other math sites. However, the strategy that many students use is to ask friends directly or take lessons at the tutoring school. It turns out that students' answers regarding strategies for overcoming difficulties in learning mathematics are very necessary for various reasons, such as to increase enthusiasm, increase motivation, be able to understand the material better, and make learning mathematics more comfortable, so that mathematics material enters the mind more quickly, creates focus, and to create the future. All students interviewed, namely 61 students, stated that this strategy was necessary. There are many ways for students to increase motivation in facing difficulties learning mathematics, such as remembering the future, improving their mood, seeing other more successful people, seeing videos of successful or successful people, remembering parents' messages, remembering existing dreams, and trying hard to understand mathematics. So each student has their way of growing motivation in facing difficulties learning mathematics.

CONCLUSION

Based on the data and analysis carried out in this research, it can be concluded that the difficulties that mathematics teachers face when implementing mathematics learning with credits vary. The difficulties that mathematics teachers face in teaching mathematics with credits are due to the different abilities of students, the difficulty of determining fast, medium, or slow learners, and the existence of 2 study groups in one class, where there are students who graduate 2 years and 3 years in one class. These difficulties affect mathematics learning with SCS. Students find it difficult to learn mathematics because of a lack of understanding of the material, and questions; inappropriate or too fast ways of teaching mathematics teachers; difficulty in memorizing formulas; and fast time for students who graduate in 2 years. Difficulties that mathematics teachers and students face can also come from mathematical material, such as trigonometry, limits, logarithms, algebra, geometry, trigonometric limits, arithmetic series, geometric transformations, logarithms, probability, and three dimensions. Many factors make it difficult for mathematics teachers to convey mathematics learning to their students during the implementation of SCS, such as fast time, students having difficulty understanding the material, and difficulty relating mathematics material to everyday life. Students have many factors that make it difficult to learn mathematics in a class with SCS, such as being sleepy, material that is difficult to understand, fast time, unsuitable teachers, not liking mathematics lessons and not being in a good mood. So the factors of difficulty in learning

mathematics during implementing SCS at Kedu Residency come from mathematics teachers, students, mathematics material, environment, and time.

When difficulties in learning mathematics with SCS occur, there are strategies for mathematics teachers and students to overcome them. The strategies used by mathematics teachers in overcoming these difficulties are the use of learning media or teaching aids as well as mathematics software to support mathematics learning, personal approaches to students, sharing difficulties in mathematics learning with the MGMP mathematics teacher forum, conducting ice-breaking before mathematics learning begins, following student learning styles, sharing with other teachers regarding difficulties faced, and having a clear plan for implementing the strategy. Students have strategies for overcoming difficulties in learning mathematics, such as asking friends who already understand the mathematics material, tutoring in the tutoring group, sitting in the front seat, increasing practice questions, peer tutoring, being indifferent to the nature of mathematics teachers who may not suit the students, and studying the material through the internet such as YouTube and other mathematics sites.

ACKNOWLEDGMENTS

The researchers thank LPDP as a related party for research funding. Thank you to Yogyakarta State University. Thank you to Mrs. Heri Retnawati who helped in writing this article. Thank you to my parents for always supporting and encouraging me. And lastly thanks to my partner and brothers for all their prayers.

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