Self-regulated learning profile of students with auditory learning style in mathematics lessons

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Abstract:

Education aims to develop potential and make students more independent. Students' self-regulated learning in learning mathematics needs to be built according to students' learning styles. Teacher instructions play an important role in triggering students to want to learn without being forced or forced so that students can be comfortable in learning mathematics. Descriptive qualitative research on the uniqueness of male students after finishing studying in grade 6 with an auditory learning style who continued studying at a boarding school. Of the 8 students with an auditory learning style, 1 student has a different uniqueness. Data collection used MIR (Multi Intelligence Research) documents, SRL inventory, direct observation, and interviews. As a result, teachers give some confidence to students to take the initiative and maintain consistent intentions to learn mathematics. This encourages students to take advantage of the teacher's trust to learn in their way by discussing and guessing with friends.

Keywords: Self-Regulated Learning, Auditory Learning Style, Mathematics

INTRODUCTION

Understanding Self-Regulated Learning (SRL) according to children's age development shows positive learning behavior (Jeong & Frye, 2018). SRL among female students is better than male students at the level of mathematics competency (Bishara, 2016). SRL makes students see mathematics as a fun lesson, more meaningful in everyday life, builds more self-confidence, sets certain targets for themselves, and communicates the learning process (Yıldızlı & Saban, 2016). SRL is not only obtained in the classroom but can be obtained in the school and family environment (Yıldıcczlı & Saban, 2016). With SRL, students put effort into learning mathematics and solving mathematical problems, are resistant to challenges, and have more time to complete assignments (Yıldıcczlı & Saban, 2016:4). This can be revealed that SRL in students based on age and gender shows a positive influence on learning behavior, attitudes, motivation and self-confidence, thereby making students try to understand, set goals and integrate their learning process. The results of research that has been conducted show that teachers constructing feedback and praise can potentially effectively promote students in carrying out SRL (Guo & Wei, 2019). SRL based on gender shows that intrinsic motivation and self-confidence are highly correlated with the use of various learning strategies, while extrinsic motivation is weakly correlated with the use of learning strategies (Guo, et al., 2021). The level of SRL tends to be the same between students who live with their parents and students who live far from their parents, so it is necessary to identify the cause (Handaka, et al., 2019)

This research aims to explore teacher instructions and student responses according to learning styles in mathematics SRL so that the state of students' SRL according to their learning styles in mathematics lessons can be known. This is by Halem's (2020) suggestion that further research is needed to investigate the steps of SRL in real terms through tracing to provide information on teaching and learning stages. Likewise, Guo & Wei (2019) suggested that the focus of future research be to investigate how to develop students' SRL through teacher feedback in learning mathematics. The research results of Dignath & Veenman (2021) raise the question of how teachers determine ways to support students' learning arrangements?, while the suggestions of Harding, et al (2019)that research on SRL needs to focus on observing teachers' patterns in teaching students and effective learning methods. The update that is expected from this research is to obtain in-depth information about students' SRL profiles according to their learning styles in mathematics lessons which include thinking, performance, and reflection, especially in auditory learning styles.

Self-Regulated Learning

Efforts to plan, organize, instruct, monitor, and evaluate oneself during the learning process by considering oneself competent, qualified, and autonomous to carry out active behavioral changes to create an optimal learning environment so that independent learning activities occur in terms of thoughts, feelings and systematic actions with assumptions able to realize potential that is oriented towards achieving goals of increasing achievement. SRL involves metacognitive, motivational, and behavioral processes initiated for knowledge and skills, such as goal setting, planning, learning strategies, self-reinforcement, self-recording, and self-instruction (Zimmerman, 2015). SRL refers to the ability to become a learning agent who transforms mental abilities into task-completion skills (Zimmerman, 2015). SRL is a learning initiative in social learning between individuals in the environment (Zimmerman & Schunk, 2015). SRL is a strategy for processing one's learning, and changing mental abilities into skills related to efforts to complete tasks (Robb, 2016). The learning agent process plans learning progress in stages by monitoring goal-oriented learning activities (Winne, 2019). SRL is an active process of constructive self-regulation in learning (Lee, et al., 2019). SRL is a gradual learning process effort by self-regulating agents to be able to competently change mental metacognitive,

motivational, and behavioral changes in optimizing learning skills. Learning is not only done individually but involves the social environment to achieve learning goals.

SRL is not only built from within but needs to trigger instructions from the teacher to carry out independent learning. Teachers need to build SRL with confidence in providing direct instructions, choices, challenges, and assignments, as well as confidence in building evaluations (De Smul, et al., 2018). In forming SRL, teachers must recognize that students have the social potential to adapt to the learning environment, so teachers must adapt students' learning styles and students must adapt teachers' teaching styles (Williamson, 2015). Not all of the stages of SRL have to be triggered by the teacher, but some are given to students to carry out themselves (Mursidik, et al., 2023). Simply put, SRL is influenced by internal factors such as self-confidence, behavior, and desire to achieve goals as well as external factors for environmental adjustments and teachers as triggers for the formation of SRL.

SRL components include (1) goal selection, (2) action preparation, and (3) behavioral cycles (Brown, 2014). SRL refers to the process of activating and maintaining cognition, as well as influencing systematic behavior oriented towards achieving goals. With a learning orientation through self-reflection to monitor effectiveness and adapt, students must be proactive to set goals, motivate beliefs, and engage in self-regulatory cycles (Zimmerman & Schunk, 2015). The SRL stages are (1) students' perceived understanding of personal tasks; (2) goal setting and planning; (3) carrying out tasks with a completion strategy; (4) learning adaptation to face challenges. This is by the SRL cycle, namely the process of cognitive, metacognitive monitoring, progress evaluation, and adaptation planning (McCardle et al., 2017). Simply put, starting from self-observation and task orientation, it continues with the process of self-regulation and confidence in achieving goals through thinking in planning, performance behavior, and self-reflection on the results obtained. The implementation of the SRL stages can form an attitude of self-awareness in carrying out the independent learning process.

Auditory Learning Style

Auditory students learn by prioritizing the sense of hearing information (Keliat, 2016). Recognizing one's learning style does not necessarily make students smarter, but a teacher who can recognize students' learning styles will be able to help determine more effective ways of learning (Wahyuni, 2017). Learning style is one of the important factors needed to absorb, store, and process new information (Keliat, 2016). Each student's learning style has strengths and weaknesses depending on the material studied and how to study it. One of the difficulties students have in learning mathematics is influenced by the student's learning style in determining how to absorb information through more developed senses during the learning process (Apipah & Kartono, 2017).

Based on students' difficulties, teachers must try to adapt instructions in moving students' learning activities so that they are easy to understand according to their learning style. Teachers need instructional models that suit students' learning styles in certain learning contexts and environments. This means that if students are given appropriate instructions by the teacher, students can engage in a series of diverse activities to achieve learning success (Blanton et al., 2015) Learning styles are used by teachers to consider and plan different learning activities. Information about learning styles can be used by teachers to provide a conducive learning environment for students to discuss among friends so that it can reduce the role of the teacher because students act as learning resources (Lwande et al., 2021). Teachers should provide diverse learning so that it accommodates students' learning styles, according to opinion Widayanti's (2013) for students with an auditory learning style, teachers should vary the vocals and teaching materials and apply group discussion learning or peer tutoring and explain in detail, even using concept repetition and then summarizing in oral form and recorded for later listening and understanding. Simply put, student learning styles help teachers provide

information to make learning plans according to students' diverse potential. Teachers can combine various student potentials to strengthen each other's understanding by forming study groups. Apart from that, students complement each other's knowledge between friends and discussions occur so that students try to organize their learning according to their goals.

METHODS

Research Design

Descriptive qualitative research on the uniqueness of male students after completing study in grade 6 with auditory learning style and continuing at boarding school. This is because these students are experiencing adjustments to a new learning environment so it is interesting to reveal students' self-regulated learning in learning mathematics according to the auditory learning style.

Participant

Participant of the research were 8 student at the boarding school with an auditory learning style, 1 student was taken as the research subject because he had a different uniqueness. The unique thing is that the MIR test results show that students have 11 strengths and 2 weaknesses and suggestions. Meanwhile, the SRL inventory results show the high category.

Research Instruments and Indicators

Data collection uses the Multi Intelligence Research (MIR) document, SRL inventory, direct observation, and in-depth interviews with indicators according to the Table 2.

Procedure

Research procedures were carried out starting from grouping inventory data, observations, documents and transcribing recorded interviews with research subjects. Next, in-depth interviews were conducted and supporting information was searched so that primary and secondary data could be grouped. In the next stage, after the research data is complete, analysis, discussion, and conclusion of the research findings are carried out. The stages are as follows:

TABLE 1. *Data on prospective subjects and research subjects*

Gaya Belajar	MIR test $S_{a,b,c}$: (Subject strengths, weaknesses, suggestions)	SRL Inventory	Subject
8 Auditorial students	|$S_{11,3,3}$|$S_{4,2,8}$|$S_{4,3,6}$|$S_{6,3,7}$|**$S_{11,2,2}$**|$S_{11,4,4}$|$S_{12,2,2}$|$S_{9,5,5}$|	|S|R|S|R|**T**|S|S|T|	$S_{11,2,2}$

T : Hight x > (x + ½ Sd)   S : Mediun (x – ½ Sd) < x < (x + ½ Sd)   R : low x < (x – ½ Sd)

TABLE 2. *Research aspects and indicators*

Aspect	Indicator
I. Thinking	(A) Learning initiative; (B) Identification of learning needs; (C) Setting learning goals; (D) Select and determine learning strategies
II. Performance	(E) Viewing difficulties as challenges; (F) Utilizing media and facilities; (G) Looking for relevant learning resources
III. Reflection	(H) Monitor, organize, and control learning; (i) Evaluate learning processes and outcomes.

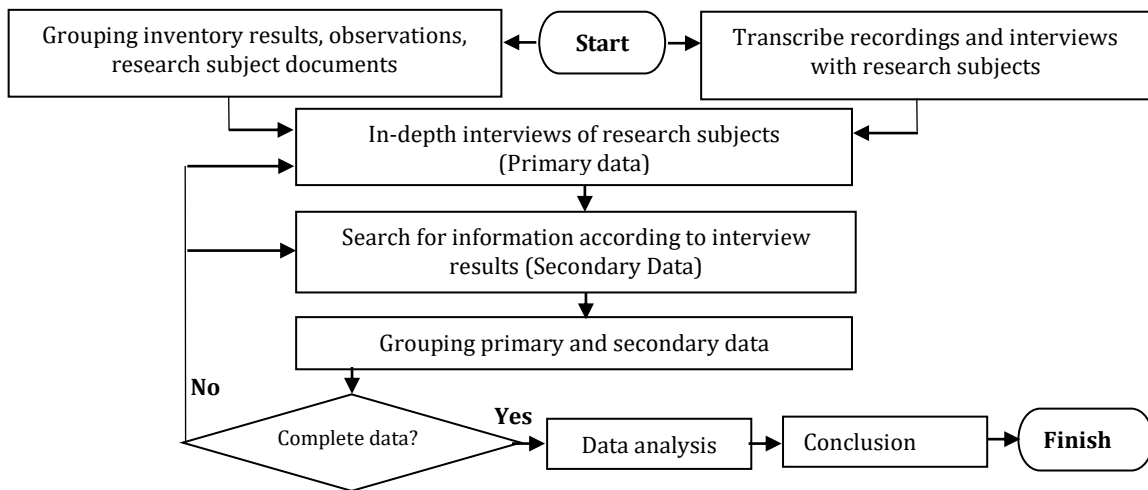(Zimmerman & Schunk, 2015; Zimmerman, 2015; and Simanjuntak, 2018).

FIGURE 1. *Research procedures*

Data Analysis

Data analysis was carried out during data collection and afterward with stages (1) Document data collection, observation and interviews with research subjects; (2) Data reduction during the research process according to the research focus so that valid and objective results can be found; (3) Presentation of research data through detailed descriptions then coding and then comparing with related data; (4) Concluding with the stages of comparing, grouping, reviewing and linking research data, then continuing the verification process until a research conclusion is found.

RESULTS

Thinking

At the thinking stage, the subject takes the initiative and is enthusiastic about learning mathematics even though he finds it difficult. This shows that intrinsic motivation encourages the subject to learn because of personal desire and is triggered by extrinsic motivation which influences him because it plays an important role in maintaining enthusiasm for learning and helping overcome obstacles. The findings of thinking about identifying problems and learning needs in mathematics are that students can identify learning needs and the main causes of mathematics learning problems so that students try to solve learning difficulties with appropriate planning according to priorities. The effort is to find a study companion to help overcome learning difficulties. The next thought is that students have a clear direction, and plan to achieve and prioritize mathematics learning goals. Students identify learning outcomes, so they can prioritize and plan strategies to achieve goals. The idea of viewing difficulties as challenges in learning mathematics, students try to face them in their way and are confident because they want to match their abilities with their friends. Being confident and persistent in facing the challenges of learning mathematics is the key to overcoming difficulties. The results of the description of research findings at the thinking stage are based on unique findings during in-depth interviews which have been reduced according to research indicators. The results of the in-depth interview findings are as follows:

(P) When the teacher starts the mathematics lesson, do you prepare yourself to learn mathematics?

(S)   Yes, I prepare my mathematics learning needs so that I can follow mathematics lessons easily. (I.A1).

(P)   What will you prepare to start studying mathematics? Why should you prepare?

(S)   Nawaitu studied and prepared stationery, mathematics textbooks, and a laptop so that it would be easy to follow mathematics lessons. (I.A2).

(P)   If you were not enthusiastic about studying mathematics in class, what would you do? Why did you do this action?

(S)   I set my intention to study mathematics again so I am enthusiastic about learning mathematics which is useful for other subjects related to mathematics. (I.A3).

(P)   Who motivated you to study mathematics? How do you respond to getting enthusiastic about learning mathematics?

(S)   I am often reminded by my parents during school visits and my teacher when I am about to start mathematics lessons because this helps me raise my enthusiasm for learning, besides motivating me with the thought "If my friends can do it, I should be able to do it too" (I .A4).

(P)   If you have difficulty learning to do a math problem, what do you do to solve it? Why did you do it?

(S)   Doesn't focus on mathematics lessons, often thinks about other assignments, and can't manage study time. I asked friends who could already do it or upperclassmen and even teachers when I had time (I.B1).

(P)   If your efforts to learn to do math problems have not been successful, do you look for the cause and try again? What is the reason?

(S)   Yes... I often make mistakes in the multiplication process so I have to learn multiplication first because it is very useful for the next lesson material. (I.B2).

(P)   Do you keep trying to find solutions to math problems if you have difficulty? What is the reason?

(S)   Yes... I keep trying to be able to do multiplication fluently so I can understand the next math material. My business is often doing multiplication guesses with friends. (I.B3).

(P)   If there is some mathematical material you want to study, what part do you prioritize studying first?

(S)   I chose multiplication so that I could work on problems related to multiplication because multiplication can be done easily and quickly. (I.C1).

(P)   If you have difficulty learning to do math problems on certain material, how do you try to understand the material? Why do you have to understand that?

(S)   Yes, keep studying and practicing so that you can be fluent and don't have difficulty when working on math exam questions because if you don't run smoothly it can interfere with me studying the next math material. (I.C2).

(P)   If you have difficulty learning to do math problems on certain material, do you want to understand, and try and solve them? What is the reason?

(S)   Yes, because I'm bored of studying the next mathematics material and the challenge in the mathematics exam is that it's difficult but I try to do as much as I can. (I.D1).

(P)   Are you looking for a solution so you can face the challenges of learning mathematics with confidence?

(S)   I'm sure I can face it because if my friend can, why can't I (I.D2)?

Performance

At the performance stage, students can determine learning strategies take advantage of the trust given and try to find friends or companions for studying mathematics. Student performance can know the media and facilities that will be used to learn mathematics. Students can find solutions to difficulties in utilizing the media and facilities that will be used to learn mathematics. The next performance is that students combine relevant learning resources accessed via the internet and students take advantage of trust to look for relevant learning resources because the teacher allows students to freely access the internet to study according to their schedule. The data presentation is strengthened by showing the findings from in-depth interviews at the performance stage which have been reduced according to research indicators. The results of the in-depth interview findings are as follows:

(P) When working on math problems, do you do it easily and quickly? What's the reason?
(S) Yes... I try to do math problems in an easy and fast way so that I don't think too long. Yes, I try by frequently asking questions and guessing with friends according to my habits when studying in elementary school. (II.E1).

(P) If you have difficulty working on a math problem, do you use other methods to solve it? What is the reason?
(S) Yes... sometimes I use other methods. I studied on my own, then I used the teacher's method, but then I learned from friends to find out other ways by asking friends or seniors or teachers. (II.E2).

(P) Do you use learning media (whiteboard, paper, displays, etc.) to make it easier to learn to do math problems? What is the reason?
(S) Learning media in class... blackboard, blank paper, markers, therefore I use them to write math questions to guess and then I also use them to answer them, but I prefer to read articles on the web about math questions. (II.F1).

(P) Do you use learning facilities (gazebo, internet, library, etc.) at school/class to make it easier to learn to do mathematics? What is the reason?
(S) Yes, the school already has a library, gazebo, and internet facilities. Yes... the facilities at the school can be used for studying, especially the library and internet network because the school gives me trust, yes... I use them as well as possible. I often use the internet to look for steps to solve math problems if I can't answer them. (II.F2).

(P) Do you look for mathematics learning resources in the library or the internet to increase your knowledge in studying mathematics? What is the reason?
(S) Yes... I plan to use books and digital books when studying in class during lessons or not because I can access them according to the schedule and I use them for studying. (II.G1).

(P) If there are several mathematics learning resources, do you choose learning resources that are appropriate to the material being studied? What is the reason?
(S) Yes... I am often given references to learning resources, both hard and soft, in the form of links accessed via the internet to study or work on and I often discuss with friends how to work on them. (II.G2)

Reflection

At the reflection stage, students record mathematics material according to discussion and make individual study schedules but not group study schedules. Next, students evaluate the process and results of learning mathematics by reading, researching, and re-evaluating which is a priority for improvement so that students try to organize learning activities

independently according to their goals. This is shown from the findings from in-depth interviews which have been reduced according to the research indicators at the reflection stage. The results of the in-depth interview findings are as follows:

(P) *To review the process of working on math problems and make learning easier, do you note down how to do math problems? What is the reason?*

(S) *Yes, I note down the lesson material according to the subject matter studied so that it can be studied again. (III.H1)*

(P) *To study mathematics regularly and regularly, do you make a schedule for studying mathematics independently or in groups? What is the reason?*

(S) *Yes, I make a math study schedule so that my study time is organized, but I don't routinely make a group schedule but only study agreements, usually studying with friends in the dormitory before the exam. (III.H2).*

(P) *After receiving the work results that had been corrected by the teacher, did you read and re-examine the process of answering math questions? What's the reason?*

(S) *Yes, I received the results of working on the math problem, then I checked, and if there was anything wrong, I asked how to do it correctly. I didn't protest but I was curious to know what I had done wrong. (III.I1)*
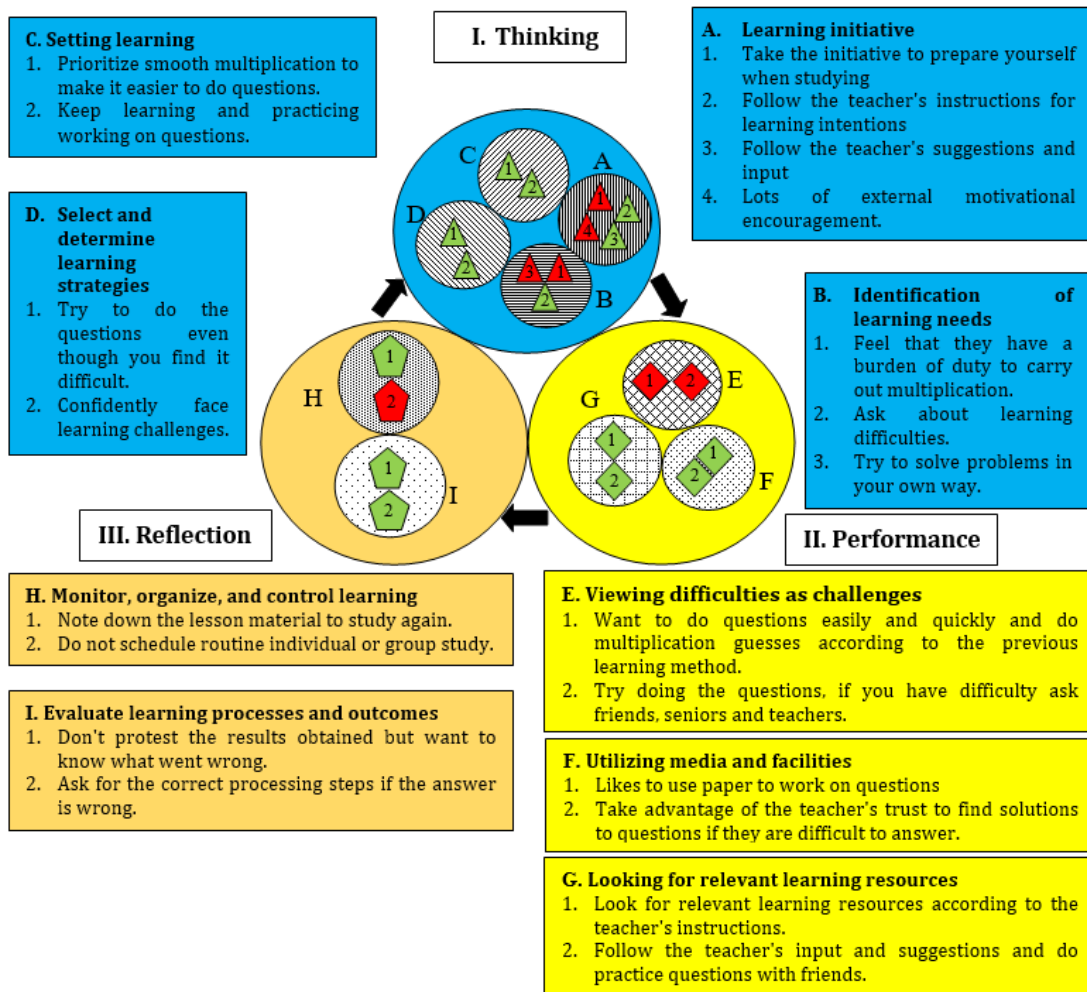
(P) *Do you correct the process and results of answers to math questions and read suggestions for improvement from the teacher? What is the reason?*

(S) *Yes... After I double-checked, I often processed it wrong because I often calculated the multiplication wrongly. I didn't compare it with a friend whose answer was correct, but I asked the steps so that if I did almost the same problem, I could do it more easily because I wanted to. achieve better mathematics learning outcomes. (III.I2)*

DISCUSSION

Thinking

At the thinking stage, there is a combination of intrinsic and extrinsic motivation, as well as good planning so that students have strong motivation to succeed in learning mathematics. The relationship between self-regulation, parental involvement, and achievement at the start of school while controlling for demographic variables has implications for important early intervention when starting school (Daniel, et al., 2016). Students have targets for achieving learning outcomes and try to plan to achieve them. Students set goals to achieve in learning mathematics so it becomes an important step in planning the learning process. According to Zimmerman (Hanifah & Rusmawati, 2019), the importance of initiative in learning is because self-regulated learning occurs on initiative. Bringing up independent student learning initiatives requires teacher encouragement so that the success of students in becoming SRL depends on each teacher who has the knowledge and understanding to make appropriate learning plans and the willingness to do so. According to Efklides (Dignath & Veenman, 2021) motivational processes such as self-confidence and goal setting, play a role in SRL by influencing student initiative to maintain learning behavior. Students try to plan strategies to achieve learning targets so that students have the self-awareness to learn and take concrete steps to achieve their goals. Another opinion from Kihwele & Mkomwa, (2023) states that learning initiatives aim to create a comfortable and enjoyable learning environment focused on giving students confidence to try to increase their interest and achievement in learning mathematics.

C. Setting learning
1. Prioritize smooth multiplication to make it easier to do questions.
2. Keep learning and practicing working on questions.

D. Select and determine learning strategies
1. Try to do the questions even though you find it difficult.
2. Confidently face learning challenges.

I. Thinking

A. Learning initiative
1. Take the initiative to prepare yourself when studying
2. Follow the teacher's instructions for learning intentions
3. Follow the teacher's suggestions and input
4. Lots of external motivational encouragement.

B. Identification of learning needs
1. Feel that they have a burden of duty to carry out multiplication.
2. Ask about learning difficulties.
3. Try to solve problems in your own way.

III. Reflection

II. Performance

H. Monitor, organize, and control learning
1. Note down the lesson material to study again.
2. Do not schedule routine individual or group study.

I. Evaluate learning processes and outcomes
1. Don't protest the results obtained but want to know what went wrong.
2. Ask for the correct processing steps if the answer is wrong.

E. Viewing difficulties as challenges
1. Want to do questions easily and quickly and do multiplication guesses according to the previous learning method.
2. Try doing the questions, if you have difficulty ask friends, seniors and teachers.

F. Utilizing media and facilities
1. Likes to use paper to work on questions
2. Take advantage of the teacher's trust to find solutions to questions if they are difficult to answer.

G. Looking for relevant learning resources
1. Look for relevant learning resources according to the teacher's instructions.
2. Follow the teacher's input and suggestions and do practice questions with friends.

Code	Information
△ (green)	Students follow the teacher's instructions in the thinking stage
▲ (red)	Students follow the teacher's instructions in the thinking stage but students have their way
◇ (green)	Students follow the teacher's instructions in the performance stage
◆ (red)	Students follow the teacher's instructions in the performance stage but students have their way
⬠ (green)	Students follow the teacher's instructions in the reflection stage
⬠ (red)	Students follow the teacher's instructions in the reflection stage but students have their way

FIGURE 2. *SRL profile of students with auditory learning style in mathematics lessons*

Students can understand priorities for solving problems based on the level of urgency or complexity. Students take the initiative to seek help from study assistants because collaborating can help solve problems and understand difficult concepts. Students have good problem-solving skills and a proactive attitude to overcome mathematics learning problems. This is in line with the opinion of Guo, et al, (2021) that teachers need to help students become aware of suspected barriers to learning and motivate them to be challenged to complete them. The results of research by Kihwele & Mkomwa (2023), mathematics teachers are needed to help students solve mathematics problems using different methods and strategies. Students understand the priority of goals to be achieved and arrange them according to the level of difficulty or relevance. The importance of high awareness, having clear priority goals, and precise plans, students can have the

enthusiasm to achieve mathematics learning goals by showing readiness and commitment. Teachers independently need to demonstrate achievement of learning goals and apply learning goal orientation, but it is necessary to pay attention to students' efforts to learn by managing efforts to memorize material from the teacher which will cause students to lose motivation due to excessive memory workload (Matsuyama et al., 2019).

Students' self-confidence becomes a strong foundation for overcoming learning difficulties and see it as an opportunity to improve their mathematical abilities. This is an important aspect of success in learning mathematics according to learning style and understanding. This finding is in line with Paska & Laka, (2020) that teacher support contributes to student learning activities. Furthermore, Guo, et al, (2021) confirmed that students' intrinsic motivation must be increased by teachers by inspiring students' curiosity and triggering extrinsic motivation to compete among students. Apart from that, parental involvement indirectly encourages students to achieve higher results (Daniel, et al., 2016).

Performance

Choosing the right strategy, taking advantage of learning opportunities, and collaborating can overcome difficulties and achieve better learning outcomes so that you have an intelligent approach focused on developing mathematics skills. Each student has a different learning style and has a different strategy for solving math problems. These findings agree with Gonzalez-DeHass & Willems (2016) that teachers need instruction strategies to help students' learning strategies. Teachers need to teach SRL strategies explicitly so that students develop metacognitive knowledge and skills to integrate strategy application into the learning process (Dignath & Veenman, 2021). Matsuyama, et al, (2019) stated that there was a change in strategy from monotonous (memorization) to varied (elaboration, organization, belief control, etc.). In addition, the strategies modeled by teachers are important in shaping students' SRL and teachers need to obtain information on students' (Peeters, et al, 2014). So in SRL, cognitive strategies are most often used by students (Imani, et al, 2021). Furthermore, there is a change from teacher-centered learning to student-centered and increasing the diversity of strategies (Matsuyama, et al, 2019).

Students can understand the media and facilities that play an important role in supporting the learning process because students have good adaptation and problem-solving skills in utilizing various resources to improve their understanding of mathematics. This helps students become more effective and independent learners. These findings show that teachers believe in the strength of students' SRL, control the class more humanistically, and create a learning environment conducive to SRL development. School policy support that creates conducive learning conditions will help students in the learning process (Gestiardi & Maryani, 2020). Kihwele & Mkomwa (2023) stated that a decrease in learning performance requires the implementation of pedagogical innovation to increase students' interest and achievement in learning mathematics.

Teachers control students looking for relevant learning resources so that students can access digital information consistently and maintain the focus of learning activities in class. This ability enables independent learners to develop effective and adaptive learning skills so that students maximize opportunities to improve their understanding of mathematics. Therefore, student-centered learning builds self-confidence, and self-reflection, and seeks diverse learning strategies (Matsuyama, et al, 2019).. Agree with Daniel, et al, (2016)about learning strategies that give rise to students' SRL, which is important in exploring the relationship between SRL and subsequent achievement. In addition, the relationship between individual learning and group development can contribute to shaping students' learning situations.

Reflection

Students note down mathematics material according to the discussion and make individual study schedules but not group study schedules. This effort shows high independence in learning mathematics because of awareness of achieving learning outcomes and being responsible for their implementation. This is a good attitude and approach to consistently developing effective, committed, and independent learning skills. Teachers need to instruct students to schedule learning by considering peer support and collaboration (Gonzalez-DeHass & Willems, 2016; Paska & Laka, 2020).

Students evaluate the process and outcomes of mathematics learning by reading, researching, and re-evaluating which areas are priority improvements. This student's proactive attitude shows independence in managing the learning process and does not depend on feedback from the teacher, but tries to become an independent learning agent. Reflective abilities are important for self-development as an effective and independent learner as well as continuing to improve your abilities according to your goals. This agrees with Matsuyama, et al., (2019) that increasing self-reflection does not depend on test scores. These reflections need to be complemented by student and teacher self-report data to gain a comprehensive view of the effectiveness of teachers' approaches to supporting SRL (Dignath & Veenman, 2021). So that we can obtain a comparison of the reflection "between oneself and the teacher's benchmark" to "between the current self and the future"(Matsuyama, et al., 2019).

CONCLUSION

The findings of this research are that a teacher by giving trust to students can generate the initiative to want to learn and students try to maintain consistent intentions to learn mathematics. Students with an auditory learning style make the best use of the teacher's trust to learn independently by discussing solving questions and strengthening understanding by guessing with friends. This research is limited to students with an auditory learning style, while students with other learning styles need to be researched. It is necessary to understand the learning styles of students other than auditory learning style students so research needs to be carried out. Information on student learning styles can help teachers create instructional plans and facilitate a conducive learning environment.

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