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Students' Perceptions of Islam-Based Mathematics Learning

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Abstract

Islamic-based mathematics learning is mathematics learning in an Islamic context. Learning mathematics in an Islamic context is expected for students to give more meaning to learning mathematics so that students are not afraid and negative suggestions do not arise. Good student perceptions of the teacher's teaching methods applied. This research uses qualitative descriptive research using purposive sampling techniques. The research subjects were class XII students at Senior High School 1 Sekayu West Sumatera Selatan. The instrument was a questionnaire based on Islamic aspects: religion, honesty, discipline, hard work, independence, curiosity, and communicativeness. Data were analyzed using descriptive statistical analysis. The results of the research show that a small number of students need the character to work hard in learning mathematics, which is caused by several factors, namely a lack of confidence in their abilities in learning mathematics and easily giving up on learning. Almost all students strongly agree with honesty because they understand that actions based on honesty will make them better and get the blessing of Allah SWT. The average percentage of students' perceptions regarding the application of Islamic values in mathematics learning is 69% of the students strongly agree with the application of Islamic values in class, 30%, almost half of the students agree with the application of Islamic values in class, and 1%, a small portion disagree with the application of Islamic values in class. Class on mathematics learning.

INTRODUCTION

Perception is important before carrying out an activity so that what is done is appropriate and profitable (Mazana et al., 2019; Parwati & Yono, 2022; Stahnke et al., 2016). Perception is one of the factors that can influence students' learning of mathematics. This is in line with Slameto's opinion, which states that perception can influence students' cognitive characteristics (Afari et al., 2013; Suratmi & Purnami, 2017). Mathematics plays an important role in everything in human life, so it can

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greatly impact world progress. However, students tend to have a negative perception of mathematics learning (Hendriana, 2014; Heuvel-Panhuizen & M., & Drijvers, 2020; Joseph et al., 2019).

This tendency toward negative perceptions by students is shown by 80% of students who believe mathematics is an important learning method. However, mathematics is considered a subject that is difficult to understand (Carrillo-Yañez et al., 2018; Chen et al., 2016). Students who think mathematics is a difficult subject because previously students had negative suggestions and were afraid of mathematics itself. This negative suggestion is also accompanied by students not being able to participate in mathematics learning, resulting in laziness in learning mathematics (Aguilar, 2021; Kartika et al., 2021; Maloney et al., 2013). Based on these findings, it can be revealed that students' perception of mathematics is still a subject that is feared and difficult to understand or master (Deng et al., 2020).

One factor influencing students' perceptions of mathematics is students' needs for the material being studied (Fidalgo et al., 2020; Heswari & Patri, 2022; Sarah et al., 2021). Perceptions can be seen and measured through indicators of students' perceptions of mathematics learning. This is in line with what Siregar, (2022) said. Perception can be seen through indicators, namely fostering active attitudes, motivation, and independent learning attitudes in mathematics. It also improves understanding, presentation of material, class management, assessment, and access (Efendi & Sholeh, 2023; Scherer et al., 2016; Sebastian, 2022; H. M. Siregar et al., 2021). One of the ways students' needs for the material studied can be met is by linking mathematics lessons to students' real lives (close to students and recognized by students). One of them links mathematics lessons to students' real lives, namely mathematics learning that is linked to (based on) Islam (Imamuddin, 2022; Kurniati, 2016; Mansir, 2021; Sirait & Azis, 2017; Yustianingsih et al., 2017).

Islamic-based mathematics learning uses Islamic contexts, integrating learning with Islam (Abdillah et al., 2022; Imamuddin & Isnaniah, 2023; Novikasari & Ulpah, 2022). Mathematics learning that is contextual and integrates Islam and mathematics can be done in mosques as a medium and place of learning. By learning mathematics closer to students, it is hoped that students will give more meaning to mathematics learning so that students are not afraid and negative suggestions do not arise (Azzuhro & Salminawati, 2023; Imamuddin & Isnaniah, 2024; Sullivan et al., 2016).

Research related to student perceptions in learning mathematics, including research conducted by Wardana & Damayani (2018), found that students had good perceptions of the teacher's teaching methods. Teachers often gave practice on mathematics questions, had a high average mathematics score, and some factors influenced the learning environment, in this case, the characteristics of the teacher (Anggraeni et al., 2020; Durksen et al., 2017; Utari et al., 2019). Learning that is carried out well by teachers can increase their understanding of the material (Aslina et al., 2022; H. Siregar, 2022; Syah & Imamuddin, 2023). Adila & Harisah (2020), also conducted other research on the perceptions of class X MIPA students at Senior High School 1 Bojong regarding online learning in mathematics. They found that students' perceptions favored online learning over conventional learning, with a percentage of 77.2%. Students need help understanding online learning. Based on this description, the author is interested in researching "Students' Perceptions in Islamic-Based Mathematics Learning." This research is to enrich studies related to Islamic integrated mathematics learning (Gillett-Swan, 2017; Imron et al., 2022; Purwati et al., 2018; Sari et al., 2023).

METHOD

This research uses qualitative descriptive research to present data in words. This research provides a real picture of the research results (Bradshaw et al., 2017; Colorafi & Evans, 2016). Determining the research subjects using purposive sampling technique, the chosen subjects were class XII students at Senior High School 1 Sekayu because the researcher was a subject teacher in class XII at Senior High School 1 Sekayu (Campbell et al., 2020; Etikan et al., 2016). A questionnaire was used for data collection in this research. The questionnaire contained 13 statements prepared and developed based on Islamic aspects expected to emerge, including religious aspects, honesty, discipline, hard work, independence, curiosity, and communicativeness (Ikhrom et al., 2019). This questionnaire instrument was previously validated by 1 lecturer at the Mathematics Education Study Program at University Bukittinggi.

The data analysis used is in the form of processing the questionnaire results into percentages with a range of 0 - 100 with the following parameters:

0%: None
1% - 25%: Small portion
26% - 49%: Almost Half
50%: Half
51-% - 75%: Mostly
76% - 99%: Almost all
100%: Completely

RESULT AND DISCUSSION

Religious

Table 1 shows the results of a questionnaire from 35 students in class VIII at Senior High School 1 Sekayu regarding the application of Islamic values to religious aspects in mathematics learning at Senior High School 1 Sekayu (Fahmi et al., 2021; Fuadi & Suyatno, 2020).

Table 1. Religious Aspects

No	Student Activities	Strongly Agree	Agree	Don't Agree	Strongly Disagree
1	Every beginning and end of mathematics learning is always accompanied by prayer.	18	16	1	0
	Percentage	51 %	46 %	3 %	0 %
	Criteria	Most of the	Nearly Half	Fraction	None
2	Giving greetings before and after expressing an opinion is recommended by Allah SWT.	24	11	0	0
	Percentage	69 %	31 %	0 %	0 %
	Criteria	Most of the	Nearly Half	None	No one

3	It is an obligation to be grateful for God's grace after studying mathematics.	23	12	0	0
	Percentage	66 %	34 %	0 %	0 %
	Criteria	Most of the	Nearly Half	None	No one
	Average Percentage	**62 %**	**37 %**	**1 %**	**0 %**
	Criteria	**Most of the**	**Nearly Half**	**Fraction**	**None**

Based on the table above, it can be seen that students' perceptions of the application of Islamic values in the religious aspect are in the strongly agree category at 62%, meaning that the majority of students strongly agree with the application of religion in mathematics learning: 37%, almost half of whom agree with the application of religion in learning mathematics, and 1%. A small portion disagreed with the application of religion in learning mathematics (Demirel Ucan & Wright, 2019; Giles et al., 2016).

Honesty

Table 2 shows the results of a questionnaire from 35 students in class VIII at Senior High School 1 Sekayu regarding the application of Islamic values to honesty in mathematics learning at Senior High School 1 Sekayu (Agusti et al., 2018; Fitrah & Kusnadi, 2022; Yustinaningrum et al., 2020).

Table 2. Aspects of Honesty

No	Student Activities	Strongly Agree	Agree	Don't Agree	Strongly Disagree
1	Being honest when taking exams, tests, and assignments is an act that pleases Allah.	27	8	0	0
	Percentage	77 %	23 %	0 %	0 %
	Criteria	Almost All	Fractio n	None	None
2	Being honest when taking exams, tests, and assignments is an act that pleases Allah.	22	13	0	0
	Percentage	63 %	37 %	0 %	0 %
	Criteria	Most of the	Nearly Half	None	None
3	Reducing mistakes and reducing oneself in understanding mathematics learning must be shown to oneself.	23	12	0	0

	Percentage	66 %	34 %	0 %	0 %
	Criteria	Most of the	Nearly Half	None	None
	Average Percentage	**69 %**	**31 %**	**0 %**	**0 %**
	Criteria	**Most of the**	**Nearly Half**	**Fraction**	**None**

Based on the table above, it can be seen that students' perceptions of the application of Islamic values in the aspect of honesty in the strongly agree category are 69%, meaning that the majority of students strongly agree with the application of honesty in mathematics learning, 31% almost half of whom agree with the application of honesty. In mathematics learning (Akbari & Sahibzada, 2020; Crocco et al., 2016; Gayatri & Chew, 2013; Roach, 2014).

Discipline

Table 3 shows the results of a questionnaire from 35 students in class VIII at Senior High School 1 Sekayu regarding the application of Islamic values to the disciplinary aspect of mathematics learning at Senior High School 1 Sekayu (Istiqomah et al., 2018; Tambrin et al., 2021; Zulnaidi & Abd Rauf, 2024).

Table 3. Disciplinary Aspects

No	Student Activities	Strongly Agree	Agree	Don't Agree	Strongly Disagree
1	Students must make good use of time to learn mathematics.	17	18	0	0
	Percentage	49 %	51 %	0 %	0 %
	Criteria	Most of the	Nearly Half	None	None
2	Competing honestly and sportingly is an attitude that every student must have.	30	5	0	0
	Percentage	86 %	14 %	0 %	0 %
	Criteria	Most of the	Fraction	None	None
	Average Percentage	**68 %**	**32 %**	**0 %**	**0 %**
	Criteria	**Most of the**	**Nearly Half**	**None**	**None**

Based on the table above, it can be seen that students' perceptions of the application of Islamic values in the aspect of discipline in the strongly agree category are 68%, meaning that the majority of students strongly agree with the application of discipline in mathematics learning, 32% almost half of whom agree with the application of discipline. In mathematics learning (Hao, 2016; Tseng et al., 2013).

Hard Work

Table 4 shows the results of a questionnaire from 35 students in class VIII at Senior High School 1 Sekayu regarding the application of Islamic values to the

disciplinary aspect of mathematics learning at Senior High School 1 Sekayu (Yadav et al., 2014).

Table 4. Aspects of Hard Work

No	Student Activities	Strongly Agree	Agree	Don't Agree	Strongly Disagree
1	Every student must have the attitude of not giving up easily and continuing to try to solve math problems.	24	9	1	0
	Average Percentage	**69 %**	**26 %**	**3 %**	**0 %**
	Criteria	**Most of the**	**Nearly Half**	**Fraction**	**None**

Based on the table above, it can be seen that students' perceptions of the application of Islamic values in the aspect of hard work in the strongly agree category are 69%, meaning that the majority of students strongly agree with the application of hard work in learning mathematics 26%, almost half of whom agree. The application of hard work in learning mathematics, and 3% disagree (Brahimi & Sarirete, 2015; Love et al., 2014).

Independent

Table 5 shows the results of a questionnaire from 35 students in class VIII at Senior High School 1 Sekayu regarding the application of Islamic values to the independent aspect of mathematics learning at Senior High School 1 Sekayu (Ramadhani et al., 2019; Shodiq et al., 2017; Tan, 2014).

Table 5. Independent Aspects

No	Student Activities	Strongly Agree	Agree	Don't Agree	Strongly Disagree
1	Doing assignments independently in mathematics learning is an attitude that every student must have.	23	11	1	0
	Percentage	66 %	31 %	3 %	0 %
	Criteria	Most of the	Nearly Half	Fraction	None
2	Rechecking the answers before collecting them in mathematics learning is an attitude that students must have.	29	6	0	0
	Percentage	83 %	17 %	0 %	0 %
	Kriteria	Almost All	Fraction	None	None

	Average Percentage	**75 %**	**24 %**	**1 %**	0 %
	Criteria	**Most of the**	**Fractio n**	**Fraction**	**None**

Based on the table above, students' perceptions of the application of Islamic values in the independent aspect for the strongly agree category are 75%, meaning that the majority of students strongly agree with the application of independence in mathematics learning, 24%. A small portion concurs with the application of work. Challenging in learning mathematics, and 1% disagree with independent application (Kurniasih et al., 2020; Lo & Hew, 2020; Zafrullah et al., 2024).

Curiosity

Table 6 shows the results of a questionnaire from 35 students in class VIII at Senior High School 1 Sekayu regarding the application of Islamic values to the curiosity aspect of mathematics learning at Senior High School 1 Sekayu (Ariningsih & Amalia, 2020; Suyatno et al., 2020).

Table 6. Aspects of Curiosity

No	Student Activities	Strongly Agree	Agree	Don't Agree	Strongly Disagree
1	Asking questions is a command from Allah SWT for every Muslim, and to do this when they do not understand or comprehend mathematics learning.	24	11	0	0
	Average Percentage	**69 %**	**31 %**	**0 %**	**0 %**
	Criteria	**Most of the**	**Nearly Half**	**None**	**None**

Based on the table above, it can be seen that students' perceptions of the application of Islamic values in the aspect of curiosity for the strongly agree category are 69%, meaning that the majority of students strongly agree with the independent application of mathematics learning, and 31%, almost half of them agree (Akbari & Sahibzada, 2020; Mazana et al., 2019; Utami & Cahyono, 2020).

Rewarding Achievement

Table 7 shows the results of a questionnaire from 35 students in class VIII at Senior High School 1 Sekayu regarding the application of Islamic values to the curiosity aspect of mathematics learning at Senior High School 1 Sekayu (Hayah, 2017; Pratiwi, 2019).

Table 7. Aspects of Rewarding Achievement

No	Student Activities	Strongly Agree	Agree	Don't Agree	Strongly Disagree
1	Respect your friends' opinions when discussing this, and do not differentiate between ethnicities when learning mathematics.	30	5	0	0

Average Percentage	**86 %**	**14 %**	**0 %**	**0 %**
Criteria	**Almost All**	**Fraction**	**None**	**None**

Based on the table above, students' perceptions of the application of Islamic values in the aspect of respect for achievement in the strongly agree category are 86%, meaning that almost all students strongly agree with the application of respect for achievement in mathematics learning, and 14% are a small number. Students agree on the application of rewarding achievement in mathematics learning (Clark, 2015; Hidayatullah & Csíkos, 2024).

Students' perceptions of the application of Islamic values in mathematics learning at SMAN 1 Sekayu based on the results of the questionnaire given, it appears that the highest percentage is in the aspect of honesty, with a rate of 86% where almost all students strongly agree with the application of this aspect in class. In contrast, the lowest percentage of students who answered disagreed was 3% on the element of hard work. This indicates that teachers at SMAN 1 Sekayu must continue to strive to create a learning atmosphere that develops students' ability to work hard (Aldila & Rini, 2023; Mualim et al., 2023; Mulyanti & Nadrun, 2021). The overall score for the average percentage of student's perceptions of the application of Islamic values in mathematics learning is 69%; the majority of students strongly agree with the application of Islamic values in the classroom 30%, and almost half of the students agree with the application of Islamic values in the school (Chan & Wong, 2014; Wijayanto, 2020). Islam in class, and 1% of students do not agree with applying Islamic values in class in mathematics learning.

A small number of students need the character to work hard in learning mathematics, which is caused by several factors, namely a need for more self-confidence in their abilities to learn mathematics (Heri, 2019; Netson & Ain, 2022). Thus, they quickly give up on studying and doing the assignments given. However, almost all students strongly agree with honesty because they understand that actions based on honesty will make them better and get the blessing of Allah SWT (Yatim et al., 2023).

The results of this research strengthen the findings of research conducted by, which concluded that students were thrilled/agreed with using Islamic values in learning mathematics. Using Islamic values in mathematics learning can help students understand mathematical concepts more quickly (Choirunnisa et al., 2022; Kariadinata et al., 2019). Motivating students' learning, students become more interested in participating in mathematics learning. Integrating Islamic values in Mathematics learning is very important for educators to implement.

CONCLUSSION

The conclusion that can be drawn from this research is that the average percentage of students' perceptions regarding the application of Islamic values in mathematics learning is 69%; most of the students strongly agree with the application of Islamic values in mathematics learning, 30%, almost half of the students. They agree with applying Islamic values in the classroom, and 1% of the students do not agree with applying Islamic values in mathematics learning at school. It is hoped that educators will always be innovative in implementing mathematics learning so that students are happy and motivated in learning mathematics. One way to learn mathematics that can be implemented is by integrating it with Islamic values.

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