IJMR E-ISSN: 3109-9777
INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEACH

PROFILE OF PGMI (PRIMARY MADRASAH TEACHER EDUCATION) STUDENTS IN THE LEVEL OF HASS GEOMETRY IN DECISION MAKING

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E-ISSN: 3109-9777		
Received: September 2025	Accepted: September 2025	Published: October 2025

Abstract:

This study describes the profiles of students with low, medium, and high levels of geometric ability. These profiles serve as benchmarks to analyze student typologies in terms of economic behavior, particularly in classifying them as either thrifty savers or highly consumptive individuals. The study employs a qualitative descriptive method, involving a sample of 9 students selected from a population of 500. Referring to previous research on geometric ability based on Hass's Theory, students are categorized according to their capabilities in visualization, conceptualization, pattern recognition, and problem-solving. The findings show that 100% of students with high geometric ability opted for saving behavior. Meanwhile, 70% of students with medium geometric ability chose to save, while the remaining 30% exhibited fully consumptive behavior. In contrast, none of the students with low geometric ability chose to save; all of them demonstrated high consumerism. In this study, saving behavior is referred to as being a "thrifty client." It is expected that future research will provide interventions for students with low geometric ability using Hass's geometric theory, aiming to shift their behavior towards saving and thus becoming thrifty clients. In the long term, such efforts are anticipated to help reduce consumptive behavior both at the local and global levels.

Keywords: *Hass Theory, thrifty Customer, University Student.*

INTRODUCTION

Campus life that involves field trips can enrich students' experiences, as they can interact directly with the community and understand the real-world context (Ratnawati & Sutirman, 2025). In addition, activities such as Community Service Training or KKN provide opportunities for students to develop empathy and social skills (Agustian et al., 2025). The emotional involvement of educators is also very important in creating closer relationships with students, which can increase their motivation to learn (Anjal et al., 2024). In addition, sharing inspiring or funny stories from personal experiences can strengthen the emotional bond between educators and students, making the learning atmosphere more enjoyable and interactive (Liu et al., 2025).

The experience gained by students from activities such as Community Service Programs (KKN) or Community Service Training can greatly contribute to the development of their character and professional attitudes. In these activities, students not only learn theory, but also face real-world challenges that teach them to think critically, creatively, and adaptively. According to (Towadji et al., 2024), intensive PKL experiences can enhance students' work readiness

through high learning motivation. Direct interaction with the community broadens their understanding of social dynamics, teaches the importance of teamwork, and provides them with opportunities to contribute directly to community development. This prepares them to face the challenging and complex world of work.

On the other hand, strong emotional involvement from educators is an important element in creating a conducive and enjoyable learning environment. Educators who are able to create emotional connections with students can foster a warm and classroom atmosphere, which in turn can increase student motivation to learn (Ali, 2015). By sharing personal experiences or inspirational stories, educators can inspire students to be more enthusiastic about learning and facing their academic challenges (Hariroh & Soleha, 2022). Other studies also emphasize the importance of a good relationship between lecturers and students in achieving sustainable learning, where attentive interaction can strengthen students' confidence and self-efficacy in their learning.

The creativity of an educator will also be a major concern for students being taught. Provide lots of humor or light stories to lighten the classroom atmosphere. Use teaching aids such as spatial structures, creative learning cards, or interesting video presentations to simulate students' development of the material being taught (Yasinta & T, 2024). Collaboration between educators and students is also essential. Encourage students to work in groups and learn from one another. This can be achieved by assigning tasks that require cooperation and communication.

Educators should not be too strict in managing the class. This will cause students to get bored more quickly. Educators must be able to adjust their teaching methods to the needs, interests, and learning styles of students. Give students choices about how they want to learn or complete assignments. Equally important is evaluation. Use interactive quizzes, puzzles, or games to measure student understanding. Educators should avoid evaluations that cause stress and focus more on constructive feedback (Sujarwati et al., 2023). With efforts such as the strategies mentioned above, learning can become a more enjoyable and meaningful experience for students, thereby motivating them to learn.

In addition, educators also need to create an inclusive classroom atmosphere that supports diversity among students. By respecting every difference, whether in terms of cultural background, interests, or ways of thinking, educators can create a space that allows students to feel accepted and valued (Lunga, 2024). This will strengthen students' self-confidence, making them more willing to actively participate in learning activities. In addition, providing opportunities for students to work in groups or on collaborative projects can also improve their communication and teamwork skills, which are very important in the professional world. With this approach, students will feel more empowered to develop their potential, while also understanding that each individual has a valuable contribution to make in the learning process (Ayuningtias AS et al., 2022).

The focus of this study is enjoyable mathematics learning from a visual-spatial perspective. This study is a descriptive study using a qualitative approach. The purpose of this study is to describe enjoyable learning in a pesantren environment. This study focuses on the visual-spatial intelligence of students living in a pesantren environment. Student intelligence in this study was measured using Hass's theory. This theory categorizes visual-spatial intelligence into four categories, namely imagination, conceptualization, problem solving, and pattern discovery. The study was divided into three classes, namely students' abilities in low geometry class, medium geometry class, and high geometry class (Margaretha et al., 2015) .

RESEARCH METHOD

This study uses a quantitative research approach, which is a type of research that builds knowledge and obtains truth based on targeted and measurable data. This means that data must be collected, processed, and analyzed using mathematics and statistics (Vardiansyah, 2005 in Syahida, 2021). A descriptive method was used to determine how events occur at present and can still be observed by researchers related to (Suryadi et al., 2019) in (Syahida, 2021) . The type of study uses correlational. That is, to test and describe the influence between two or more variables using correlational statistics(Creswell, 2014) in(Syahida, 2021) . The variables studied in this study are the independent variable (X), namely Hass's level of geometry ability, and the dependent variable (Y), namely student economic behavior. The technique used to take samples without the odds determined by the researcher is the purposive sampling technique, where samples are determined based on certain assessments predetermined by the researcher or, in other words, only those who meet the requirements as part of the research members(Sugiyono., 2015) in(Syahida, 2021) . Based on a population of 500 students, a sample of 9 respondents was selected using the Slovin formula. The criteria for selecting respondents included: (1) Students with high geometric ability, (2) Students with moderate geometric ability, (3) Students with low geometric ability. The questionnaire distributed had 20 statements, consisting of 10 statements in variable X, the level of geometric ability based on Hass's theory, and 15 statements on student economic behavior related to saving and consumptive behavior.

The instruments used in this study were a geometry ability test sheet, a visual-spatial intelligence indicator compilation sheet, a visual-spatial intelligence test sheet, interview guidelines, an assessment rubric, and a validation sheet. The instruments were developed by three validators who are experts in the visual and spatial fields. The validated instruments were then revised until they reached a level of validity acceptable to the validators. The test sheets and interview guidelines were also validated by validators who are experts in the visual and spatial fields.

FINDINGS AND DISCUSSION

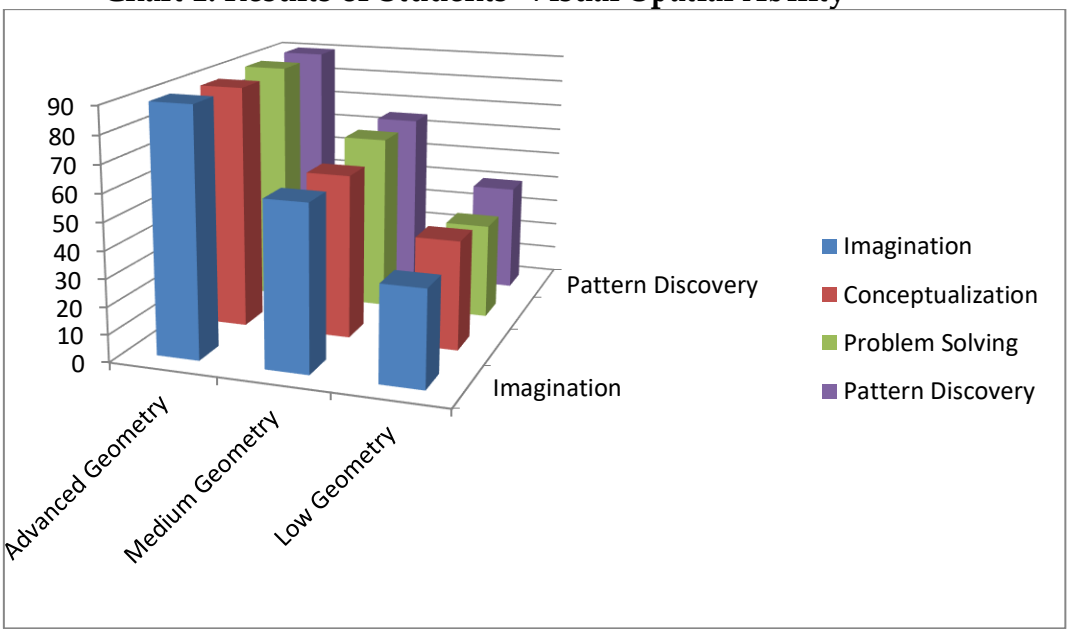
Results

The description was carried out by explaining the characteristics of the subjects' visual-spatial intelligence with indicators in this study classifying the characteristics of visual-spatial intelligence into 12 levels, with level 1 being the highest level and level 12 being the lowest level. The visual-spatial intelligence of students with high geometric abilities, with 3 subjects, was classified at levels 1 to 5, with most subjects at level 1.

The percentage of achievement of the characteristics of imagination, conceptualization, problem solving, and pattern discovery of these subjects was between 89.5% and 90%, with most reaching 90%.

The following chart presents the results of observations on students with high, moderate, and low geometric abilities.

Chart 1. Results of Students' Visual-Spatial Ability



The visual-spatial intelligence of students with moderate geometry skills with 3 subjects is classified at levels 1 to 5, with most subjects at levels 1 and 4. The percentage of achievement in the characteristics of imagination, conceptualization, problem solving, and pattern discovery of the subjects is between 60% and 65%. This shows that even though students with moderate geometry skills can understand basic concepts, they still have difficulty applying these concepts in more complex situations. However, they can still identify certain patterns, although not always accurately. Most of the time, they still rely on repetition to solve these problems. These achievements indicate that there is potential that can be developed with a more specific approach to learning.

The visual-spatial intelligence of students with low geometry skills in three subjects is classified at levels 1 to 10. The percentage of achievement in the characteristics of imagination, conceptualization, problem solving, and pattern discovery for these subjects is between 35% and 40%. This figure shows that most students are not yet able to understand basic concepts in geometry well. They tend to have difficulty imagining the requested geometric shapes or structures,

and this hinders their ability to solve problems. However, with more in-depth learning methods, these students have the potential to develop further. More intensive intervention is needed so that students can achieve a better and more independent understanding in solving geometry problems.

The chart shows that students with low geometry skills are not yet able to work on conceptual problems well, are not yet able to solve visualization problems well ( ), are not yet able to solve problem-solving problems well, and are not yet able to solve pattern discovery problems well. This indicates that they need more time to achieve a deeper understanding of the material being taught. More structured teaching and more targeted methods are needed to support the improvement of their abilities. Learning that involves practical experience and the use of visual aids can help them understand these concepts more effectively. With improvements in teaching and tailored learning, these low-ability students can show significant progress.

Students with moderate geometry skills are quite capable of working on conceptual problems well, quite capable of solving visualization problems well, quite capable of solving problem-solving problems well, and quite capable of solving pattern recognition problems well. They have demonstrated sufficient ability in understanding and solving geometry problems, although they still need a lot of practice and further understanding. With additional understanding and practice in the form of more diverse problems, they can develop further. Improvements in certain aspects, such as the use of more effective problem-solving strategies, can help them become more competent in solving more complex problems. Reinforcement-based learning can help them overcome existing challenges.

Students with high geometry abilities are already able to work on conceptual problems well, are able to solve visualization problems well, are able to solve problem-solving problems well, and are able to solve pattern discovery problems well. Their excellence is evident in their ability to understand and apply geometric concepts at a higher and more complex level. They can identify patterns, conceptualize new ideas, and solve problems more quickly and accurately. Their level of understanding covers both theoretical and practical aspects, enabling them to handle various types of more challenging problems. With more experience, they can more easily adapt to various forms of more demanding problems.

Another study mentions that differences in a person's understanding in solving problems will also affect a person's decision-making. For example, another article mentions that customer knowledge is very much needed in decision-making, in which case customers not only need to know about sharia in Islamic teachings but also need to be provided with knowledge about Islamic banking from the very beginning of their introduction to the products provided (Basri: ALKASB, 2024). The higher the knowledge and understanding of Islamic banking, the more likely it is to increase the decision to save in an Islamic bank. The accessibility of a service also determines consumer behavior because it concerns the ease of obtaining a service. With the availability of facilities that

support smooth transactions, customers will certainly feel satisfied and will continue to use the bank's services. Accessibility determines the level of consumer comfort, making it one of the factors that determine consumer behavior. Religion is one of the most influential norms in society. The results of the study show that knowledge has a significant effect on customer satisfaction in saving. Similarly, accessibility will also influence a person's decision to save.

This also applies in this study. In the results of interviews with students, it was found that students with high geometry skills would choose to save more than become high consumers. This statement can be seen in the following table.

Table 2. Results of Interviews with Geometry Class Students

No	Name	Class	Description
1	A	Height	Choosing to save
2	B	High	Choosing to save
3	C	High	Choosing to save
4	D	Moderate	Choosing to save
5	E	Currently	Choosing to save
6	F	Currently	Choosing to be a consumer
7	G	Low	Choosing to be a consumer
8	H	Low	Choosing to be a consumer
9	I	Low	Choosing to be a consumer

Based on the results of the study, it was found that 100% of students with high geometric ability chose to save money rather than being continuous consumers. This shows that students with high geometric ability have better financial awareness and are more likely to prioritize wiser financial management. The next result was that 70% of students with moderate geometric ability chose to save money rather than other consumer activities. However, there was a small portion of them who still tended to prioritize consumption, which may have been influenced by social factors or daily habits. Students with low geometric ability chose to be consumers rather than saving. This decision may have been caused by a lack of understanding or awareness of the importance of long-term financial planning, which can be improved with better education on money management.

Discussion

Based on the results and discussion, it can be concluded that differences in a person's understanding will lead to differences in that person's decision-making.

Further research is expected to provide therapy for students with moderate and low geometric abilities. This will have a positive impact on the students' ongoing education. Providing improvements to these students can increase their understanding of conceptualization, visualization, problem solving, and pattern discovery. In addition, students with low abilities are expected to conduct further studies on choosing to save money rather than spending on other consumer goods. It is also hoped that students will be more

economical and skilled in managing their finances. With the focus on students as the subject of research, it is hoped that in the future Indonesia will not become the highest consumer country. Other studies mention that Indonesia is the number one consumer country in Southeast Asia. Students are also greatly influenced by the Shopee app, which makes shopping easier for consumers. Cheap shipping offers are also an attraction for consumers to always shop through this orange app. This has also been studied in previous research, namely in an article stating that free shipping offers can empirically increase the number of consumer orders. Additionally, several studies confirm that retailers can effectively attract potential buyers with free shipping offers(Keeney, 1999) in(Syahida, 2021) .

Overall, the results of this study describe differences in financial management patterns among students with different geometric abilities. Students with high geometric abilities tend to have higher awareness in terms of financial management and choose to save, while students with low geometric abilities are more likely to become consumers. This indicates that understanding and skills in financial management can be influenced by cognitive ability levels, particularly in terms of information processing and long-term planning. Therefore, it is important to integrate more effective financial education into the curriculum to increase student awareness, especially those with lower geometry skills, so that they can make wiser financial decisions in the future.

CONCLUSION

This study shows that there is a significant relationship between students' geometric ability and their economic behavior, especially in terms of decisions to save or be a consumer- . Students with high geometric ability tend to be more prudent in managing their finances and choose to save, while students with low geometric ability show more consumptive behavior. This reflects that students' visual-spatial intelligence influences how they process information and make decisions related to financial management. Therefore, it is important to provide a more effective educational approach, particularly in developing financial skills for students with low geometric abilities, in order to increase awareness of the importance of saving and better financial planning in the future. This research is expected to serve as a basis for further interventions to help reduce consumption levels among students and ultimately contribute to better financial management at the local and global levels.

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