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ELEMENTARY SCHOOL MATHEMATICS EDUCATION: ARE STUDENTS ENTHUSIASTIC ABOUT LEARNING MATHEMATICS? STUDENTS' AND TEACHER PERSPECTIVES

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Abstract

The objective of this study is to investigate the varying attitudes and requirements of elementary school children in the domain of mathematics, taking into account both gender differences and general trends. The study design used is descriptive research, using both quantitative and qualitative analytic methodologies. This study is enhanced by the use of triangulation techniques to combine several research methodologies and data sources, including semi-structured interviews, questionnaires, and direct observation. The data was analyzed using descriptive quantitative measures and also including the qualitative approach adapted by Huber and Froehlich. The sample was carried out using a convenience sampling approach determined by Krejcie and Morgan also Issac and Michael formula. Eighty grade V primary school students completed the questionnaire, while a teacher and 24 students were interviewed. The data in this study is valid and reliable with a Cronbach Alpha value of 0.78. The findings indicated that children' judgments of enthusiasm and ambition in studying mathematics were significantly high. Moreover, the mathematical aptitude exam yielded "good" scores, but falling within the lower range of this group. According to the research findings, pupils need further comprehension of fundamental mathematical operations, particularly multiplication and division. Furthermore, throughout the process of learning, it is anticipated that instructors would consistently provide students with progressively complex mathematical problems and continuously enhance their appreciation in order to ignite student excitement. The study also aims to provide a fundamental analysis to develop mathematics learning media products. This analysis will consider the impact on elementary school students' enthusiasm, benefiting writers, teachers, researchers, and readers. Ultimately, the findings will assist teachers and students in enhancing the learning process.

Keywords: Mathematics in Elementary Education, Mathematics Enthusiastic, Students' Perspectives.

INTRODUCTION

Mathematics enables students to develop a comprehensive understanding of numbers and forms while also fostering their ability to reason, make connections between ideas, and think logically (Nyberg, Koerber, and Osterhaus 2022; Shtulman and Young 2023). In a broader sense, the acquisition of mathematical knowledge enables youngsters to engage in profound contemplation of the interconnections and regularities present in all phenomena (Ernest 2015). Indeed, mathematics is inherently challenging and sometimes lacks attraction for children (Arias-Flores, Solis, and Zapata 2023). Despite the significant utility of mathematics in daily life, a considerable number of individuals have yet to experience the advantages of mathematics in enhancing cognitive abilities, shaping attitudes, and fostering general development as individuals (Dewilde et al. 2019; Guzmán, Rodríguez, and Ferreira 2023; Hill and Seah 2023; Herlina Usman et al. 2023)

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In the realm of personality development, learning mathematics in schools has failed to cultivate pupils' ability to autonomously determine decisions, exhibit honesty and courage, take responsibility for their actions and words, and develop 21st century skills (Sumantri and Satriani 2016; Widodo, Turmudi, and Rosjanuardi 2021). Learning mathematics often yields graduates who possess extensive knowledge but lack essential life skills, entrepreneurial abilities, and accountable behaviors (Li et al. 2023; Liverani et al. 2023; Metallidou and Vlachou 2010). Learning mathematics should align with the child's individual qualities, promoting active and enjoyable learning experiences without any gender bias (Da Costa Varjolo, De Souza Santos, and Guedes 2021; Pitchford and Outhwaite 2019; PutriP et al. 2023; Rahman and Aminah 2022). The goal is to enhance students' skills and comprehension of mathematical concepts and procedures (Gün Şahin and Kirmizigül n.d.; James H. Stronge, Pamela D. Tucker, and Jennifer L. Hindman 2004; Van de Walle, Karp, and Bay Williams 2013).

One reason for being enthusiastic about learning mathematics is that the mathematics lesson plans are overloaded and inadequate in addressing the varied developmental traits experienced by children (Jenifer et al. 2024; Sumantri 2023). The lack of consistency in teaching strategies and methodologies contributes to students' disinterest in lessons and their tendency to become fatigued. Furthermore, student perception is crucial as it offers insights into the specific requirements for mathematics education, aligning with students' qualities and fostering their enthusiasm and curiosity in the subject (Kamid et al. 2022; Nopitasari et al. 2023; Rati and Rediani 2021). This, in turn, leads to more favorable learning outcomes (Bueno and Niess 2023; Herlina Usman and Anwar 2021).

Perception refers to the cognitive process by which an individual receives sensory perceptions of things, which are influenced by both internal and external influences (Astalini et al. 2022; Kristiani, Sudiyanto, and Usodo 2022; Supramono and Retnawati 2023) Students' perceptions vary and are intended to be positive. They demonstrate an augmentation in enhanced knowledge and improved learning proficiency (Nigam et al. 2021; Singh and Mishra n.d.). Many different factors, including motivation, excitement, enthusiasm, objectives, family, surroundings, media, educational institutions, and gender, can shape and have an impact on perceptions during learning, the process of acquiring knowledge (Hill and Seah 2023; H Usman et al. 2021).

Student learning progress can vary due to divergent perspectives influenced by gender disparities (Forgasz and Markovits 2018; Huntington, Goulding, and Pitchford 2023; Kersey et al. 2018; Pitchford, Chigeda, and Hubber 2019; Pitchford and Outhwaite 2019; Zhao, Wininger, and Hendricks 2022). Gender is the identity of a person that is seen as a social construct that has been created and organized (Kamid et al. 2022). Gender differences also play a role in the attainment of learning outcomes, in addition to the learning process (Forgasz and Markovits 2018). Gender disparities in cognitive processes regarding the utilization of educational resources can have an impact on students' academic achievements (Kersey et al. 2018).

Prior research has been conducted on the topics of mathematics, views, and gender in elementary education (Astalini et al. 2022; Forgasz and Markovits 2018; Kamid et al. 2022; Pitchford and Outhwaite 2019; Şanlı 2023; Zhai, Zhao, and Qiao 2023; Zhao, Wininger, and Hendricks 2022). A study examining the Implicit Theories of Intelligence Scale for Children—

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Self Form on a sample of 1533 elementary kids, consisting of 782 boys and 751 girls, revealed that boys outperformed girls in the areas of mathematics and science (Zhao, Wininger, and Hendricks 2022). Another study (Astalini et al. 2022; Forgasz and Markovits 2018; Huntington, Goulding, and Pitchford 2023; Kamid et al. 2022; Kersey et al. 2018; Pitchford, Chigeda, and Hubber 2019; Şanlı 2023) also verified it. Moreover, this occurs when pupils embrace more robust incremental ideas. However, there was no discernible disparity in the scores for mathematics and science achievement. It is likely because of the significant conceptual overlap, intrinsic links, and basic relationship between these two realms.

The PISA data analysis showed that Indonesia continues to exhibit gender disparities in both domains (OECD 2023b, 2023c, 2023a). It is imperative to address these problems promptly and thoroughly in order to prevent any additional discrepancies. This study aimed to conduct a need analysis of the developing of mathematics learning medias that caters to the interests of elementary school students. Given this description, researchers undertook a study to address the following inquiries:

1) How are the students' enthusiasm and ambition of mathematics learning outcomes differ According on gender?
2) How do the students perceive mathematics learning based on gender?

METHOD

The current study utilizes a descriptive research approach, employing a combination of qualitative and quantitative data analysis techniques, and incorporating triangulation methodologies. Quantitative research is performed to examine hypotheses by comparing one or more groups in order to identify disparities (Astalini et al. 2022; Hill and Seah 2023; Kamid et al. 2022; Loeb et al. 2017; Naidoo and Hajaree 2021). Moreover, qualitative research is a distinct form of investigation that is distinguished by its scientific methodology and its objective of understanding social reality (Bingham 2023; Merriam 2009; Pramana et al. 2021; Şanlı 2023). The research was segmented into three distinct phases (depicted in Figure 1): direct observation, interviews, and shipping of questionnaires. This undertaking was initiated to ascertain the underlying reason of the problem by altering the behaviors and preferences of pupils, facilitating subsequent investigations to generate appropriate advancements, such as the development of educational materials or the use of treatments.

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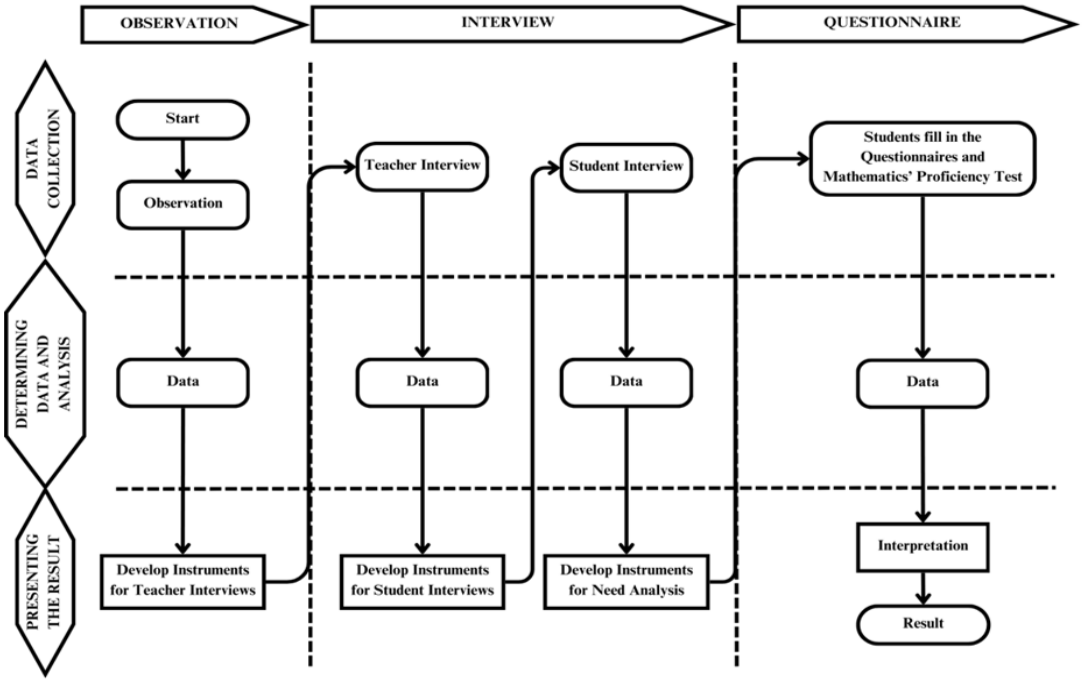

Figure 1: The Procedure for the Survey Using Triangulation Adapted from (Bingham 2023; Loeb et al. 2017; Matthias Huber and Dominik E. Froehlich 2020)

One of the data in this research obtained via direct observation, which was initially recorded as notes, was then organized into an instrument to facilitate interviews with teachers. This data is then presented visually in Table 1. The questionnaire and mathematics proficiency test were developed using data gathered from classroom observations as well as interviews conducted with the teacher and 24 pupils.

Table 1: Interview Instruments Grid

Subjects	Aspects	Items
Teacher	Status Quo of teaching and learning mathematics	Program
		Strategy
		Problems
		Class Behaviour
		Students' need
	Plan of teaching and learning mathematics potential development	Need
		Media/ Technology resources
		Students' participation
Students	Enthusiasm	Mathematics' stereotypes
		Feeling and emotion
		Attraction
		Participation
	Ambition	Motivation
		Proficiency
		Hope

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Another piece of data for this study was collected using a questionnaire. This data collection is conducted by disseminating questionnaires or perception surveys through the mobile-gaming application, Quizziz, to students, who will thereafter provide their responses to the offered assertions. The questionnaire comprises items designed to assess both perceptions and learning outcomes. Table 2 displays the grid of data gathering parameters utilized in this investigation.

Table 2: Student Perception Questionnaire Instruments Grid (Astalini et al. 2022; Cui et al. 2021; Permana, Permatawati, and Khoerudin 2023)

Investigation Indicator		Investigationed Aspect
Enthusiasm	**E1**	Mathematics is easy.
	E2	Mathematics is fun.
	E3	Mathematics is my favorite subject.
	E4	I prefer counting to reading.
	E5	I just do mathematics casually.
	E6	I tried to focus in mathematics and get no distractions.
	E7	While teacher is explaining something in mathematics, I prefer talking to my friend.
	E8	I found difficulties in solving multiplication problems in mathematics.
	E9	Sometimes, I find learning mathematics boring.
	E10	Videos and games help me learn mathematics.
Ambition	**A1**	I am excited to be competing with others in mathematics' results.
	A2	I tried to get the best score in mathematics.
	A3	I tried to enjoy learning mathematics.
	A4	When I found out something difficult, I would ask for help.
	A5	I love spending time learning mathematics.

The size and characteristics of the population, in addition to the permissible margin of error, must be taken into account when determining the sample (Anwar 2009). Using the formula for determining sample size is an efficient approach to identifying a representative sample from a diverse population (Sugiyono 2017). As shown in Table 1, samples 68 and 70 were calculated using the Issac and Michael formula (Isaac and Michael 1987) and the Krejcie and Morgan formula (Krejcie and Morgan 1970), respectively. The study consisted of one instructor selected from an elementary school and a sample of 80 fifth-grade pupils, representing the majority of the total population of 85 pupils, taking into consideration those who were absent. Therefore, the sample size is considered significantly valid.

The questionnaire was constructed using a Likert scale, which is a type of measurement scale commonly used in questionnaires. A Likert-type scale was employed to assess views on statements that pertain to an individual's perspective on a phenomenon (Aslı ÖZGÜN-KOCA and İlhan ŞEN 2011). During the research, the scale was translated for students based on their language proficiency. The options for responses were: I strongly agree (4), I agree (3), I disagree (2), and I strongly disagree (1). The categorization of instrument findings on perception is using the following ranges: Strongly Significant (SS: 48.76 - 60.00), Significant (S: 37.51 - 48.75), Insignificant (I: 26.26 - 37.50), and Strongly Insignificant (SI: 15.00 - 26.25). Cronbach's alpha is a statistical measure that assesses the level of internal consistency among a population, showing the extent to which they are closely related as a whole (Cui et al. 2021). This

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questionnaire data's internal consistency and dependability are judged acceptable at 0.78. A score closer to 1 suggests a better level of reliability (Mokshein, Ishak, and Ahmad 2019; Rati and Rediani 2021; Zakaria and Hanid 2023).

Table 3: Reliability and Internal Consistency Result

No	Indicator	Value
1	Number of Item	15
2	Number of Population	85
3	Number of Sample Based on Issac and Michael with $\alpha = 0.05$	68
4	Number of Sample Based on Krejcie and Morgan with $\alpha = 0.05$	70
5	Realization Number of Sample	80
6	Cronbach's Alpha Based on Standardized Items	0.78

Furthermore, the acquired data in this questionnaire is valid, accompanied by a clarifying information presented in Figure 2. With respect to the results of the questionnaire as shown in Figure 2, question 1 exhibited the highest level, whereas question 5 demonstrated the lowest level. Nevertheless, the r count of questions 1 through 15 surpasses 0.2139. According to this, it appears that every question is valid.

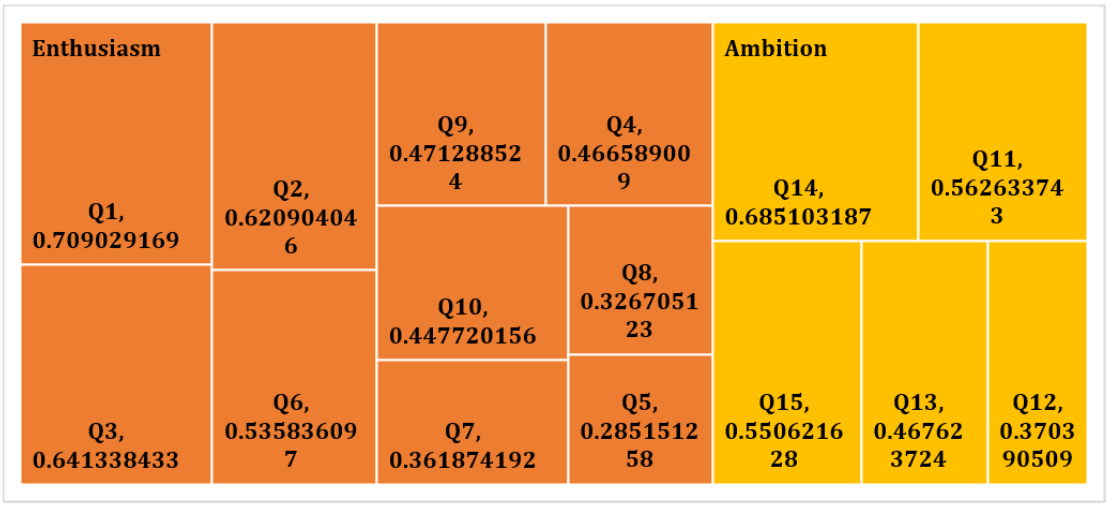

Figure 2: The Validation Result is Determined for Each Question in the Questionnaire, Encompassing both Enthusiasms and Ambition

To assess the material needs of students for generating learning media, a tool in the form of a need-test was employed, using a mathematics proficiency test. This test was implemented by incorporating the elements of the national assessment of numeracy literacy offered by the Centre for Educational Assessment (Pusmendik). This test consisted of open-ended questions and drawings, comprising a total of 10 essays over 3 indicators, including multiplication (M), division (D), and data interpretation, with various types of question. The range for evaluating pupils' mathematical competence test were: Excellent (75.01 – 100.00), Good (50.01 – 75.00), Poor (25.01 – 50.00), and Terribly Poor (0.00 – 25.00).

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RESULT

The results of the descriptive test analysis for fifth grade of an elementary school were generated by processing the data using Excel. The findings of the student perception descriptive analysis for mathematics may be seen in Figure 3, along with Table 4 and Table 5.

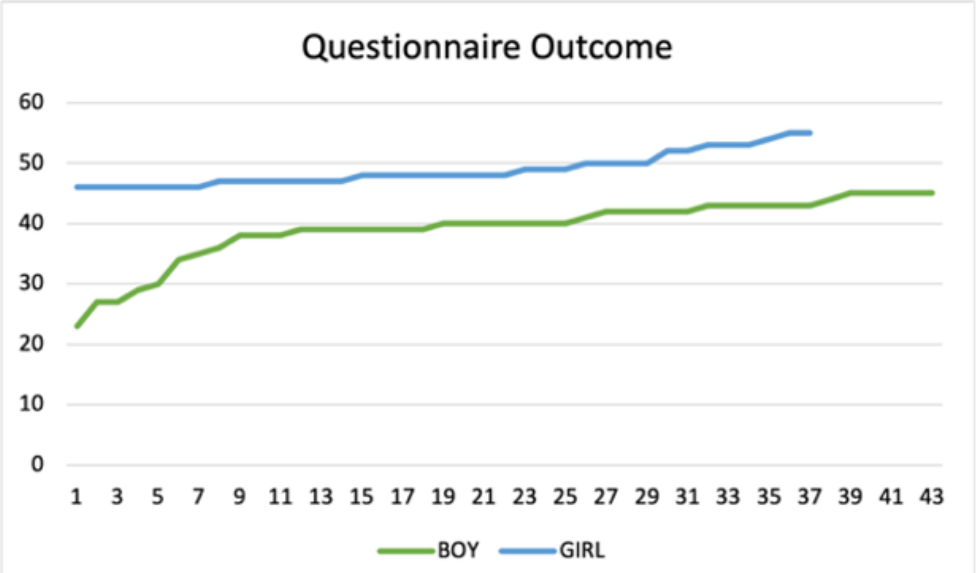

Figure 3: Questionnaire Outcome

Table 4: Mean and its Interpretation of Questionnaire Result

	MEAN	INTERPRETATION
GIRLS (37	44.78	Significant
BOYS (43)	42.74	Significant
TOTAL (80)	43.69	Significant

Table 4 demonstrates that the survey results regarding students' enthusiasm and motivation are significant for both genders and the whole sample. It is noteworthy that girls see the practical relevance of their mathematical learning and embrace it as a source of ambition and enthusiasm is quite promising. Nevertheless, the mean of the questionnaire outcomes for girls and boys showed little disparity. This indicates that there is minimal gap between them. Based on the data in Figure 3, girls have a greater level of enthusiasm and ambition when it comes to embracing difficulties in the field of Mathematics, compared to boys. During observation and interviews, girls exhibit a greater level of diligence in doing assigned activities, irrespective of the assignments and instructional approaches provided by the teacher. Then for the deeper analysis of the descriptive test, it can be seen in Table 5.

Table 5 displays the outcomes of pupils' feedback about their levels of anthusiasm and ambition in relation to studying mathematics. Regarding excitement, 13% of students have a strong disagreement and 6% firmly hold a strong disagreement that mathematics is easy. Boys are the primary contributors to this outcome, with 9% and 12% of them expressing disagreement and

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severe disagreement, respectively. Moreover, a majority of pupils, namely 60%, exhibit a preference for counting over reading, with boys constituting the biggest share at 61%. A significant proportion of students, up to 69%, make an effort to avoid distractions. However, there remains a notable percentage of individuals, at least 35% of boys and 27% of girls, who have yet comprehended the importance of this.

Table 5: Questionnaire Results in each Aspect's Interpretation (in percent)

		Enthusiasm										Ambition				
		E1	**E2**	**E3**	**E4**	**E5**	**E6**	**E7**	**E8**	**E9**	**E10**	**A1**	**A2**	**A3**	**A4**	**A5**
TOT (80)	**SA**	33	33	25	20	19	26	13	14	29	44	44	73	25	34	31
	A	49	41	43	40	30	43	21	30	20	33	48	25	58	43	44
	D	13	18	29	38	43	26	48	43	36	16	6	1	14	15	15
	SD	6	9	4	3	9	5	19	14	15	8	3	1	4	9	10
GIRLS (37)	**SA**	35	32	27	27	22	30	16	11	41	46	41	78	16	43	27
	A	49	46	41	32	35	43	19	32	22	30	51	22	54	38	49
	D	16	19	32	41	41	27	51	41	27	19	5	0	24	16	19
	SD	0	3	0	0	3	0	14	16	11	5	3	0	5	3	5
BOYS (43)	**SA**	30	28	23	23	19	26	14	9	35	40	35	67	14	37	23
	A	42	40	35	28	30	37	16	28	19	26	44	19	47	33	42
	D	14	16	28	35	35	23	44	35	23	16	5	0	21	14	16
	SD	0	2	0	0	2	0	12	14	9	5	2	0	5	2	5

In compliance with Table 5, over 32% of boys and 35% of girls show a preference for conversing with peers instead of listening to mathematical explanations from their teacher, as shown in the enthusiasm component. Approximately 49% of mathematics students, including over half of the total, expressed a strong sentiment that mathematics is very boring. Among girls, this sentiment was shared by 63%. A total of 44% of pupils in the total had challenges while doing arithmetic multiplications, with an almost equal distribution of males and girls. Nevertheless, a significant 77% of students concurred that using video and game-based methods for studying mathematics was very beneficial to them. Notably, both male and female students exhibited a similar level of agreement.

According to Table 5 in terms of ambition, 92% of pupils expressed enthusiasm about competing in mathematics achievements with their peers. Nearly the whole total, 98% of students, expressed a desire to get the highest possible score in mathematics. Therefore, students consistently endeavor to develop an affinity for studying mathematics. Out of all the students, 83% agreed with this statement, with 93% of male students and 70% of female students correspondingly. The ambition of children is seen in their inclination to seek assistance, as shown by 77% of them requesting aid when faced with challenges in problem-solving. According to the interview findings, some individuals feel at ease inquiring the teacher, while others prefer seeking assistance from their classmates.

In furtherance of administering questionnaires on students' enthusiasm and ambition in learning mathematics. Afterwards, we will assess the mathematical aptitude of the students. The students' mathematical proficiency is generally good, however, the data in Table 6 indicates that

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their performance tends to be poor. Girls exhibited higher scores compared to boys, with respective scores of 61.22 and 52.79, resulting in a total average of 56.69.

The graph depicted in Figure 4 illustrates the outcomes of students' mathematical proficiency according to different categories. The graph illustrates that girls outperform superior mathematical proficiency in various areas, including multiplication (M), division (D), and data interpretation (DI). This includes both narrative problems with or without visualizations (VISUAL/NON-VIS) as well as open questions (OQ) that require the use of problem-solving procedures (Dr) and explanations (EXP). Boys exhibited below-average mathematical proficiency in the specified question categories compared to the total as a whole. Further elaboration on this topic will be provided in Table 7.

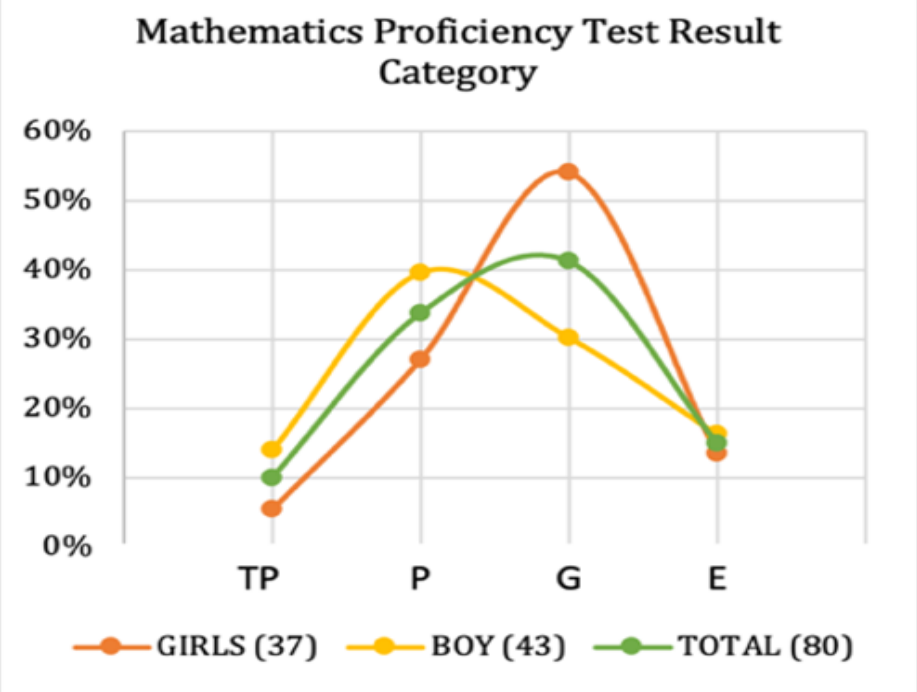

Figure 4: Mathematics Proficiency Test Result based on Categories

Table 6: Mean and its Interpretation of Mathematics Proficiency Test

	MEAN	CRITERIA
GIRLS (37)	61.22	Good
BOY (43)	52.79	Good
TOTAL (80)	56.69	Good

Table 7 emphasizes that the majority of grade five primary school students, specifically 56%, demonstrated an inability to accurately solve multiplication problems. Regarding division, only 73% of individuals were able to provide accurate answers. Notably, girls had the highest proportion at 81%, while boys lagged behind at only 67%. This discrepancy may arise from variations in the question's presentation. Multiplication queries are typically presented in

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various formats, including procedural commands, narrative scenarios with visualizations, and narrative scenarios without visualizations. In contrast, division problems are usually only presented with procedural instructions. Girls exhibit a higher level of data interpretation proficiency compared to boys, with rates of 73% and 57%, respectively.

Table 7: Mathematics Proficiency Test Results in each Interpretation (in percent)

	M		D		DI		VISUAL		NON-VIS		OQ		Dr			EXP	
	F	T	F	T	F	T	F	T	F	T	F	T	F	T	C	F	T
GIRLS (37)	55	45	19	81	27	73	81	19	78	22	55	45	18	78	3	46	54
BOYS (43)	57	43	34	67	43	57	77	23	84	16	60	40	27	67	5	70	30
TOTAL (80)	56	44	27	73	35	65	79	21	81	19	58	42	23	73	4	59	41

Both the overall results of the mathematics proficiency exam and the individual responses for each question were taken into consideration. The elucidation and exposition of the methodology need a more thorough examination. The information is shown explicitly in Figure 5 and Figure 6.

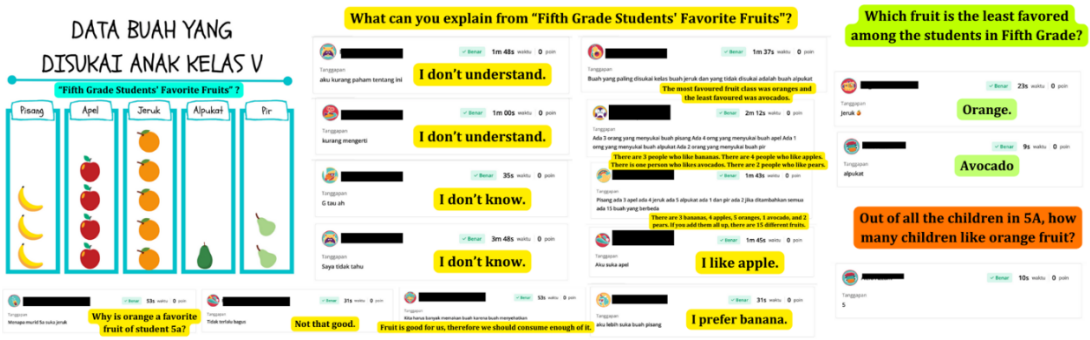

Figure 1: Mathematics Proficiency Test Results Centered on Problem Solving that Demands Explanation

Figure 5 illustrates that students had a greater inclination to openly communicate their thoughts about queries that required an explanation of data interpretation outcomes. Several students promptly expressed their lack of comprehension and inability to respond to the question. Others sought clarification by asking the question again. Some evaluated the question's quality, responding with phrases such as "I don't know" or "I don't understand" or expressing their dissatisfaction with the question by stating "Not that good" or questioning the preference for oranges as a favorite fruit. Some students said that the lesson to be derived from the data was that "Fruit is good for us, therefore we should consume enough of it" However, this was not accurate. Additionally, several students conveyed their preferences with responses such as “I like apple" or "I prefer banana" that may be captured in the data. However, around 41% (as shown by Table 10) of them had the ability to respond accurately and draw conclusions based on the most prominent disparities seen in the data.

Meanwhile, Figure 6 depicts students engaging in the process of addressing open questions that need the demonstration of procedural steps. Students are given the freedom to present the technique according to their own preferences. The outcomes of students' responses to this

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particular sort of inquiry exhibit significant variation. Among the pupils, there are some who effectively articulate the procedure, while others just restate the question or directly provide clear answer without accompanying procedure, some express their ideas by illustrations, others admit their lack of knowledge, and a few are capable of accurately presenting the procedure but struggle to answer it.

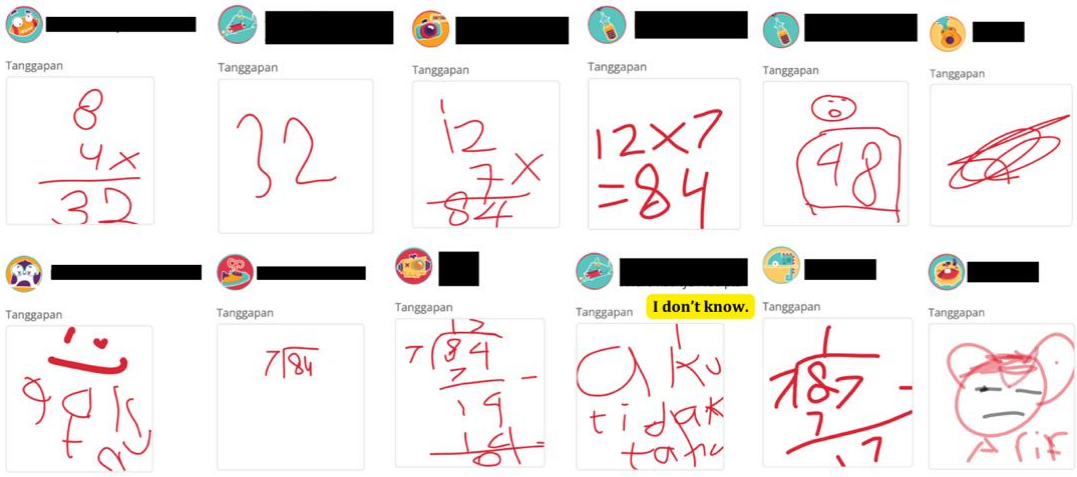

Figure 2: Mathematics Proficiency Test Results that Examine Problem-Solving Skills by Showing the Procedures

DISCUSSION

The first conclusion, derived from the analysis of the acquired data, indicates that students in elementary schools discover the teaching offered by their teachers as captivating, fostering their excitement for the learning process and motivating them to strive for high academic achievements. However, students still encounter several barriers in implementing this learning. An issues that cultivates is the widespread perception of mathematics as a challenging subject, which has a significant impact (Liverani et al. 2023). This problem also gives rise to another concern, essentially the disparity in levels of enthusiasm and ambition between girls and boys. The disparity in enthusiasm and ambition between the two individuals has the capacity to generate substantial disparities in results over time, if left unaddressed (Jenifer et al. 2024). This has the potential to happen via recursive and independent mechanisms (Walton 2014).

Previous research (Kersey et al. 2018) reinforces the findings of this study, indicating that most students are devoid of gender-biased beliefs about the superiority of girls or boys in mathematics, the difficulty of mathematics, or the importance of mathematics regardless of gender. Among them, boys often exhibit more noticeable perspectives, aligning with the belief that mathematics is challenging and numerical counting is easier than reading. Girls exhibit a resigned perspective as they continue to confront and tackle mathematics, persistently seeking procedures to infuse enjoyment into the subject. However, a recent study (Forgasz and Markovits 2018) further supports this research indicating that girls consistently outperform boys in mathematical skill when it comes to different types of problem-solving activities.

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A different approach prior investigation (Forgasz and Markovits 2018; Kamid et al. 2022) in learning mathematics demonstrates that children's conceptual skills may exhibit proficiency initially, but tend to deteriorate with time. This may be attributed to the fact that youngsters often have a greater capacity for memorization rather than mastery in the construction of processes. Conceptual and procedural skills are crucial in the learning process (Gün Şahin and Kirmizigül n.d.; James H. Stronge, Pamela D. Tucker, and Jennifer L. Hindman 2004; Reys et al. 2009; Van de Walle, Karp, and Bay Williams 2013). The perceptions of students are used as a benchmark to evaluate the effectiveness of teachers in delivering materials for learning and conducting targeted educational appraisals (Lee et al. 2023; LEE, SHARIF, and RAHIM 2018; Sung, Leong, and Lee 2023).

Despite the simplicity of the content being tested, primarily multiplication, division, and data interpretation, this research demonstrates a high degree of mathematical aptitude. The mathematics proficiency assessment used in this research was mostly visual and narrative in nature, necessitating students to articulate the step-by-step process. Previous study (Jenifer et al. 2024) stated that elementary school students have the fundamental belief that achieving achievement in mathematics is more reliant on being "highly intelligent" compared to achieving success in reading or writing. Hence, it is more advantageous to segregate reading and writing activities rather than integrating children's perspectives on them. While elementary school students might think of reading and writing as interconnected, it is important to note that these abilities entail distinct cognitive demands. As a result, children may have conflicting ideas about the factors that contribute to success in each ability.

Furthermore, it was discovered that pupils concurred that the utilization of movies and games may be beneficial in facilitating their mathematics learning, which was also confirmed by preliminary inquiries. (Caamaño-Navarrete et al. 2021; Demir and Birgili 2023; Naidoo and Hajaree 2021; Román-Sánchez et al. 2023; Vázquez-Cano et al. 2023). They were elated and intrigued concerning videos and games. In addition, they previously used the mobile game application, Quizziz, for conducting assessments. Nevertheless, students have yet to encounter the experience of learning facilitated by videos and games.

Hence, it is important to establish a connection between those aspects in order to enhance students' comprehension of concepts and proficiency in procedural skills to fulfil present skill requirements. An avenue that might be explored is the creation of educational Medias that are tailored to the specific requirements of both students and teachers. Exploring the kind of media and its potential as an alternative to this issue might be a promising avenue for future investigation.

CONCLUSION

On a global scale, girls often exhibit lower performance in mathematics relative to boys, whereas their reading proficiency tends to surpass that of boys. The pervasive perception of mathematics as a challenging subject is very influential. Individuals prefer to get satisfaction from engaging with mathematical problems that are within their grasp, allowing them to successfully solve them. Conversely, when confronted with more arduous mathematical

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challenges, they tend to experience apprehension and fear. In order to effectively solve mathematical issues of any kind, it is crucial to maintain a balance between the differences in viewpoint or ability gap across girls and boys, as well as within people, in terms of their capacity and inclination towards calculation and reading. Students often rely on rote memorization rather than developing a deep understanding of mathematical ideas and techniques, which hinders their ability to solve a wide range of mathematical issues. Conversely, students perceive that using movies and games for learning purposes enhances their focus and facilitates their comprehension of mathematics. Furthermore, it will indirectly stimulate their excitement and drive. Hence, it is essential to develop educational resources in the future that can effectively address the aforementioned issues. The purpose of learning media is to enhance the quality of education by providing assistance for both students and teachers.

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