JOURNAL OF INTERDISCIPLINARY PERSPECTIVES

ISSN Print: 2984-8288, ISSN Online: 2984-8385
Vol. 2, No. 12, pp. 335-343, December 2024

Teachers' Instructional Practices vis-à-vis Students' Interest in Learning Mathematics

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Date received: September 20, 2024
Date revised: October 28, 2024
Date accepted: November 15, 2024

Originality: 85%
Grammarly Score: 99%
Similarity: 15%

Recommended citation:
Ubat, J., Ogatis, P., Samonte, R.K., Celestial, S.E., Villalon, G. (2024). Teachers' instructional practices vis-à-vis students' interest in learning Mathematics. *Journal of Interdisciplinary Perspectives*, 2(12), 335-343. https://doi.org/10.69569/jip.2024.0511

Abstract. The study explores the correlation between teaching practices and student's interest in learning mathematics among Grade 10 students of Guihulngan National High School—Hilaitan. It utilizes a survey with a sample size of 134 students distributed across five sections. The study focused on teachers' instructional practices regarding classroom management, social-emotional support, instructional quality, and students' cognitive engagement as independent variables. The dependent variables were students' overall interest in mathematics and their confidence level in mathematical problems. Results indicated that teachers' instructional practices were rated as effective, with an average mean of 2.88 on classroom management, social-emotional support, instructional quality, and cognitive engagement. Students expressed "confidence" in their problem-solving abilities, with an average mean of 2.86, and exhibited a "high" level of interest in learning mathematics, with an average mean of 2.93. Positive correlations were found between teachers' instructional practices and students' confidence level and learning interest in mathematics. Classroom management ($r = 0.532$) and instructional quality ($r = 0.420$) showed moderate correlations with students' confidence levels in Mathematical problems. In contrast, instructional quality ($r = 0.653$) had the highest correlation with students' learning interest in mathematics. Classroom management ($r = 0.466$), social-emotional support ($r = 0.377$), and cognitive engagement ($r = 0.371$) also contributed positively. The study underscores the critical role of effective teaching methods in fostering students' mathematical interest, contributing to improved academic performance and positive attitudes toward the subject where educators can create a positive learning environment that promotes success in Mathematics and makes the learning process enjoyable. Teachers can always develop a better teaching strategy, especially regarding their instructional quality. As per the findings of this study, it has the highest correlation with the students' learning interests. These results highlight the importance of thorough and efficient teaching approaches in increasing students' confidence and interest in mathematics, which enhances their academic achievement and fosters a more positive attitude toward the subject.

Keywords: Classroom management; Cognitive engagement; Instructional practices; Instructional quality; Social-emotional support; Students' interest; Mathematics.

1.0 Introduction

Mathematics is an essential subject in human life. It is a fundamental subject taught to students at all levels of education, from grade school to college. Mathematics is at the heart of science and our daily lives. It is all around us in everything we do. It is the building block for everything. Mathematics instruction begins with identifying simple numbers, which progresses to complex ones. Mathematics is embedded in our everyday lives, especially with the rise of technology (Mustafa, 2024). Learning about it is essential in helping students build their mental and cognitive development, such as problem-solving and critical thinking abilities. Through Mathematics, they acquire an attitude of thinking about solutions rather than focusing solely on the problem. It is common for people to wonder what relevance Mathematics serves in their daily lives.

In the modern world, math, such as applied Mathematics, is relevant and crucial (Hom & Gordon, 2021). Mathematics has a widespread reputation for being the subject students hate. It is not uncommon to hear from students who are struggling with math. People are becoming scared of Mathematics, and it makes them anxious. Thus, the researchers were eager to conduct this study to determine the correlation between the teaching-learning process and the student's learning interest in Mathematics. The study primarily focuses on the teachers' instructional practices that could jeopardize the teaching-learning process, such as classroom management, social-emotional support, instructional quality, and students' cognitive engagement.

On the other hand, the students' confidence level in dealing with mathematical problems and their interest in learning mathematics serve as the dependent variables for students' achievements. The researchers desire to know the significant relationship between the two variables. The outcome of this study is a big help for teachers to innovate their teaching practices, for the students to enhance their understanding and learning interest in Mathematics, and for the institutions to improve their current academic pedagogy.

The study was conducted in the heart of Guihulngan National High School – Hilaitan with the participation of Grade 10 students within the School Year 2023-2024 where it focuses on the correlation between the teachers' instructional practices and students' interest in learning mathematics within this local context. Examining their teaching styles or engagement strategies, we can identify effective approaches that may enhance student interest and motivation. The findings are expected to inform local educational policies and practices, ultimately contributing to improved student outcomes in mathematics. Addressing this pressing need supports academic success and fosters a generation of learners equipped with essential mathematical skills necessary for the workforce.

2.0 Methodology

2.1 Research Design

The study utilized the descriptive research design to determine the relationship of the teaching-learning process to the student's learning interest in Mathematics. Specifically, the method used was a survey using floating questionnaires for the respondents. The researchers chose this research design to digest the information from the respondents through statistical tools fully.

2.2 Research Locale

The study focused on the teacher's instructional practices and the student's learning interest in Mathematics. The respondents were the Grade 10 students of Guihulngan National High School – Hilaitan, Guihulngan City, Negros Oriental.

2.3 Research Participants

The participants of this study were one hundred thirty-four (134) students in the Grade 10 level of Guihulngan National High School – Hilaitan enrolled in the Academic Year 2023-2024. Sixty (60) respondents were male, while the remaining seventy-four (74) were female.

2.4 Research Instrument

This study used an adapted questionnaire from Yan Zhu and Gabrielle Kaiser (2022) entitled Impacts of Classroom Teaching Practices on Students' Mathematics Learning Interest.

2.5 Data Gathering Procedure
The researchers had control over data collection because they coordinated and administered their respondents. Fundamentally, the data for this study was gathered from identified respondents (GNHS-Hilaitan Grade 10 students). A survey questionnaire was utilized to gather information about the respondents' mathematical learning interests and their relevance to the teaching-learning process. After collecting the data, the researchers tabulated and tallied the survey using statistical methods.

2.6 Data Analysis
To analyze the data, the researchers used frequency and percentage to determine the demographic profile of the respondents. They also used weighted mean or average mean to look for the level of confidence, teachers' institutional practices, and students' interest in Mathematics. Pearson's product-moment correlation coefficient was also used to identify the relationship between the two variables, the relationship between the independent variable, and the primary and secondary dependent variables.

2.7 Ethical Considerations
This research study followed ethical guidelines. The researchers obtained consent before conducting the research and did not force the respondents to respond to the surveys. It ensured that all respondents' personal information would be kept confidential. The researchers supplied a letter of permission to participate in the study. As a result, the participants readily engaged in the study after being approached by the researchers and given a suitable explanation of the research goal and methodology.

3.0 Results and Discussion
3.1 Demographic Profile
As shown in Table 1, seventy-six (76) of the respondents came from Grade 10—Bonifacio and Grade 10—Mabini, comprising thirty-eight (38) students in each section, making 56% of the total respondents. On the other hand, 22% of the respondents came from Grade 10—Rizal, which has 29 students, while the remaining 21% came from Grade 10—Silang and Grade 10—Luna, which had 15 and 14 students, respectively.

Table 1. Descriptive statistics of the demographic profile of the respondents (n= 134)

	Frequency	Percentage
Grade & Section		
Grade 10 – Bonifacio	38	28
Grade 10 – Mabini	38	28
Grade 10 – Luna	14	10
Grade 10 – Rizal	29	22
Grade 10 – Silang	15	11
Gender		
Male	60	45
Female	74	55

The data also indicates that sixty (60) of the one hundred thirty-four (134) students were male, which comprises 45% of the total respondents. The remaining seventy-four (74) students were female, which makes 55% of the total respondents. This denotes that the majority of the respondents were female, which is the same data extracted from the total population of the Grade 10 students of Guihulngan National High School—Hilaitan.

3.2 Effectiveness of Teachers' Instructional Practices

In terms of Classroom Management
Classroom management plays a vital role in the teaching-learning process. It ensures that the lessons run smoothly and effectively and emphasizes academic and social-emotional development. In this study, five (5) statements correspond under the sub-variable classroom management. The weighted mean was extracted from each statement and combined into one grand weighted mean. The data on classroom management is presented in the table below.

Table 2. Descriptive statistics of classroom management

Indicators	Mean	Description	Interpretation
1. When the lesson begins, our mathematics teacher does not have to wait long for us to quiet down.	2.66	Agree	Effective
2. The class never loses time because of students interrupting the lesson.	2.66	Agree	Effective
3. In our teacher's class, we know what is allowed and what is not.	3.16	Agree	Effective
4. Our teacher reacts to disruptions so that the students stop disturbing learning.	2.75	Agree	Effective
5. Our teacher is aware of what is happening in the classroom, even if he or she is busy with an individual student.	2.96	Agree	Effective
Average	**2.84**	**Agree**	**Effective**

As shown in Table 2, the total average mean in classroom management was 2.84, with a verbal interpretation of "effective." The statement "In our teacher's class, we are aware of what is allowed and what is not allowed" has the highest weighted mean, meaning most students agreed to this. This coincides with the article by Riches (2021) stating that two factors for success in any classroom are the students knowing what to do and how they should be doing it. Instructions and expectations are the bread and butter of successful learning. Quite simply, if students do not know how to complete a task and how they are expected to do it, they will not learn efficiently.

In terms of Socioo-Emotional Support

Table 3 below shows the data on social-emotional support, where students and teachers must acquire and effectively apply the knowledge, attitudes, and skills required to understand and manage emotions, form and maintain positive relationships, and make responsible decisions. In this study, five (5) statements correlate to the sub-variable social-emotional support, and the weighted mean from each statement has been combined into a single grand weighted mean.

Table 3. Descriptive statistics of the social-emotional support

Indicators	Mean	Description	Interpretation
1. I get along well with my mathematics teacher.	2.81	Agree	Effective
2. My mathematics teachers listen to what I have to say.	3.00	Agree	Effective
3. My mathematics teacher treats me fairly.	3.00	Agree	Effective
4. My mathematics teacher makes me feel she/he cares about me.	2.94	Agree	Effective
5. I never felt like an outsider (or left out of things) in my mathematics class.			
Average	**2.95**	**Agree**	**Effective**

Table 3 indicates the overall average mean of 2.95 with a verbal interpretation of "Effective." "My mathematics teacher really listens to what I have to say" and "My mathematics teacher treats me fairly" have the highest weighted mean. It shows that listening to students is critical to the student/teacher relationship. Knowing their teacher is interested in what they say makes students feel cared for and emotionally connected to their school. Since research shows that feeling connected is necessary for students' motivation to learn, showing that teachers listen is important not only as a matter of kindness but also as a motivational strategy (Kelly, 2019). Teaching also takes each student seriously as an individual. This means not taking equality and fairness for granted but setting them as an educational goal and seeing them as requirements for good teaching. That includes ensuring a good learning environment for everyone (Freie Universität, 2024).

In terms of Instructional Quality

Table 4 below displays the data on instructional quality, which is important in understanding the essence of effective instruction and developing strategies for improving learning. Instructional quality has a direct impact on student academic satisfaction, and students' academic satisfaction increases as instructional quality improves. In this study, eight (8) statements are associated with the sub-variable instructional quality, and the weighted mean of each statement is added together to produce one grand weighted mean.

Table 4 shows the descriptive statistics of the instructional quality. Based on the results, the weighted mean of the sub-variable instructional quality ranges from 2.75 to 3.17, which fits under the verbal interpretation "Effective". The average mean of 2.91 equates with the verbal interpretation "Effective." The statement "Our mathematics teacher explains how new and old topics are related" has the highest weighted mean. This coincides with the study of Alreshidi (2023) entitled "Enhancing topic-specific prior knowledge of students impacts their outcomes in mathematics," stating that learning new procedures that have relationships with other procedures that students possess would contribute to learning connections. This prior knowledge was selected to enhance by determining

what is necessary for students to facilitate its integration into new information. For example, students cannot learn to compare or order fractions unless they have already learned equivalent fractions. Being able to recognize equivalent fractions works as a facilitator for new learning.

Table 4. Descriptive statistics of the instructional quality

Indicators	Mean	Description	Interpretation
1. Our mathematics teacher presents a summary of recently learned content.	2.84	Agree	Effective
2. Our mathematics teacher sets goals at the beginning of instruction.	3.01	Agree	Effective
3. Our mathematics teacher explains how new and old topics are related.	3.17	Agree	Effective
4. Our mathematics teacher presents tasks that require us to apply what we have learned to new contexts.	2.82	Agree	Effective
5. Our mathematics teacher gives tasks that require us to think critically.	2.82	Agree	Effective
6. Our mathematics teacher gives us opportunities to explain our ideas.	3.03	Agree	Effective
7. Our mathematics teacher encourages us to question and critique arguments made by other students.	2.81	Agree	Effective
8. Our mathematics teacher requires us to engage in discussions among ourselves.	2.75	Agree	Effective
Average	**2.91**	**Agree**	**Effective**

In terms of Cognitive Engagement

Table 5 below shows the students' cognitive engagement data, which is essential to their strategic involvement in learning and can increase their capacity to comprehend the subject. Cognitive engagement allows students to be motivated and engaged while learning in the classroom. In this study, five (5) statements correspond with the sub-variable students' cognitive engagement, and the weighted mean of each statement is merged to form a single grand weighted mean. The table below shows the data regarding the students' cognitive engagement. The weighted mean of the sub-variable instructional quality ranges from 2.53 - 2.98, indicating an "Effective" verbal interpretation.

Table 5. Descriptive statistics of students' cognitive engagement

Indicators	Mean	Description	Interpretation
1. Our mathematics teacher adapts the lessons to my class's needs and knowledge.	2.86	Agree	Effective
2. Our mathematics teacher changes the way of explaining (e.g., using different representations) when a student has difficulty understanding a topic or task.	2.85	Agree	Effective
3. Our mathematics teacher changes the lesson's structure on a topic that most students find difficult to understand.	2.75	Agree	Effective
4. Our mathematics teacher gives different work to students of different ability levels.	2.69	Agree	Effective
5. Our mathematics teacher asks questions to check if we have understood what he/she has taught.	2.98	Agree	Effective
Average	**2.83**	**Agree**	**Effective**

On the other hand, the average mean of 2.76 corresponds to the verbal interpretation of "Effective". Earning the highest weighted mean is the statement, "Our mathematics teacher asks questions to check if we have understood what he/she has taught," which is important because it helps educators make the most of instructional time. Essentially, it involves checking to see if students retain the information while you are still teaching it, not after. It often takes the form of a short formative assessment but doesn't need pencil-and-paper checks (Ozan & Kıncal, 2018).

Summary Instructional Practices

Table 6. Descriptive statistics of the composite mean of teachers' instructional practices

Indicators	Mean	Description	Interpretation
1. Classroom Management	2.84	Agree	Effective
2. Social-Emotional Support	2.94	Agree	Effective
3. Instructional Quality	2.91	Agree	Effective
4. Students' Cognitive Engagement	2.83	Agree	Effective
Average	**2.88**	**Agree**	**Effective**

Table 6 above presents all the data of each weighted mean of the sub-variables under teachers' instructional practices, which ranges from 2.83 to 2.94, gaining the verbal interpretation of "Effective." This garners the composite mean of 2.88, which also has the verbal interpretation of "Effective." This reveals that the Grade 10 students of Guihalngan National High School – Hilaitan had experienced above average regarding their teachers'

instructional practices in terms of classroom management, social-emotional support, instructional quality, and students' cognitive engagement during their Mathematics class. Effective instructional strategies help students become actively involved in the learning process. When done right, instructional strategies also support students in reaching their learning objectives (Haramain & Alih, 2021).

3.3 Students' Confidence in Mathematics

Table 7 below displays the data according to the student's confidence level in Mathematical problems. Researchers must also consider the student's confidence level in solving various mathematical problems. Possessing the confidence to work through problems reflects how well students have learned the topic and reflects on how well they were taught. The first dependent variable in this study, the student's confidence level in solving mathematical problems, is linked to nine (9) statements. The weighted means of each statement are combined to create the grand weighted mean.

Table 7. Descriptive statistics of the student's confidence level in dealing with mathematical problems

Indicators	Mean	Description
1. Plotting the graph of $y=x^2$.	2.75	Confident
2. Solving a problem like x^2-4-0 by inspection.	2.79	Confident
3. Finding all values of x for which $(x - 4)(x + 5) = 0$.	2.97	Confident
4. Using the binomial formula $(a+b)^2=a^2+2ab+b^2$ when solving a problem like $x^2 + 6x + 9 = 0$.	2.95	Confident
5. Solving any quadratic equation (example: $4x^2+6x+3 = 0$).	2.94	Confident
6. Using different ways when solving a quadratic equation.	2.83	Confident
7. Explain when a quadratic equation has one, two, or no solutions.	2.81	Confident
8. Checking if an equation like $2x^2+3x+1$ has any real solution	2.86	Confident
9. Calculate the highest point of a ball thrown diagonally into the air.	2.82	Confident
Average	**2.86**	**Confident**

Legend: 3.26 – 4.00 – Very Confident 2.51 – 3.25 – Confident
1.76 – 2.50 – Somewhat Confident 1.00 – 1.75 - Not Confident

The weighted mean of the variable students' confidence level in mathematical problems varies from 2.75 to 2.97, all falling within the verbal interpretation of "Confident," as indicated in Table 4.0. The grand weighted mean of 2.85 equates with the verbal interpretation of "Confident." This signifies that the respondents are confident in their abilities to solve different Mathematical problems. Thus, students' mathematical confidence affects their approach to challenges and failure. Students who possess mathematical confidence look at challenging math problems completely differently. With mathematical confidence, they can persevere through challenging problems, trying and trying again until they figure them out (Heinemann Blog, 2024).

Table 8 below shows the student's interest in learning mathematics, where the effectiveness of learning also depends on the level of interest that a student has in a subject. A person will have difficulty learning something if their interest is in other things. This also applies to learning Mathematics. The more the student is interested in a subject, the more efficient learning is. The second dependent variable, students' level of interest in learning Mathematics, measures how the students are into Mathematics, with thirteen (13) statements. The grand weighted mean is obtained by summing the weighted means of each statement.

3.4 Students' Interest in Learning Mathematics

The overall weighted mean of the variable students' level of interest in learning Mathematics ranges was 2.93, as shown in Table 8, with a verbal interpretation of "High." This signifies that most respondents are highly interested in learning Mathematics, which is above average. The statement with the highest weighted mean is "I will learn many things in mathematics that will help me get a job," which was supported by Northern Illinois University (2024), stating that problem-solving and analytical skills are highly desired in many jobs. Your teens will have a greater chance of finding a job if they develop these skills in school. They will also do better on tests and exams that they take at school and college if they know how to solve problems. Math-related occupations promise high job satisfaction levels, making people feel better about their lives. The statement with the lowest weighted mean is "After mathematics class, I was often curious about the next mathematics class," although labeled as the lowest weighted mean, it still has the verbal interpretation of a high level of interest. It denotes that although curiosity is not an explicit part of most mathematics curricula, it can still improve learning and is essential for learning mathematics (Knuth, 2002).

Table 8. Descriptive statistics of students' level of interest in learning mathematics

Indicators	Mean	Description	Interpretation
1. Making an effort in mathematics is worth it because it will help me in the work I want to do later.	3.04	Agree	High Level
2. Learning mathematics is worthwhile because it will improve my career prospects.	3.11	Agree	High Level
3. Mathematics is an important subject because I need it for what I want to study later on	3.03	Agree	High Level
4. I will learn many things in mathematics to help me get a job.	3.12	Agree	High Level
5. I was interested in mathematics.	3.07	Agree	High Level
6. I often thought what we discussed in my mathematics class was interesting.	3.00	Agree	High Level
7. I was often curious about the next mathematics class after mathematics class.	2.84	Agree	High Level
8. I wanted to deal more intensively with topics discussed in my mathematics class.	2.96	Agree	High Level
9. I believe I will receive an excellent grade in mathematics.	2.87	Agree	High Level
10. I am confident I can understand the most difficult material in mathematics.	2.86	Agree	High Level
11. I am confident I can do an excellent job on the mathematics assignments and tests.	2.91	Agree	High Level
12. I expect to do well in mathematics.	2.92	Agree	High Level
13. I am confident I can master the mathematics skills being taught.	2.94	Agree	High Level
Average	**2.93**	**Agree**	**High Level**

3.5 Relationship Between Teachers' Instructional Practices and Students' Confidence Level

Table 9 presents the correlation between the teacher's instructional practices and the student's confidence level. Based on the result, there is a correlation between the teachers' instructional practices with its sub-variables and the students' confidence level in dealing with mathematical problems, which ranges from low/slight correlation to marked/moderate correlation.

Table 9. Correlation between the teachers' instructional practices and the student's confidence level

Instructional Practices	Computed r	Tabular Value	Degree of Relationship	Decision	Interpretation
Classroom Management	0.532	0.087	Moderate	Reject H_o	Significant
Social-Emotional Support	0.274	0.087	Low/Slight	Reject H_o	Significant
Instructional Quality	0.420	0.087	Moderate	Reject H_o	Significant
Students' Cognitive Engagement	0.380	0.087	Low/Slight	Reject H_o	Significant
Overall	**0.402**	**0.087**	**Moderate**	**Reject H_o**	**Significant**

The sub-variables social-emotional support and students' cognitive engagement show a low/slight correlation with the computed values of 0.274 and 0.380, respectively. In contrast, the sub-variables classroom management and instructional practices show marked/moderate correlation with the computed values of 0.532 and 0.420, respectively. This reveals that classroom management and instructional practices play vital roles in helping students gain confidence in dealing with mathematical problems. Although social-emotional support and students' cognitive engagement show a slight/low correlation, it could still impact the students' confidence level in dealing with Mathematical problems. Overall, the sub-variables sum up to a computed value of 0.402, representing a marked/moderate correlation. Since it is greater than the tabular value of r, thus it imposes a significant relationship between the two variables. This finding is aligned with the study of Begaj (2014), which denotes that positive student-teacher relationships, teachers' praise, and teacher feedback are important contributors to increasing students' self-confidence. Evidence was gathered and analyzed relating to students, teachers, pedagogues, and psychologists' views on teachers' role in increasing students' self-confidence. The study has shown that teachers are crucial to students' self-confidence.

3.6 Between the Teachers' Instructional Practices and the Students' Learning Interest in Mathematics

Table 10 below shows the Correlation Between the Teachers' Instructional Practices and the Students' Learning Interest in Mathematics. It indicates a correlation ranging from a low/slight correlation to a strong correlation between the students' learning interest in Mathematics and the teachers' instructional techniques and its sub-variables. With computed values of 0.377 and 0.371, respectively, the sub-variables social-emotional support and students' cognitive engagement exhibit a low/slight correlation. On the other hand, classroom management shows a marked/moderate correlation with a computed value of 0.466, whereas instructional quality shows a high correlation with a computed value of 0.653. This indicates that instructional quality is crucial in developing the student's interest in mathematics, gaining the highest correlation. The sub-variable classroom management succeeds it with a marked/moderate correlation, making it another vital factor affecting students' learning interest. Additionally, even if there is a low/slight correlation between the sub-variables students' cognitive engagement and social-emotional support, it could still have some bearing on the student's level of interest in learning mathematics. The sub-variables add up to a computed value of 0.467, which denotes a marked/moderate

correlation. It implies a significant correlation between the two variables because it is greater than the tabular value of r.

Table 10. Correlation between the teachers' instructional practices and the students' learning interest in mathematics

Instructional Practices	Computed r	Tabular Value	Degree of Relationship	Decision	Interpretation
Classroom Management	0.466	0.087	Moderate	Reject H_o	Significant
Social-Emotional Support	0.377	0.087	Low/Slight	Reject H_o	Significant
Instructional Quality	0.653	0.087	High	Reject H_o	Significant
Students' Cognitive Engagement	0.371	0.087	Low/Slight	Reject H_o	Significant
Overall	**0.467**	**0.087**	**Moderate**	**Reject H_o**	**Significant**

This outcome mirrors the findings of the study by Zhu and Kaiser (2022), which stated that teachers' instructional quality and social-emotional support had a significantly positive impact on students' post-instruction mathematics interest and general mathematics self-efficacy after statistically controlling for students' characteristics and their pre-instruction performance. Moreover, this study showed that the quality of teachers' instruction positively enhances students' motivation. All these results suggest that the impact of teaching practices is multi-dimensional. While it is understandable that the most attention is paid to academic performance, this study revealed that the considerately positive impact of teaching practices on student's academic performance is through their general self-efficacy. Therefore, while paying attention to academic performance, it is particularly important to strengthen classroom management and students' emotional classroom experiences to enhance their learning motivation and other non-cognitive performance.

This is also supported by the study of Emiru (2019), which deduced that a teacher-focused approach to teaching has a significant positive correlation with students' surface approaches to learning. The study also affirmed that students' learning outcomes significantly correlate with teachers' conceptual change approach to teaching. In addition, it has been asserted that a significant positive correlation exists between students' deeper approaches to learning and their learning outcomes. In addition, a study by Ayuwanti et al. (2021) revealed that teacher-student interaction in mathematics learning affects students' mathematical understanding. The results of this study guide mathematics teachers in planning the implementation of learning in the classroom. In addition to implementing activities full of interactions between teachers and students, teachers can also add learning media that can support learning activities, such as computers, tablets, and other technologies. The results of this study are forms of teacher-student interaction in mathematics learning that can help students build and improve.

4.0 Conclusion

Based on the research findings, it can be concluded that using effective teaching methods can significantly boost students' interest and confidence in learning mathematics. When teachers effectively manage their classrooms, provide social-emotional support, and utilize engaging instructional techniques, students not only achieve better results but also develop a true appreciation and become more interested in the subject. This study highlights that by focusing on these aspects, educators can create a positive learning environment that promotes success in Mathematics and makes the learning process enjoyable. Furthermore, the relationship between teaching methods and students' feelings towards Mathematics is clear. Teachers can enhance students' confidence and interest in Mathematics by making lessons both interesting and supportive. This approach improves their academic performance and increases their eagerness to learn.

Therefore, schools should emphasize these teaching strategies to help students build a strong foundation in Mathematics and maintain a lasting interest in the subject. This implies that teachers can always develop a better teaching strategy, especially regarding their instructional quality. As per the findings of this study, it has the highest correlation with the learning interests of the students. These results highlight the importance of thorough and efficient teaching approaches in increasing students' confidence and interest in mathematics, which enhances their academic achievement and fosters a more positive attitude toward the subject. Second, School administrators can enhance the teaching quality of their educators by actively engaging them in seminars, training sessions, and workshops while addressing the students' basic needs. This approach may lead to increased student interest in mathematics. Lastly, for future studies, the researchers can improve the scope of this study or change the respondents from students to teachers or both. This involves the number of respondents not just limited to one year level and broadening the scope from one specific location into a much wider one for a larger sample size.

With this, a wider variety of insights can be gathered from the respondents. Future researchers may also consider transitioning from quantitative to qualitative research to explore different data-gathering techniques, such as using interviews instead of surveys or a combination of both. In addition, future researchers may also consider the other components of the teaching-learning process, such as background knowledge/experience of the teachers, availability and quality of the resources, lesson planning, and assessment methods.

5.0 Contribution of Authors

The authors reviewed, wrote, and approved the final work.

6.0 Funding

This work did not receive funding from any specific grant agency.

7.0 Conflict of Interest

There is no conflict of interest.

8.0 Acknowledgment

The author would like to express her genuine and deepest gratitude to the generous and helpful people who have supported her in achieving and completing this study.

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