

Teaching Strategy and Mathematics Performance of Maritime Students in the New Normal

Allyn Mae D. Rubio

Davao del Sur State College, Digos City, Davao del Sur, Philippines

Author email: allynrubio02@gmail.com

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Abstract. The COVID-19 pandemic has abruptly changed educational paradigms, especially in maritime education. Online learning has presented unprecedented difficulties to instructors' instruction quality and student results. This study examines how maritime education professors' teaching strategies affect students' math performance. The research examines the domain of teaching strategies of college instructors that significantly influence the mathematics performance of maritime students. The descriptive correlational non-experimental design was employed, and the study involved 100 maritime students enrolled in Math 1 during the 2021-2022 academic year, selected via random sampling. Student perceptions were collected using a standardized questionnaire to gain data on instructional practices. Academic grades were used to evaluate mathematics performance. The data was analysed using statistical methods such as mean calculations, Pearson correlation coefficients, and linear regression to assess the importance of correlations between variables. Results revealed that the teaching strategies of college instructors in teaching mathematics as perceived by the maritime students were very high. Also, the findings revealed that teaching strategies and mathematics performance of maritime students have no significant relationship. Although it may appear unexpected that there is no direct correlation between teaching strategies and mathematics performance, the role of affective strategies underscores the need to cultivate a pleasant emotional environment in maritime education. The implementation of strategies that target the enhancement of student motivation, engagement, and emotional well-being has been identified as crucial in the improvement of mathematics performance in the face of the difficulties associated with online learning. Based on the aforementioned findings, it is recommended that educators and institutions give precedence to the advancement and execution of affective teaching methodologies specifically designed to cater to the requirements of maritime students. Furthermore, it is necessary to conduct additional research to investigate the effectiveness of particular instructional interventions and student support systems in maximizing academic achievements in the context of online maritime education.

Keywords: Maritime education; Mathematics performance; Teaching strategies; New normal.

1.0 Introduction.

The concept of the new normal, which was formerly unusual, has now become the norm in nearly all schools and institutions where lessons are predominantly conducted online. Currently, the current phase in education is characterized by significant challenges and key moments, primarily attributed to the unforeseen global crisis. The COVID-19 epidemic has significantly affected individuals, notably in the field of education, where the conventional method of in-person instruction is disallowed. Online learning is significantly transforming the maritime education sector in the country because of the ongoing COVID-19 pandemic, which poses a hazard to all individuals. Within the realm of maritime education, this learning delivery strategy is considered groundbreaking. The mathematical idea of maritime is distinct from regular computing since many maritime

students are unable to compute while performing something. To understand concepts, relationships between ideas, and relationships between concepts and different subjects, students need problem-solving skills.

Moreover, Germany's lockdown schools closed in March 2020 and only partially reopened in May because of the COVID-19 pandemic. Teachers were faced with the challenge of adapting to online learning (König et al., 2020). In most parts of the world, schools and universities closed because of this proclamation, necessitating the necessity for remote learning. According to UNESCO (2020), the COVID-19 pandemic has resulted in a lack of education for over 1.5 billion students, which accounts for 90 percent of the global population of registered learners. In light of these worldwide difficulties, the purpose of this study is to provide insights into the effectiveness of teaching strategies and the mathematics performance of maritime students in the context of the new normal in education. In addition, research conducted in the United States has reported on the influence that teaching and learning had during the pandemic (Hamilton et al, 2020) and (Reich et al, 2020) conducted interviews with forty educators from all throughout the United States. Describe their professional experiences during the pandemic when they were working in a variety of educational sectors during the year 2020. The research findings unveiled three key challenges encountered by educators: difficulties in effectively involving students, burnout and erosion of professional identities among instructors, and the exacerbation of disparities among students with special needs or those from underprivileged districts.

The education sector in the Philippines has experienced significant impacts as a result of the ongoing pandemic. In research conducted by Tria (2020), various new normal scenarios were identified in the educational environment. Nevertheless, certain obstacles and issues arose while proposing various techniques to adapt to the new normal. Consequently, educational institutions at every level must confront these challenges and meticulously assess strategies and protocols for executing the new standard. In the current challenging circumstances, collaboration emerges as a key factor. It is imperative to contribute to the establishment of post-COVID-19 education, adapting to the emerging paradigm. In the new normal, teaching and learning mathematics is extremely difficult. There will be doubts, concerns, and anxieties. Erroneous beliefs may arise, along with a disdain for the topic or the instructor. Students' critical thinking and problem-solving skills, which are the main objectives of K-12 arithmetic, may not be effectively developed by math teachers (The Philippine Star, 2020). The myth that math is the most difficult subject to learn should be debunked. The basis for teaching and learning arithmetic at the elementary school level must be solid. Its real-world applications should be practical and useful. Even in the new normal, such efforts should begin with math professors themselves, so that students will begin or continue to enjoy and enjoy learning the subject. Based on the objective of this study it provides insights into effective approaches for teaching and learning mathematics in the new normal, ultimately contributing to the improvement of mathematics education in the Philippines. According to Villegas (2021), there were pre-pandemic warning signs of an education crisis in the Philippines. The 2018 assessment conducted by the Organization for Economic Co-operation and Development (OECD Program) for International Student Assessment (PISA) garnered significant attention due to its findings. The assessment revealed that Filipino students exhibited the lowest performance among 79 countries in the subjects of mathematics, science, and reading. The math and science scores of Filipino 15-year-old children were 353 and 357 points, respectively, which is lower than the average score of 489 in both categories among OECD countries. It is realistic to predict that the public health situation resulting from the ongoing pandemic will increase Filipino pupils' low performance. Many lockdowns have resulted in no face-to-face interaction under the new normal, forcing students to rely on learning resources to finish their education. As a result, there is a learning crisis, with low-quality content in modules and distance-learning resources.

A school in Davao del Sur reported that teachers have difficulties when using the online-blended learning strategy as they adapt to the new teaching paradigm. Educational institutions continue to have difficulties in adequately addressing the deficiencies in resources and capabilities for both educators and learners as they adapt to the transformative changes in pedagogical approaches. Contemporary educational initiatives aim to cultivate teachers' proficiency in various pedagogical approaches, particularly in adapting to the evolving landscape of education. This is to provide insights into overcoming challenges and improving the effectiveness of online-blended learning in Davao del Sur schools, ultimately contributing to the enhancement of pedagogical delivery in the new normal.

With the literature presented on the teaching strategies and mathematics performance of maritime students, the researcher feels that there is a need for better and more effective teaching strategies. Schools are formed with the purpose of imparting knowledge and skills to their students, with the ultimate goal of improving academic performance. This study will also help to determine the strengths and weaknesses of the students in mathematics. In addition, this will be the backbone of the department to improve the performance of the students and it seeks to identify areas for improvement and inform the development of strategies aimed at enhancing the academic performance of maritime students in Davao City maritime schools.

2.0 Methodology

2.1 Research Design

This study used a quantitative research design utilizing a descriptive-correlational non-experimental research design. The data was subjected to statistical analysis to examine the relationship between teaching strategies and mathematics performance and ascertain their relevance. The perceived success of teaching strategies was using descriptive statistics, which included mean calculations. To evaluate the magnitude and level between teaching strategies and mathematics performance, the Pearson correlation coefficient was calculated. According to Kirch (2008), The Pearson correlation coefficient (r) is a statistical measure used to quantify the degree of linear relationship between two variables. The proposed study employs a correlational research design method to examine the relationship between teaching practices and the mathematics performance of maritime students. Furthermore, the researcher performed linear regression analysis to ascertain the particular teaching strategies that had a substantial impact on mathematics performance.

2.2 Research Respondents

The respondents of the study were the maritime schools in Davao City. A maritime school is a technical school that teaches practical skills that can be applied to the ocean or in ocean-related sectors. Graduates of such a school are equipped for professions in shipping, merchant marine, or any other maritime industry. The researcher had 100 respondents. The researcher employed a simple random sampling technique to choose a sample of 100 marine students from the total population of 2,359 currently enrolled students. According to Lavrakas (2008), random sampling plays a crucial role in the overall design of survey research.

2.3 Research Instrument

The researcher employed a survey questionnaire that was adopted due to its alignment with the study's aims. A study was conducted to examine the instructional approaches employed by a group of mathematics educators in Amman, Jordan, who are employed in public schools (Hamzeh, 2014). For the independent variable, which is the teaching practices, the researcher has a total of 30 items. Before the researcher distributed the survey questionnaire to the respondents, it went on first to undergo validation and pilot testing.

Also, the researcher used the class record to get the scores of the respondents. For the independent variable, which is the mathematics performance, the researcher used their final grade in Math 1, which indicates their performance in written work, performance tasks, and quarterly assessment scores based on their class record with the help of the School Registrar.

2.4 Data Gathering

To conduct a study on the teaching performance and mathematical performance of maritime students, the researcher sought an endorsement letter from the dean, with the approval of the thesis adviser. The researcher sent a formal request letter to the Office of the School President, facilitated by the Chairperson of Maritime Studies, in conjunction with the endorsement letter, in order to obtain permission to perform the study. As a result, the researcher sought the initial consent of the program dean at the aforementioned educational institution. Under the guidance and endorsement of the Chairperson of Maritime Studies and Program Deans, the researcher provided comprehensive instructions to the students and teachers on how to complete the questionnaires using Google Forms. The researcher distributes the survey questionnaires to the respondents via Google Forms during the administration phase. The school asked all maritime students to complete the instrument. Once the respondents had supplied comprehensive and truthful responses, along with all the requisite data outlined in the questionnaire, the researcher proceeded to collect all the completed questionnaires.

2.5 Ethical Consideration

The researcher assured that the Research Ethics Committee adhered to the nine components of ethical considerations. The aforementioned factors encompass societal value, informed consent, risks and rewards, safety considerations, privacy and confidentiality of information, principles of justice, transparency, researcher qualifications, appropriateness of facilities, and community involvement.

3.0 Results and Discussion

Table 1. Summary of the level of teaching strategies of college instructors in teaching mathematics

TEACHING STRATEGIES	MEAN	DESCRIPTION
Behavioral Strategies	4.27	Very High
Cognitive Strategies	4.36	Very High
Affective Strategies	4.40	Very High
Overall Mean	4.34	Very High

The mean scores indicate consistently positive ratings with an overall mean score of 4.34 or very high levels of teaching strategies of college instructors in teaching mathematics (Table 1). This further implies that the teacher's strategy is always manifested in the new normal. All indicators under the teaching strategies of college instructors have a verbal description of very high. Consequently, the college educators implemented affective techniques in response to the current circumstances, encompassing learning strategies aimed at effectively managing emotions, encompassing both positive and negative states.

The correlation between affective strategies and learning remains ambiguous; nevertheless, a favorable emotional environment often enhances the process of learning. The respondents perceived that the affective strategy has the highest mean. Based on the data given, the affective strategies get a mean of 4.40, or very high. This means that the teacher's affective approach is always observed in the new normal. This further implies that teachers show a very high level of effective teaching strategies in teaching college mathematics. A cognitive strategy is the second-highest indicator with a mean score of 4.36 or very high. In teaching college mathematics, instructors have a high level of teaching strategies in terms of cognitive strategies. This further implies that the teacher's cognitive strategy is always manifested in the new normal.

This finding supports the notion proposed by Pishghadam (2012) that the affective domain is a significant indication for enhancing quality of life. Therefore, it is recommended that instructional efforts prioritize the affective domain. British Council (2020) also justifies this strategy during the pandemic, that in the classroom, teachers can play an active role in the development and use of emotional strategies by creating a generally positive atmosphere in the classroom. This can be done by encouraging and counseling learners, identifying achievable goals, and working towards autonomous learning through personal activities and pair and group work. The findings of Costley's (2020) study indicate that the use of cognitive methods moderates the link in question. This exemplifies the efficacy of employing cognitive techniques in addressing ambiguous instruction, thereby leading to enhanced levels of student learning.

In addition, ScholarChip (2020) mentioned that daily, teachers must strike a delicate balance in the classroom. In addition to teaching, grading, supporting students, and doing administrative responsibilities, teachers must also handle student conduct. Classrooms can become unruly and chaotic if proper behavior management is not taken into account. This results in an environment that is unsuitable for learning or academic performance. And, Sharp (2021) stated that in the new normal views, students' behavior and attitude have an impact on their learning. It supports the influence of new normal classes and learning perspective development while also contributing to self-determination in the new normal classes and framework theory of learning engagement. Lastly, Open Colleges (n.d.) mentioned in her article that there are pros to online learning but also comes with its unique challenges. Teachers and Instructors need to be the primary force driving this change and promoting engagement. Amidst the epidemic, universities need to understand and recognize the ramifications of this phenomenon on teaching, learning, student experience, infrastructure, operation, and people in the medium and long term. As stated by Dayagbil et al. (2021), it is imperative to employ scenario analysis and possess a

comprehensive awareness of the unique environment of each university in order to effectively tackle the existing difficulties they encounter.

Table 2. Level of teaching strategies of college instructors in teaching mathematics in terms of affective strategies

INDICATORS	MEAN	DESCRIPTION
My Instructor...		
1. Allows students to have more clarifications and explanations on a certain stimulus.	4.47	Very High
2. Supports students' sympathy towards others.	4.38	Very High
3. Helps students have confidence in themselves.	4.42	Very High
4. Encourages students to interact positively amongst themselves.	4.40	Very High
5. Teach students the way to identify their points of strength and weakness.	4.41	Very High
6. Makes students take part in different roles in the teaching-learning situation.	4.38	Very High
7. Let students have their conversations positively.	4.37	Very High
8. Teach students how to change their negative reactions into positive ones.	4.29	Very High
9. Trains students to solve their problems comfortably.	4.43	Very High
10. Strengthens leadership in his students.	4.46	Very High
Overall Mean	4.40	Very High

Table 2 displays college instructors' impactful math teaching strategies. Of the three indications of college instructors' teaching strategies, respondents rated affective strategies the highest, with a mean score of 4.40 or very high. This suggests that the new normal always reflects the teacher's emotive approach. With a mean score of 4.47, respondents scored the first item as the highest, saying the instructor "*Allows students to have more clarifications and explanations on a certain stimulus*". This means that instructors always allow students to get further clarification on a math issue in the new normal. As stated in the British Council (2020), that the instructor can promote affective methods by creating a favorable classroom environment. Let students ask clarifying questions to eliminate negative variables and develop positive ones. However, item eight, which stated that the instructor "*Teaches students how to change their negative reactions into positive ones*," was rated the lowest with a mean score of 4.29 and was also described as very high. This implies that the teacher always instructs students on how to turn negative responses into positive ones. In line with the result, Garay (2012) stated that Affective learning strategies control happy and negative emotions. While the relationship between affective methods and learning is uncertain, a favorable affective environment improves learning. Emotional variables affect learning. They can be good or bad. Second language acquisition models emphasize negative affective components or affective filters.

Table 3. Level of teaching strategies of college instructors in teaching mathematics in terms of cognitive strategies

INDICATORS	MEAN	DESCRIPTION
My Instructor...		
1. Begins with presenting the main ideas of the topic at the beginning of the class.	4.49	Very High
2. Encourages students to verify information and facts before giving judgments.	4.48	Very High
3. Begin the teaching-learning situation by presenting a problem to students.	4.36	Very High
4. Guides students to references such as dictionaries, encyclopedias, internet sites, ...etc.	4.26	Very High
5. Uses cognitive teaching strategies to harmonize with students' learning strategies.	4.27	Very High
6. Encourages students to generate as many alternatives as they can for the problem discussed.	4.29	Very High
7. Facilitates for students to make use of the procedures that organize memory potentials (symbolizing information)	4.25	Very High
8. Gives students enough time to question and investigate the desirable objective.	4.41	Very High
9. Allows the students to generate new information by making comparisons between their previous knowledge and new one.	4.35	Very High
10. Begins with examples up to the concept in the teaching-learning situation.	4.40	Very High
Overall Mean	4.36	Very High

Table 3 presents the data pertaining to the cognitive methods employed by the respondents. This indicator ranks second in terms of verbal description, with all items receiving very high ratings. College instructors employ a significantly high level of cognitive strategy in mathematics instruction, as indicated by the indicator's mean value of 4.36. This further implies that the instructor's cognitive strategy is always observed in the new normal. The first item stating that college instructors "*Begin with presenting the main ideas of the topic at the beginning of the*

class” obtained the highest mean of 4.49, described as very high. This implies that at the beginning of the lesson, teachers always introduce the main concept of the topic in this new normal.

According to Anderson (2011), the cognitive domain includes expertise, comprehension, application, analysis, synthesis, and evaluation. The learner's ability to analyze records is knowledge. Comprehension tests the learner's capacity to recognize knowledge's means. Students can explain an idea in their own words. Better to present the lesson's primary topic before addressing it. On the other hand, the lowest item in this indicator with a mean score of 4.25 but still a very high verbal description is item seven, in which the instructor “*Facilitates their students to make use of the procedures that organizes memory potentials*”. This implies that college teachers always guide their students in the new normal by using processes that arrange cognitive potentials such as symbolizing information.

Based on the results, Costley (2020) suggested using cognitive methods to clarify instruction and improve student learning. Repetition, organizing new language, summarizing, context guessing, and imagery-based memorization are examples. All of these tactics use language manipulation to increase learning. Online learning performance is affected by student motivation and cognitive load. Students who can regulate their learning in difficult settings surpass those who can't. Cognitive methods improve cognitive processing and help students handle challenging teaching situations.

Table 4. Level of teaching strategies of college instructors in teaching mathematics in terms of behavioral strategies

INDICATORS	MEAN	DESCRIPTION
My Instructor...		
1. Provide the student with information regarding his answer's accuracy all the time.	4.37	Very High
2. Use specific questions to have specific answers.	4.39	Very High
3. Uses direct presentation to provide students with information.	4.42	Very High
4. Eliminates any undesirable stimuli after the student does correct behavior.	4.11	High
5. Trains his students on distinguishing between characteristics of the same concept.	4.36	Very High
6. Cares about rectifying students' undesired behaviors.	4.24	Very High
7. Dissembles the teaching-learning material into specific tasks that need specific responses.	4.19	High
8. Helps his students imitate desired models.	4.28	Very High
9. Give awards to students for their right answers.	4.26	Very High
10. Neglects undesired behaviors in the teaching-learning situations.	4.04	High
Overall Mean	4.27	Very High

Table 4 shows the behavioral strategies were rated as the least indicator among the others with a total mean score of 4.27 or very high, which means that the college instructor's behavioral strategy is very high in teaching mathematics. This further implies that the teacher's behavioral strategy is always manifested in the new normal. The second item in which teachers use specific questions to have a specific answer was rated as the highest with a means core of 4.42 and described as very high. This further implies that in the new normal, their college instructors “*Use the direct presentation to provide students with information*”. Research related to behavioral approaches This inquiry aims to elucidate the importance of employing behavioral strategies by both trainers and learners in order to appreciate and analyze the fundamental aspects of improving, structuring, and recognizing preferred behaviors, as well as the methods of comparing outcomes.

Direct instruction is one of the best teaching methods, according to Renard (2019). Direct instruction, often misunderstood, outperforms other methods. Direct instruction uses lectures or demonstrations to teach new topics. Teachers now teach directly when suitable for the skill being taught. Example: The step-by-step problem-solving procedure is best learned directly, whereas demonstrating how to is more engaging and hands-on. On the other hand, the lowest was the tenth item stating that their instructor “*Neglects undesired behaviors in the teaching-learning situations*”, with a mean score of 4.04 described as high. Although this statement had the lowest mean it is still described as high. This implies that teachers often ignore undesirable behavior in the new normal during teaching-learning circumstances.

Sharp (2021) believed that behavioral strategies were powerful strategies or precisely directed behaviors that could be evaluated and observed. Such tactics aim to rectify bad habits and teach good ones. According to the

new normal, students' conduct and attitudes affect learning. It supports new normal classrooms, learning perspectives, self-determination, and the framework theory of learning engagement.

Table 5. Level of mathematics performance of maritime students in the new normal

VARIABLES	MEAN	DESCRIPTION
Mathematics Performance	1.68	High

According to the statistics provided in Table 5, the mathematics performance of maritime students is characterized by a mean score of 1.68, indicating a satisfactory level of achievement. This implies that the group of participants satisfies the minimum level of proficiency, as evidenced by their score above the average. This further implies that students have a very satisfactory academic performance in mathematics.

Based on Montondo (2020), the evolving impact of mathematics on our daily lives necessitates a more thorough reconsideration of mathematics education. The skills required to design and construct a secure vehicle vary significantly from those necessary to operate the same vehicle safely. Similarly, we need to differentiate between the minority, who are the target audience for numerous mathematical curricula, and the majority, who must be knowledgeable users of mathematics without necessarily comprehending all of it.

This research shows how good mathematics teaching and learning approaches can help teachers, school leaders, and policymakers solve current and future difficulties. Students with poor learning autonomy are likely to have inferior mathematical aptitude, according to Bringula et al. (2021). Students who doubt their math skills do worse. Students say asynchronous session activities including reading, assignments, practice exercises, and quizzes are difficult to assess, teach, and consult. Problems like this explain test anxiety in students. These problems caused uncertainty or low-grade perceptions. The quantitative data suggest that children should be gradually introduced to learner autonomy to improve their math ability.

Table 6. Correlation analysis between teaching strategies and mathematics performance of maritime students in the new normal

TEACHING STRATEGIES	R	P-VALUE	DECISION ON HO	INTERPRETATION
	0.093	0.359	Failed to Reject	There is no significant correlation

The findings shown in Table 6 demonstrate that there exists a positive association between teaching strategies and the mathematical performance of maritime students in the context of the new normal. However, it is important to note that this correlation is not statistically significant. The correlation coefficient (r value) in the table is 0.093, indicating a minimal positive link between the degree of teaching strategies and the mathematics performance of marine students in the current learning environment. Moreover, the r -value is close to zero, which pertains to no correlation. This implies that teaching strategies and mathematics performance have almost no relationship. Given that the p -value of 0.359 exceeds the predetermined alpha threshold of significance of 0.05, it may be concluded that the observed association lacks statistical significance. There is no substantial correlation between instructional methods and the mathematical achievement of marine students in the current circumstances. It can be concluded that the null hypothesis has not been rejected. The data imply that in the new normal, the instructor's teaching strategies and the mathematics performance of maritime students are not significantly related at all.

This further means that teaching strategies are not a factor in maritime students' academic performance in learning college mathematics. The teaching approaches of the college instructors of a particular maritime school do not significantly contribute to their maritime students' learning or academic performance in learning mathematics. Despite the long-standing existence of online learning, a significant number of faculty members and students fail to recognize the inherent benefits associated with totally online learning. During the ongoing health crisis, numerous educators have been compelled to devise expedient online learning strategies (Hodges et al., 2020). While online approaches have proven to be efficient in providing knowledge, their effectiveness in promoting active learning and fostering engagement is limited.

Table 7. Test of significance on the influence of teaching strategies on mathematics performance

TEACHING STRATEGIES (TS)	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS				
	B	SE	Beta	t	Sig.	Decision on Ho	Interpretation
(Constant)	1.892	0.206		9.164	0.000		
Behavioral Strategies (BS)	0.004	0.013	0.085	0.305	0.761	Failed to Reject	Not Significant
Cognitive Strategies (CS)	0.023	0.017	0.498	1.347	0.181	Failed to Reject	Not Significant
Affective Strategies (AS)	-0.031	0.014	-0.685	-2.296	0.024	Reject	Significant

R = 0.237; R² = .056; F-value = 1.912; p-value = 0.048

The results show (see table Table 7) that the teaching strategies of maritime college instructors as regards affective strategies (B, 0.031; $p < 0.05$) significantly predict the mathematics academic performance of maritime students at a 0.05 level of significance. The results further show that for every unit increase in the teaching strategies of maritime college instructors as regards to affective strategies, the academic performance of students in mathematics would significantly increase by -0.031 as represented in the Regression Model: TS = 1.892 -0.031 (AS) at a 0.05 level of significance (F, 1.912; $p < 0.05$). A coefficient with a negative sign indicates that there is a tendency for the dependent variable to drop as the independent variable increases. The coefficient value represents the extent to which the average of the dependent variable is altered when the independent variable is shifted by one unit while keeping all other variables in the model the same. This implies that the null hypothesis will be rejected and the affective strategies are statistically significant. Furthermore, using Linear Regression Analysis, the data results from Table 4 revealed an F-value of 1.912 and a p-value of 0.048, which means that the data fit the model. Also, the model summary showed an R-square, which suggests that the model explains 5.6 percent of the variation in the dependent variable; Mathematics Performance can be explained by the variation in the independent variables; Behavioral, Cognitive, and Affective Strategies. Additional factors not included in the model account for the remaining 94.4 percent. Furthermore, the findings suggest that the regression model explains a maximum of 1.912 (R², 0.056; $p < 0.05$) of the variations or fluctuations in the academic achievement of maritime students in mathematics, with a significance level of 0.05.

4.0 Conclusion

The findings of this study shed light on several key aspects of maritime education in the context of the new normal, particularly regarding teaching strategies and mathematics performance. While the study identified very high levels of teaching strategies among college instructors, it's crucial to interpret these findings within the broader landscape of online education and maritime studies. These findings underline the need for educators to analyze and refine teaching strategies to meet online learning obstacles. Professional development in online pedagogy and technology-enhanced teaching can improve education and student engagement. Additionally, policymakers can help educators and students transition to online learning. Infrastructure, technology, and professional development can help maritime students embrace remote teaching and learning best strategies, enhancing educational outcomes. Future researchers could explore additional factors influencing mathematics performance among maritime students, such as socio-economic background, access to technology, and student motivation. Longitudinal studies tracking student progress over time can provide deeper insights into the sustained impact of teaching strategies on academic achievement. Lastly, comparative research across maritime institutions and locations can also reveal the efficacy of different teaching strategies and uncover maritime online education best practices.

5.0 Contributions of Authors

There is only one author for this research.

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7.0 Conflict of Interests

The author declares that they have no conflicts of interest.

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