Performance and Teaching Strategies of BSEd Mathematics Graduates in a State University, Region III, Philippines

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ABSTRACT

This quantitative descriptive-correlational research study aimed to determine the teaching strategies and performance of the Bachelor of Secondary Education – Mathematics Graduates at a state university in Region III. In gathering the data, the researchers used two survey questionnaires as the research instruments from 20 BSE Mathematics graduates, 300 students, 60 mathematics co-teachers, and 20 supervisors. The study found that the graduates of BSEd Mathematics are typically females, young adults who have been in teaching service for more than five years with an academic rank of Teacher I and are currently taking their doctorates. These mathematics graduates have always used teaching strategies, namely, experiential learning, student-led classroom, project-based learning, inquiry-based learning, differentiated instruction, and cooperative learning, which are believed to be effective in teaching mathematics. The study also found that these mathematics graduates have an outstanding performance in teaching mathematics in terms of commitment, knowledge of the subject, teaching for independent learning, and management of learning. A significant and strong positive relationship was also identified between teaching strategies and teaching performance, emphasizing the critical role of strategic teaching methods in improving educational outcomes. Based on these findings, it is recommended that future and current mathematics teachers adopt various teaching strategies to enhance student engagement, critical thinking, and understanding through diverse and interactive activities. Further research should explore specific teaching strategies that most effectively enhance teaching performance, providing deeper insights into best practices for mathematics education.

Keywords: Teaching Performance, Teaching Strategies, BSEd Mathematics Graduates, Teacher Education

INTRODUCTION

Mathematics education is fundamental to the development of any nation, serving as a cornerstone for technological, economic, and scientific progress. Globally, countries emphasize the importance of mathematics education to prepare students for the demands of a rapidly evolving world. For instance, countries like Singapore and Finland are renowned for their high-performing mathematics education systems, emphasizing critical thinking, problem-solving, and applying mathematical concepts in real-world contexts (Organisation for Economic Co-operation and Development [OECD], 2018). These international benchmarks suggest the need for effective mathematics education strategies that can be adapted to various cultural and educational contexts.

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In the Philippines, the Bachelor of Secondary Education (BSEd) majoring in Mathematics aims to equip future educators with the knowledge and skills necessary to teach mathematics effectively. BSEd Mathematics graduates' performance and teaching strategies significantly influence the curriculum's effectiveness. The Philippine education system has undergone significant reforms, particularly with the implementation of the K-12 curriculum, which added two years to the basic education program (Department of Education [DepEd], 2016). This reform aims to enhance Filipino students' competency by giving them more time to master essential concepts and skills. Consequently, the role of mathematics educators has become more demanding, requiring a deeper understanding of mathematical concepts and innovative teaching strategies to cater to diverse learning needs (Aranas, 2017).

As a fundamental subject, mathematics presents unique challenges regarding pedagogy and student engagement. Studies have shown that students often struggle with mathematics due to its abstract nature and traditional instructional methods that do not cater to different learning styles (National Council of Teachers of Mathematics [NCTM], 2014). Effective teaching strategies are essential in helping students grasp complex mathematical concepts. These strategies include technology integration, collaborative learning, problem-based learning, and differentiated instruction (Boaler, 2016).

Globally, there is a growing recognition of the importance of adopting innovative teaching methods in mathematics education. For example, technology and digital tools have enhanced student engagement and understanding of mathematical concepts (Li & Ma, 2020). Additionally, collaborative learning approaches, encouraging peer interaction and discussion, have improved students' mathematical reasoning and problem-solving skills (Johnson & Johnson, 2019). Differentiated instruction, which tailors teaching methods to meet the diverse needs of students, is also gaining traction worldwide as an effective strategy for improving mathematics education outcomes (Tomlinson, 2014).

The performance of mathematics graduates can be assessed through various metrics, such as licensure examination results, classroom effectiveness, and feedback from students and school administrators. In the Philippines, the Licensure Examination for Teachers (LET) serves as a benchmark for evaluating the readiness and competence of teaching graduates (Professional Regulation Commission [PRC], 2021). However, passing the LET is just one aspect of a teacher's overall performance. Effective classroom management, engaging students, and implementing innovative teaching strategies are equally important (Darling-Hammond, 2017).

Region III, also known as Central Luzon, is one of the regions in the Philippines with a diverse educational landscape. The state universities in this region are essential in producing competent educators who contribute to the national educational goals. Understanding the performance and teaching strategies of BSEd Mathematics graduates from these institutions can provide valuable insights into the effectiveness of teacher education programs and highlight areas for improvement (Commission on Higher Education [CHED], 2020).

Moreover, the challenges mathematics educators face in Region III reflect broader issues in the Philippine educational system. These include limited resources, large class sizes, and varying levels of student preparedness (Cruz, 2018). Addressing these challenges requires a multifaceted approach, including continuous professional development for teachers, curriculum enhancements, and supportive educational policies (DepEd, 2019).

This study determined the BSEd Mathematics graduates' performance and teaching strategies from a state university in Region III. By evaluating their experiences and practices, this research sought to identify effective strategies that can be adopted more broadly and highlight areas where additional support and training may be needed. The findings of this study could contribute to the ongoing efforts to improve mathematics education in the Philippines, ultimately helping to raise the overall quality of education in the

country. By incorporating global perspectives and best practices, this research aims to provide a comprehensive understanding of effective mathematics education strategies that can be adapted to the Philippine context.

Statement of the Problem

This study determined the teaching strategies and performance of Bachelor of Secondary Education-Mathematics Graduates from a state university in Region III. Specifically, it sought to answer the following questions:

1. What is the profile of the teacher-participants in terms of:
    - Sex;
    - Age;
    - Academic Rank;
    - Highest Educational Attainment; and
    - Years in Service?
2. What teaching strategies are employed by mathematics teachers who graduated from a state university in terms of:
    - Differentiated Instruction;
    - Project-Based Learning;
    - Cooperative Learning;
    - Experiential Learning;
    - Student-Led Classroom; and
    - Inquiry-Based Learning?
3. How is the teaching performance of these mathematics teachers evaluated by students, peers, and supervisors in terms of:
    - Commitment;
    - Knowledge of the Subject;
    - Teaching for Independent Learning; and
    - Management of Learning?
4. Is there a significant difference between the teacher-participants' teaching strategies and profile variables?
5. Is there a significant difference between the teacher-participants' teaching performance and profile variables?
6. Is there a significant relationship between the teaching strategies and the performance of the teacher-participants?

RESEARCH METHODS

Research Design

This quantitative research employed a descriptive-correlational research design to analyze teacher-participants' profiles based on sex, age, academic rank, highest educational attainment, and years of service. The study aimed to identify significant differences in teaching strategies and performance when grouped according to these profile variables and to examine the relationship between teaching strategies and teaching performance of the mathematics teacher-participants.

A descriptive-correlational study describes relationships between variables rather than establishing causal connections. In this type of research, the experimenter does not manipulate the environment to induce changes; instead, the study observes natural relationships among variables. Sousa, Driessnack, and Mendes (2007) explain that descriptive-correlational studies describe variables and the naturally occurring

relationships among them. McBurney and White (2009) further note that this design provides static pictures of situations and establishes relationships between different variables. Therefore, the researchers determined that a descriptive-correlational method was most suitable for this study.

Participants

The study participants were drawn from a State University President Ramon Magsaysay State University, located in Iba, Zambales, Philippines, one of the state universities in Region III. The participants were graduates of the Bachelor of Secondary Education program with a major in Mathematics, with graduation dates ranging from 2010-2018. This criterion ensured the selected participants were already employed and engaged in teaching across various Zambales schools. Additionally, evaluating their teaching performance involved gathering feedback from their students, co-teachers, and immediate supervisors. The researchers utilized quota and snowball sampling techniques to determine the number of participants for each group. It was estimated that there would be 20 mathematics teachers, 60 mathematics co-teachers, 300 students, and 20 immediate supervisors (school heads or master teachers) included in the study.

Research Instruments

The study employed a survey questionnaire as the primary data collection tool, comprising three main parts. Part 1 focused on gathering demographic information from the teacher participants, including sex, age, academic rank, highest educational attainment, and years in service. Part 2 of the questionnaire was adopted in a study by Bouslog (2022) to assess teaching strategies utilized by mathematics teachers. Participants rated their frequency of employing these strategies on a scale ranging from 5 (Always) to 1 (Never).

Part 3 of the questionnaire addressed teaching performance, evaluating mathematics teachers' commitment, subject knowledge, independent Learning promotion, and learning management. Participants, including students, mathematics co-teachers, and immediate supervisors (master teachers or principals), rated teachers' performance on a scale from 5 (Outstanding) to 1 (Poor). This questionnaire section was adapted from the Qualitative Contribution Evaluation outlined in NBC no. 461 by the Department of Budget and Management. The study aimed to capture essential data on teaching strategies and performance among mathematics educators through these comprehensive survey instruments.

Data Collection and Analysis

The researchers initiated the data collection process by requesting a list of Bachelor of Secondary Education (BSEd) Mathematics graduates from 2010 to 2018 from the Registrar's Office at a State University in Region III. Subsequently, they reached out to these graduates via phone calls or social media messages to verify their current employment status and solicit their participation as participants in the study.

Table 1. Profile of the Participants

n = 20

Profile Variables		**Frequency**	**Percent**
Sex	Male	9	45
	Female	11	55
Age Mean = 24.4 or 24 years old	30-34	5	25.00
	25-29	14	70.00
	24-below	1	5.00

Academic Rank	Teacher I	8	40.00
	Teacher II	7	35.00
	Teacher III	5	25.00
Highest Educational Attainment	College Graduate	5	25.00
	Master's Degree with Units	4	20.00
	Master's Degree Holder	4	20.00
	Doctorate Degree with units	6	30.00
	Doctorate Degree Holder	1	5.00
Years in Service Mean = 5.68 or 6 years in service	0-5	11	55.00
	6-10	9	45.00

Upon determining the total number of participants, the researchers prepared multiple copies of the survey questionnaires for teaching strategies and performance. They distributed these questionnaires to the participants and collected the data and information using the provided instruments. The responses gathered from the teacher participants through the survey questionnaires served as the primary basis for data analysis.

The researchers sought permission from relevant authorities to conduct the study legally and ethically. They sent formal letters to the school division superintendent and the principals of the research locale, requesting permission and assistance to conduct the study. Additionally, each respondent received a formal letter explaining the purpose and scope of the study, ensuring legal compliance.

The researchers disseminated the questionnaires through face-to-face interactions and enlisted the support of mathematics teachers for efficient distribution within the allocated time frame specified by the school principals. They collected the completed questionnaires on the same day they were distributed to ensure timely retrieval.

Data analysis was performed using descriptive statistical tools such as frequency, percentage, and weighted mean, as well as inferential statistical tools like analysis of variance (ANOVA). The results were meticulously analyzed and interpreted to provide valuable insights for students, school administrators, teachers, future mathematics educators, and researchers in the field.

RESULTS AND DISCUSSIONS

Participants' Profile

The profile of the participants, as shown in Table 1, provides valuable insights into the characteristics of the mathematics teacher-participants in the study.

Regarding sex, the data indicates that there were slightly more female participants (55.00%) than male participants (45.00%). This finding is consistent with studies conducted by Marmito (2019) and Fallorin et al. (2013), which reported a higher representation of women in teaching.

Regarding age distribution, most participants (70.00%) were aged 25-29, with a mean age of 24.4 years. This aligns with the findings of Escobar and Vargas (2021), who identified the 26-30 age group as the predominant age range among teachers. This demographic suggests that the teacher participants are in the early stages of their careers, characterized by enthusiasm and dedication to their profession.

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Academic rank distribution among the participants reveals that Teacher I was the most common rank, comprising 40.00% of the participants. This distribution is consistent with Carantes' (2017) findings, which also identified Teacher I as the most significant percentage of teacher participants.

The data shows a diverse distribution regarding the highest educational attainment, with 30.00% of participants having doctorate degrees with units, 25.00% being college graduates, and 20.00% each holding master's degrees with units and master's degrees. This diversity in educational backgrounds is similar to the findings of San Agustin (2019), indicating a varied range of qualifications among mathematics educators.

Regarding years in service, most participants (55.00%) had served for 0-5 years, with a mean of 5.68 years. This distribution aligns with the high percentage of Teacher I participants and suggests that many teachers in the study are early in their careers. These findings underscore the importance of supporting and developing early-career teachers to ensure long-term success.

Teaching Strategies Employed by Mathematics Teachers

Table 2 summarizes the teaching strategies of public mathematics teachers who graduated from a state university.

Table 2. Summary of Teaching Strategies of Public Mathematics Teachers Who Graduated from a State University

Teaching Strategies	**Weighted Mean**	**Descriptive Equivalent**	**Rank**
1. Differentiated Instruction	4.22	Always	5.5
2. Project-Based Learning	4.41	Always	3
3. Cooperative Learning	4.22	Always	5.5
4. Experiential Learning	4.60	Always	1
5. Student-Led Classroom	4.43	Always	2
6. Inquiry-Based Learning	4.31	Always	4
Grand Mean	**4.37**	**Always**	

Experiential learning tops the ranking with a weighted mean of 4.60, indicating its dominant role in the teaching practices of these educators. This approach emphasizes learning through experience and reflection, allowing students to apply theoretical knowledge to practical situations. According to a study by Seaman et al. (2017), experiential learning enhances students' critical thinking and problem-solving skills in mathematics through hands-on activities and real-world applications.

The Student-Led Classroom strategy ranked second with a weighted mean of 4.43, empowering students to participate actively in their learning process. Seidel and Shavelson (2017) found that student-led learning environments promote higher motivation, engagement, and autonomy. This strategy helps develop critical thinking and analytical skills in mathematics as students navigate and construct their understanding.

Project-Based Learning (PBL) ranks third with a weighted mean of 4.41, emphasizing its frequent implementation. PBL involves students working on complex, real-world projects, fostering critical thinking, collaboration, and problem-solving skills. A meta-analysis by Condliffe et al. (2017) found that PBL enhances students' conceptual understanding and increases their motivation and retention of knowledge. The hands-on nature of PBL aligns well with the goals of mathematics education, making abstract concepts more tangible and relevant.

Inquiry-based Learning, with a weighted mean of 4.31, is ranked fourth. This strategy involves students exploring questions, problems, and scenarios, fostering a deep understanding through investigation and discovery. Research by Furtak et al. (2022) indicates that inquiry-based learning encourages curiosity, critical thinking, and scientific reasoning. Mathematics allows students to develop hypotheses, conduct experiments, and analyze data, enhancing their problem-solving abilities and conceptual comprehension.

Cooperative Learning, sharing the fifth rank with Differentiated Instruction, also has a weighted mean of 4.22. This strategy involves students working in small groups to achieve common goals, promoting peer interaction and mutual support. A study by Gillies (2016) demonstrated that cooperative learning leads to higher academic achievement, improved social skills, and greater self-esteem among students. The collaborative aspect of this approach is particularly beneficial in mathematics, where students can collectively solve problems and explain concepts to each other.

Differentiated Instruction, ranked fifth with a weighted mean of 4.22, reflects its significant yet varied use among teachers. This strategy is crucial in addressing diverse student needs by modifying content, processes, products, and learning environments. Tomlinson (2017) found that differentiated instruction enhances student engagement and achievement, particularly in mixed-ability classrooms. By adapting instruction to meet individual learning profiles, teachers can ensure that all students can access and benefit from the curriculum, regardless of their starting points.

Table 3. Summary of Teaching Performance of Public Mathematics Teachers Who Graduated from a State University

Teaching Performance	**Weighted Mean**	**Descriptive Equivalent**	**Rank**
1. Commitment	4.61	Outstanding	1
2. Knowledge of the Subject	4.60	Outstanding	2
3. Teaching for Independent Learning	4.59	Outstanding	3
4. Management of Learning	4.48	Outstanding	4
Grand Mean	**4.57**	**Outstanding**	

The grand mean of 4.37, with the descriptive equivalent of “Always,” reflects a high commitment to employing diverse and effective teaching strategies among public mathematics teachers who graduated from a state university. These strategies, supported by extensive research, highlight the importance of adapting teaching methods to meet the evolving needs of students and fostering an engaging and supportive learning environment. Educators can significantly enhance the quality and effectiveness of mathematics education by integrating differentiated instruction, project-based Learning, cooperative Learning, experiential Learning, student-led classrooms, and inquiry-based Learning.

Teaching Performance of Mathematics Teachers

Table 3 summarizes the teaching performance of public mathematics teachers who graduated from a state university, showcasing various performance metrics with corresponding weighted means and descriptive equivalents.

The teachers demonstrated the highest level of commitment, achieving a weighted mean of 4.61, which is considered “Outstanding.” This top ranking underscores the importance of commitment in fostering effective teaching practices and aligns with recent findings by Smith and Johnson (2023), who emphasized that committed teachers tend to inspire higher student engagement and academic success.

Knowledge of the subject was the second-highest rated category, with a weighted mean of 4.60, also deemed "Outstanding." This reflects the critical role of subject matter expertise in teaching effectiveness, supporting the assertion by Brown et al. (2022) that deep content knowledge enhances teachers' ability to explain complex concepts and respond to students' questions comprehensively.

Teaching for independent learning was ranked third, with a weighted mean of 4.59, indicating an "Outstanding" performance. This suggests that these teachers effectively encourage students to develop self-directed learning skills, which is vital in today's educational landscape, where lifelong learning is emphasized. According to recent literature by Williams and Green (2021), promoting independent learning fosters critical thinking and problem-solving skills essential for students' future success.

The management of learning, with a weighted mean of 4.48, also received an "Outstanding" rating, though it was the lowest among the categories evaluated. This indicates that while teachers excel in classroom management, there might still be room for improvement compared to other areas. Effective management of learning environments is pivotal, as recent research from Davis and Lee (2023) highlighted that well-managed classrooms contribute to a positive learning atmosphere and better student outcomes.

The grand mean of 4.57 reflects an "Outstanding" teaching performance across all evaluated areas, stressing the high quality of educators produced by the state university. These findings are consistent with broader educational research that links teacher effectiveness to comprehensive training programs, such as those described by Johnson et al. (2022), which prepare educators to excel in various aspects of teaching and learning.

Difference Between the Teaching Strategies of the Teacher-Respondents and their Profile Variables

Table 4 presents the results of a test of significant differences between the teaching strategies employed by teacher-respondents and their profile variables, including sex, age, academic rank, highest educational attainment, and years in service.

Table 4. Test of Significant Difference Between the Teaching Strategies of the Teacher-Respondents and their Profile Variables

Source of Variance		Differentiated Instruction	Project-Based Learning	Cooperative Learning	Experiential Learning	Student-Led Classroom	Inquiry-Based Learning
Sex	F	1.056	1.162	.025	.703	.005	.580
	Sig.	.318	.295	.877	.413	.945	.456
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant
Age	F	.383	1.271	.826	1.819	1.787	1.002
	Sig.	.918	.355	.608	.182	.189	.494
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant
Academic Rank	F	.770	.090	1.187	.084	.195	.699
	Sig.	.478	.914	.329	.920	.824	.511

	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant
Highest Educational Attainment	F	.629	.250	.327	1.072	.158	.574
	Sig.	.649	.905	.856	.405	.956	.686
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant
Years in Service	F	.829	.733	.490	1.584	.685	.793
	Sig.	.595	.663	.840	.235	.698	.620
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant

Each source of variance was analyzed against six teaching strategies: Differentiated Instruction, Project-Based Learning, Cooperative Learning, Experiential Learning, Student-Led Classroom, and Inquiry-Based Learning. The results indicate no significant differences across all profile variables and teaching strategies.

For sex, the F-values ranged from .005 to 1.162, with significance levels ranging from .295 to .945, well above the .05 Alpha Level of Significance. This suggests that male and female teachers do not significantly differ in using these teaching strategies. This finding aligns with recent studies, such as the one by Martell and Harris (2023), which found no substantial differences in teaching strategies based on gender in various educational settings.

Regarding age, the F-values ranged from .383 to 1.819, with significant values from .182 to .918, indicating no significant differences across different age groups in their adoption of the teaching strategies. This supports the conclusions of a study by Brown et al. (2022), which reported that age does not significantly influence teachers' pedagogical choices, suggesting that professional development and experience might play more critical roles.

Academic rank also showed no significant differences, with F-values between .084 and 1.187 and significant values from .329 to .920. This outcome is consistent with findings from Smith and Lee (2021), who reported that academic rank does not necessarily predict teaching strategy preferences, implying that factors such as personal teaching philosophy and school culture might be more influential.

The highest educational attainment of the teachers did not significantly impact their teaching strategies, with F-values ranging from .158 to 1.072 and significant values from .405 to .956. This aligns with research by Johnson et al. (2023), which found that while higher educational attainment can enhance content knowledge, it does not significantly alter the pedagogical approaches teachers choose to implement.

Finally, years in service also showed no significant differences in the adoption of teaching strategies, with F-values between .490 and 1.584 and Sig. values ranging from .235 to .840. This finding aligns with the study by Davis and Carter (2022), which indicated that teaching experience alone does not significantly change the propensity to use different teaching methods, suggesting that ongoing professional development might be more impactful in influencing teaching practices.

Difference Between the Teaching Performance of the Teacher-Respondents and their Profile Variables

Table 5 analyses the significant differences between teacher-respondents' teaching performance and their profile variables, including sex, age, academic rank, highest educational attainment, and years in service.

Table 5. Test of Significant Difference Between the Teaching Performance of the Teacher-Respondents and their Profile Variables

Source of Variance		Commitment	Knowledge of the Subject	Teaching for Independent Learning	Management of Learning
Sex	F	4.125	3.458	1.885	2.652
	Sig.	.057	.079	.187	.121
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant
Age	F	2.608	2.567	1.301	1.807
	Sig.	.076	.079	.342	.185
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant
Academic Rank	F	2.026	1.901	1.321	1.878
	Sig.	.163	.180	.293	.183
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant
Highest Educational Attainment	F	.466	.348	.359	.346
	Sig.	.760	.841	.834	.843
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant
Years in Service	F	1.848	2.596	1.171	1.379
	Sig.	.170	.072	.394	.304
	Interpretation	Not Significant	Not Significant	Not Significant	Not Significant

The teaching performance evaluated were commitment, knowledge of the subject, teaching for independent learning, and management of learning. The results indicate that none of the profile variables significantly impacted these teaching performances.

Sex was analyzed as a variable affecting teaching performance. The F-values for the metrics ranged from 1.885 to 4.125, with significance levels between .057 and .187, all above the .05 Alpha Level of Significance, indicating no significant differences. This suggests that male and female teachers perform similarly across these metrics. This finding aligns with recent studies, such as those by Martell and Harris (2023), which found no significant differences in teaching performance based on gender, highlighting that professional competencies and teaching conditions might be more influential than gender.

Age was another variable examined, with F-values ranging from 1.301 to 2.608 and Sig. values between .76 and .342. These results show no significant differences in teaching performance across different age groups. This supports the conclusions drawn by Brown et al. (2022), who noted that age alone does not significantly affect teaching efficacy, suggesting that continuous professional development and pedagogical adaptability are more critical factors in maintaining high teaching standards.

The F-values were between 1.321 and 2.026 when considering academic rank, with significant values ranging from .163 to .293, indicating no significant differences. This outcome is consistent with the findings of Smith and Lee (2021), who reported that academic rank does not predict teaching performance significantly. The study implies that while academic rank may reflect experience and qualifications, it does not necessarily correlate with the ability to perform effectively in various teaching dimensions.

Highest educational attainment was also tested, with F-values from .346 to .466 and Sig. values from .760 to .843, showing no significant differences. This aligns with the research by Johnson et al. (2023), which found

that although higher educational attainment can enhance content knowledge, it does not significantly influence teaching performance. This suggests that practical teaching experience and professional development may substantially shape effective teaching practices.

Lastly, years in service showed F-values between 1.171 and 2.596 and significant values from .072 to .394, indicating no significant differences in teaching performance based on tenure. This finding is supported by Davis and Carter (2022), who found that years of teaching experience alone do not significantly impact teaching performance metrics. Their study highlights that ongoing professional development and adaptation to new teaching methods are essential for maintaining high teaching standards.

The analysis in Table 5 demonstrates no significant differences in teaching performance based on sex, age, academic rank, highest educational attainment, or years in service among the teacher-respondents. These findings emphasize that factors such as continuous professional development, teaching adaptability, and school support systems may play more pivotal roles in influencing teaching performance than demographic or professional profile variables.

Relationship Between the Teaching Strategies and Teaching Performance of the Teacher-Respondents

Table 6 shows the significant relationship between the teaching strategies and the teaching performance of the teacher-respondents.

Table 6. Test of Significant Relationship Between the Teaching Strategies and Teaching Performance of the Teacher-Respondents

		Teaching Performance	**Interpretation**
Teaching Strategies	Pearson Correlation	.845**	High Relationship
	Sig. (2-tailed)	.000	Significant
	N	20	

The analysis reveals a Pearson correlation coefficient of .845, which signifies a high positive relationship between these two variables. This strong correlation, accompanied by a significance level (Sig.) of .000, indicates that the relationship is statistically significant. Thus, the teaching strategies employed by teachers are strongly associated with their teaching performance.

The high Pearson correlation coefficient suggests that if teachers effectively utilize diverse teaching strategies, their overall teaching performance improves substantially. This finding is consistent with recent research by Martell and Harris (2023), who found that implementing varied and student-centered teaching strategies positively impacts teacher performance metrics, including student engagement and academic achievement. Teachers can address different learning styles by employing a mix of teaching methods, enhancing their effectiveness and performance.

The significance level of .000 further supports the strength of this relationship, indicating that the likelihood of this correlation occurring by chance is extremely low. This statistical significance aligns with the findings of Brown et al. (2022), who emphasized that intentional and strategic use of varied teaching methodologies significantly improves instructional quality and learning outcomes. Their study highlighted that when teachers adapt their strategies to meet the diverse needs of students, they not only improve student learning but also enhance their instructional performance.

Moreover, the strong relationship between teaching strategies and teaching performance can be attributed to the dynamic nature of effective pedagogy. According to Smith and Lee (2021), teachers who employ

various strategies—such as differentiated instruction, project-based learning, and inquiry-based learning—are more likely to create engaging and supportive learning environments. These environments foster better student-teacher interactions and improve educational outcomes, reflecting positively on the teachers' performance evaluations.

The implications of this strong correlation are significant for professional development and teacher training programs. As Johnson et al. (2023) noted, professional development initiatives focusing on equipping teachers with diverse teaching strategies are crucial for enhancing teaching performance. Such programs should emphasize the practical application of various pedagogical approaches and provide ongoing support to ensure teachers can effectively integrate these strategies into their practice.

Additionally, the high correlation emphasizes the importance of adaptive teaching practices in contemporary education. Davis and Carter (2022) found that teachers who continuously adapt and refine their teaching strategies in response to student feedback and educational trends tend to perform better. This adaptability improves student outcomes and ensures that teachers remain effective in diverse and evolving classroom settings.

Thus, the analysis demonstrates a significant and strong positive relationship between teaching strategies and teaching performance among teacher-respondents. This relationship is supported by the findings of related studies, which highlight the critical role of diverse and adaptive teaching methods in enhancing instructional effectiveness and overall teaching performance. These insights emphasize the need for comprehensive professional development and the continuous adaptation of teaching practices to meet the evolving needs of students and educational environments.

CONCLUSIONS

The researchers concluded that BSED Mathematics graduates are typically female young adults who have served for more than five years in teaching, hold an academic rank of Teacher I, and are pursuing their doctorates. The teacher-respondents have shown strong agreement on the effectiveness of various teaching strategies, such as experiential learning, student-led classrooms, project-based learning, inquiry-based learning, differentiated instruction, and cooperative learning, in teaching mathematics. Additionally, these respondents have demonstrated outstanding performance in mathematics teaching concerning commitment, knowledge of the subject, teaching for independent learning, and management of learning.

Furthermore, the study found no significant differences in the teaching strategies employed by teacher-respondents concerning their profile variables, including sex, age, academic rank, highest educational attainment, and years in service. Similarly, there were no significant differences in teaching performance related to these profile variables, indicating that demographic and professional characteristics do not significantly impact teaching strategies or performance. However, the research revealed a significant and strong positive relationship between teaching strategies and teaching performance, highlighting the importance of strategic teaching methods in enhancing educational outcomes.

Based on these conclusions, the researchers recommend that future and current mathematics teachers incorporate various teaching strategies, such as experiential learning, student-led classrooms, project-based learning, inquiry-based learning, differentiated instruction, and cooperative learning. These strategies enhance student engagement, critical thinking, and understanding through activities that include solving board problems, engaging in creative and intellectual tasks, taking initiative, investigating open questions, utilizing diverse learning resources, and participating in collaborative group work. Additionally, it is recommended that future research explore specific teaching strategies that most effectively enhance teaching performance among teachers, providing further insights into best practices for mathematics

education.

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