**TEACHING ANXIETY AND PEDAGOGICAL COMPETENCIES OF MATHEMATICS TEACHERS IN PUBLIC SECONDARY SCHOOLS**

**IN THE FIRST CONGRESSIONAL DISTRICT**

**OF NORTHERN SAMAR**

**Abstract**

This descriptive-correlational research was conducted to determine the teaching anxiety and pedagogical competencies of mathematics teachers in the public secondary schools of the first congressional district, Division of Northern Samar, and their relationship. A sample of 104 secondary school mathematics teachers in the first congressional district of Northern Samar participated. Means and Pearson Correlations were employed in analyzing the data. Respondents generally experienced low levels of teaching anxiety across five factors: teacher-related, school-related, technology-related, personal and family-related, and stakeholder-related. Junior high school math teachers were found to be very highly competent in instructional strategies, classroom management and student engagement, and assessment and feedback. Teacher-related factors demonstrated a significant relationship with classroom management and student engagement, and assessment and feedback, indicating that a higher level of teacher-related anxiety is associated with lower effectiveness in managing classrooms and providing constructive feedback. Moreover, personal and family-related factors also showed a significant negative relationship with assessment and feedback, implying that external stressors such as family responsibilities, financial strain, or emotional concerns may reduce a teacher’s ability to design or deliver meaningful assessments. The results underscore the need for targeted professional development, institutional support, and strengthened collaboration with stakeholders to enhance teacher efficacy and reduce anxiety in the mathematics teaching context.

*Keywords: teaching anxiety, pedagogical competence, mathematics teachers, public secondary schools*

**Introduction**

Teaching anxiety is a prevalent concern among educators, particularly in high-stakes and content-heavy subjects such as Mathematics. This emotional state, characterized by worry, nervousness, or apprehension, can significantly affect a teacher’s performance, confidence, and overall effectiveness in delivering instruction. In the context of Junior High School Mathematics education in the First Congressional District of Northern Samar, understanding the underlying factors that contribute to teaching anxiety is crucial for ensuring quality instruction and promoting a supportive teaching environment.

The effectiveness of mathematics instruction depends significantly on teachers' pedagogical competencies, which involve creating and adapting strategies to meet diverse learners' needs. Mathematics educators must master their subject matter while also employing creativity to make complex concepts accessible and engaging. Moreover, studies emphasize that teacher expertise in mathematics, when applied through well-structured instructional practices such as designing purposeful tasks and facilitating meaningful discussions, correlates strongly with student achievement Rowan et.al (2024). These findings highlight the need for advanced content knowledge and refined pedagogical skills to ensure equitable, high-quality education for all learners.

Anxiety, especially in subjects like mathematics, can impede teachers' ability to deliver lessons effectively, resulting in unclear communication of complex concepts. The sudden shift to distance learning, along with various stressors, has intensified teachers' stress and anxiety during the pandemic, affecting their health and well-being (Lamberte & Adalla, 2025). The study of Erickson, K.A. (2022) indicates that teacher anxiety often stems from the pressure of meeting curriculum standards, managing diverse classroom needs, and implementing new technologies in teaching. This emotional toll not only disrupts classroom management but also reduces job satisfaction, increases stress, and may ultimately lead to burnout, affecting teachers’ overall performance and student outcomes.

This research is timely and significant in identifying both the stressors and strengths within the teaching profession. Through its findings, educational leaders and policymakers can develop focused interventions to alleviate teaching anxiety and enhance the instructional quality of Mathematics teachers in Northern Samar.

**Methodology**

The descriptive-correlational study was conducted among 104 junior high school Mathematics teachers of public secondary schools in the first congressional district of Northern Samar. The respondents answered a two-part survey questionnaire. The first part assessed the teaching anxiety-related factors in terms of teachers, school, technology, personal and family, and stakeholders, while the second part included the indicators assessing the level of pedagogical competencies across key teaching domains in terms of instructional strategies, classroom management and student engagement, and assessment and feedback. Answers to the question were scored using a 5-Likert Scale and interpreted as for teaching anxiety as very high anxiety, high anxiety, moderately anxiety, low anxiety, and very low anxiety; and for pedagogical competencies as very highly competent, highly competent, moderately competent, fairly competent, and poorly competent. The study employed means and Pearson's Correlation as statistical tools.

**Results and Discussion**

**Teaching Anxiety-Related Factors**

Teachers

The data in Table 1 presents the teaching anxiety-related factors in terms of teachers. The top three indicators that teachers rated as “low anxiety” were: feeling uncertain about their ability to adjust teaching strategies to address unexpected questions or challenges during mathematics lessons (M=2.57), feeling anxious when preparing mathematics lessons, especially when introducing new or complex concepts (M=2.44), and feeling anxious about balancing the need for student engagement with the pressure to cover the required mathematics curriculum (M=2.41). These suggest that while teachers generally report low anxiety, there is a slightly higher tendency to feel uneasy when adapting to spontaneous instructional demands, introducing difficult concepts, or managing time pressures related to curriculum pacing.

On the other hand, the three lowest-rated indicators, which also fall under the “low anxiety” category, include: feeling nervous when students challenge their explanations or ask for alternative methods in solving problems (M=1.95), finding it difficult to admit when they do not know the answer to a mathematical question asked by a student (M=2.08), and feeling uncertain about their ability to help students overcome math anxiety and develop confidence in their mathematical abilities (M=2.13). These results imply that teachers are relatively confident in responding to student inquiries, acknowledging gaps in their knowledge, and addressing students' emotional needs regarding mathematics.

The computed grand mean of 2.26 indicates that the respondents experienced a low level of anxiety in relation to teaching-related factors under the teacher domain. This indicates that teachers possess a relatively stable and composed mindset in handling their mathematics teaching responsibilities. This may be due to the age profile of the respondents, as most of them were in the early to mid-stages of their teaching careers—an age group often characterized by high energy, adaptability, and openness to new teaching strategies.

This finding is supported by the research of Peker (2009), who emphasized that lower levels of teaching anxiety are often observed in educators who are well-prepared and confident in their content knowledge and pedagogical approaches. The study confirms that when teachers feel capable and supported, their anxiety remains minimal, enabling them to focus more on effective teaching and student engagement.

**Table 1.** **Teaching Anxiety-Related Factors in terms of Teachers**

|  |  |  |
| --- | --- | --- |
| **Statements** | **Mean** | **Interpretation** |
| The teacher feels uncertain about their ability to adjust teaching strategies to address unexpected questions or challenges during mathematics lessons. | 2.57 | Low Anxiety |
| The teacher feels anxious when preparing mathematics lessons, especially when introducing new or complex concepts. | 2.44 | Low Anxiety |
| The teacher feels anxious about balancing the need for student engagement with the pressure to cover the required mathematics curriculum. | 2.41 | Low Anxiety |
| The teacher feels uncertain about their ability to keep students engaged and interested in solving mathematical problems. | 2.38 | Low Anxiety |
| The teacher feels worried about their ability to maintain classroom control during math lessons, particularly during collaborative problem-solving. | 2.30 | Low Anxiety |
| The teacher is afraid of forgetting important mathematical procedures or formulas during a lesson. | 2.20 | Low Anxiety |
| The teacher feels less confident in their ability to facilitate effective mathematical discussions compared to their peers. | 2.18 | Low Anxiety |
| The teacher feels uncertain about their ability to help students overcome math anxiety and develop confidence in their mathematical abilities. | 2.13 | Low Anxiety |
| The teacher finds it difficult to admit when they do not know the answer to a mathematical question asked by a student. | 2.08 | Low Anxiety |
| The teacher feels nervous when students challenge their explanations or ask for alternative methods in solving problems. | 1.95 | Low Anxiety |
| **Grand Mean** | **2.26** | **Low Anxiety** |

School

The data in Table 2 presents the teaching anxiety-related factors in terms of school-based factors. The top three indicators rated with "moderate anxiety" were: feeling anxious when there is a lack of teaching resources or materials available in the school (M=2.85), feeling stressed when there is a lack of administrative support for classroom needs or teaching strategies (M=2.76), and feeling anxious when school-wide evaluations or assessments do not align with personal teaching methods (M=2.73). These results highlight the influence of institutional support and structural alignment on anxiety levels.

On the other hand, the lowest three indicators, all rated with "low anxiety," were: feeling anxious that a conflicted relationship with the school head negatively affects the teaching experience (M=2.26), feeling anxious about collaborating with colleagues who have different teaching styles or educational philosophies (M=2.33), and feeling uncomfortable when teaching is scrutinized by colleagues with whom there is an uncomfortable relationship (M=2.34), This indicates that interpersonal dynamics within the school were less anxiety-inducing compared to systemic or resource-based challenges.

The computed grand mean of 2.56 indicates that the junior high school math teachers experienced a low level of anxiety concerning school-based factors. This implies that while certain school-related issues moderately affected their emotional state, particularly those involving resources, administrative support, and evaluation systems, the general level of anxiety remained manageable. This may be attributed to the respondents’ high access to instructional resources, as reflected in their profile, which likely provided them with the necessary tools and support to effectively deliver lessons and meet institutional expectations, thereby reducing stress and promoting confidence in their teaching practice.

These findings are consistent with the literature highlighting the impact of school conditions on teacher stress. According to Kyriacou (2001), lack of resources and administrative support are prominent sources of teacher anxiety. Similarly, a study by Skaalvik and Skaalvik (2017) emphasized that when school systems fail to provide sufficient instructional materials and alignment with assessment policies, teacher efficacy and motivation can decline. Moreover, McMinn & Aldridge (2020) pointed out that a positive learning environment – characterized by clarity, autonomy support, and teacher encouragement – reported significantly lower math anxiety.

**Table 2. Teaching Anxiety-Related Factors in terms of School**

|  |  |  |
| --- | --- | --- |
| **Statements** | **Mean** | **Interpretation** |
| The teacher feels anxious when there is a lack of teaching resources or materials available in the school. | 2.85 | Moderate Anxiety |
| The teacher feels stressed when there is a lack of administrative support for their classroom needs or teaching strategies. | 2.76 | Moderate Anxiety |
| The teacher feels anxious when school-wide evaluations or assessments do not align with their teaching methods. | 2.73 | Moderate Anxiety |
| The teacher feels anxious about adapting teaching methods due to a school environment that does not support their needs. | 2.63 | Moderate Anxiety |
| The teacher feels uncertain about how to meet the expectations set by the school administration. | 2.60 | Moderate Anxiety |
| The teacher feels nervous when the school head has a strict approach to teaching and classroom management. | 2.54 | Low Anxiety |
| The teacher feels hindered in delivering lessons effectively due to limited school facilities or classroom space. | 2.51 | Low Anxiety |
| The teacher feels uncomfortable when their teaching is scrutinized by colleagues with whom they have an uncomfortable relationship. | 2.34 | Low Anxiety |
| The teacher feels anxious about collaborating with colleagues who have different teaching styles or educational philosophies. | 2.33 | Low Anxiety |
| The teacher feels anxious that a conflicted relationship with the school head negatively affects their teaching experience. | 2.26 | Low Anxiety |
| **Grand Mean** | **2.56** | **Low Anxiety** |

Technology

The data in Table 3 presents the teaching anxiety-related factors in terms of technology. The top three indicators, all interpreted as "moderate anxiety," were: worrying that technical issues such as malfunctioning devices or poor internet connectivity may disrupt mathematics lessons (M=2.81), worrying that the technology provided by the school is outdated or insufficient for effective mathematics instruction (M=2.68), and feeling uncertain about how to integrate technology effectively into mathematics teaching (M=2.66). These indicate that the reliability and availability of technology significantly affect teaching confidence.

Conversely, the three lowest-rated indicators, interpreted as "low anxiety," were: fearing that students may be more comfortable using technology, which contributes to feelings of incompetence in the classroom (M=2.33), feeling nervous about assessing students’ performance using digital tools due to uncertainty in monitoring progress effectively (M=2.41), and feeling anxious about not being able to troubleshoot technology-related issues during a mathematics lesson (M=2.46). These suggest that while integration and resource concerns are present, day-to-day technological interactions do not elicit strong anxiety levels.

The computed grand mean of 2.58 indicates that respondents experienced a low level of anxiety concerning technology. This suggests that anxiety related to the use of technology in mathematics instruction is generally manageable. While some concerns exist about technical disruptions, outdated equipment, and effective integration, the overall anxiety level remains below moderate. This may reflect an increasing familiarity with basic educational technologies or professional development efforts aimed at equipping teachers with the necessary digital skills. This may be attributed to the respondents' participation in various mathematics-related trainings across different levels, as reflected in their profiles. Such professional development initiatives likely enhanced their competence and confidence in using educational technologies, thereby helping to minimize technology-related anxiety in their teaching practices.

These findings are consistent with prior literature emphasizing the role of technological confidence and access in mitigating anxiety. According to Ertmer and Ottenbreit-Leftwich (2010), teachers' beliefs and confidence in their ability to use technology meaningfully influence their classroom integration practices.

**Table 3. Teaching Anxiety-Related Factors in terms of Technology**

|  |  |  |
| --- | --- | --- |
| **Statements** | **Mean** | **Interpretation** |
| The teacher worries that technical issues, such as malfunctioning devices or poor internet connectivity, may disrupt mathematics lessons. | 2.81 | Moderate Anxiety |
| The teacher worries that the technology provided by the school is outdated or insufficient for effective mathematics instruction. | 2.68 | Moderate Anxiety |
| The teacher feels uncertain about how to integrate technology effectively into mathematics teaching. | 2.66 | Moderate Anxiety |
| The teacher feels overwhelmed by the wide range of educational technologies available and struggles to select the most effective tools for lessons. | 2.65 | Moderate Anxiety |
| The teacher worries that excessive reliance on technology may hinder students’ understanding of mathematical concepts. | 2.64 | Moderate Anxiety |
| The teacher feels stressed by the pressure to stay updated with technological trends and to incorporate them into mathematics instruction. | 2.64 | Moderate Anxiety |
| The teacher feels anxious about using technology in mathematics lessons due to a lack of familiarity with tools such as interactive whiteboards, graphing calculators, educational software, or learning management systems. | 2.53 | Low Anxiety |
| The teacher feels anxious about not being able to troubleshoot technology-related issues during a mathematics lesson. | 2.46 | Low Anxiety |
| The teacher feels nervous about assessing students’ performance using digital tools due to uncertainty in monitoring progress effectively. | 2.41 | Low Anxiety |
| The teacher fears that students may be more comfortable using technology, which contributes to feelings of incompetence in the classroom. | 2.33 | Low Anxiety |
| **Grand Mean** | **2.58** | **Low Anxiety** |

Personal and Family

The data in Table 4 presents the teaching anxiety-related factors in terms of personal and family-related aspects. The top three indicators with the highest mean scores, all interpreted as "low anxiety," were: feeling guilty when time with a partner is sacrificed for lesson preparation or grading in mathematics (M=2.26), feeling anxious about balancing work commitments with the family’s emotional needs despite being passionate about mathematics education (M=2.16), and fearing that the demands of teaching mathematics interfere with quality time shared with family (M=2.13). These findings suggest that while educators may experience mild concern about the impact of their professional duties on personal life, such concerns do not cause significant anxiety.

On the other hand, the three lowest indicators were: fearing that a teaching career may negatively impact the relationship with a partner (M=1.81), fearing that a strong passion for teaching mathematics may lead to neglecting family (M=1.88), and worrying about how teaching responsibilities affect relationships with family members (M=1.88). These results imply that although personal and relational concerns exist, they remain minimal in intensity and do not heavily burden daily teaching experiences.

The computed grand mean of 2.03 indicates that respondents experienced a low level of anxiety associated with personal and family-related concerns. This suggests that while the profession requires considerable time and emotional investment, respondents are largely able to maintain balance and manage their familial roles without significant psychological strain. It may also reflect personal coping mechanisms or supportive family dynamics that help educators reconcile their professional and domestic responsibilities.

These results align with prior studies emphasizing the importance of emotional support and work-life integration for educators. According to Kyriacou (2001), while teaching is inherently stressful, strong family support systems can significantly buffer the impact of work-related stress. Similarly, a study by Cinamon and Rich (2005) revealed that teachers who experience high family-to-work enrichment tend to report lower occupational stress and greater job satisfaction. In the context of mathematics teaching, finding time for personal relationships amidst the intellectual and instructional demands can be challenging but manageable when adequate support structures are in place. Therefore, the current findings support the idea that with balanced priorities and institutional empathy, teachers can sustain both professional effectiveness and personal well-being.

**Table 4. Teaching Anxiety-Related Factors in terms of Personal and Family**

|  |  |  |
| --- | --- | --- |
| **Statements** | **Mean** | **Interpretation** |
| The teacher feels guilty when time with their partner is sacrificed for lesson preparation or grading in mathematics. | 2.26 | Low Anxiety |
| The teacher, while passionate about mathematics education, sometimes feels anxious about balancing work commitments with family’s emotional needs. | 2.16 | Low Anxiety |
| The teacher fears that the demands of teaching mathematics interfere with the quality time shared with family. | 2.13 | Low Anxiety |
| The teacher feels anxious that long hours spent preparing mathematics lessons cause strain in their relationship with their partner. | 2.06 | Low Anxiety |
| The teacher worries about maintaining a healthy relationship with their partner due to the pressures of the teaching profession. | 2.05 | Low Anxiety |
| The teacher worries that the stress associated with teaching mathematics might harm family relationships. | 2.02 | Low Anxiety |
| The teacher worries about how teaching responsibilities affect relationships with family members. | 1.88 | Low Anxiety |
| The teacher fears that a strong passion for teaching mathematics may result in neglecting family, leading to relational stress. | 1.88 | Low Anxiety |
| The teacher fears that their teaching career may negatively impact their relationship with their partner. | 1.81 | Low Anxiety |
| **Grand Mean** | **2.03** | **Low Anxiety** |

Stakeholders

The data in Table 5 presents the teaching anxiety-related factors in terms of stakeholder-related concerns. The top three indicators where low anxiety was still observed include: feeling anxious when communicating with parents about a child’s academic performance, especially when the student struggles in mathematics (M=2.38), worrying about how parents perceive teaching methods and whether they meet expectations (M=2.36), and feeling anxious during parent-teacher conferences due to fear of negative feedback about the student’s progress, teaching style, or classroom management (M=2.32). These indicators suggest that while teachers are generally confident in interacting with stakeholders, there remains some unease in situations involving direct parental feedback or scrutiny.

On the other hand, the bottom three indicators with the lowest levels of anxiety include worrying that pressure from parents may hinder effective instruction (M=2.10), feeling nervous when parents or community members are involved in school activities, sensing that expectations weigh heavily on them (M=2.17), and feeling nervous when attending community meetings or events due to concerns about being evaluated or criticized by outsiders (M=2.18). These results imply that although interaction with external stakeholders can be daunting, teachers show minimal anxiety in such scenarios overall.

The computed grand mean of 2.25 indicates that the respondents experienced a low level of anxiety in relation to teaching-related factors concerning stakeholders. This suggests that while certain interactions with parents and community members may be challenging, they do not contribute significantly to elevated anxiety levels. As reflected in the profile, many respondents have completed or are currently pursuing graduate studies, which may have strengthened their communication skills and professional confidence, enabling them to manage stakeholder interactions with reduced anxiety.

This finding is supported by the study of Epstein and Sheldon (2016) noted that well-structured school-community partnerships help teachers feel more supported rather than scrutinized, improving both morale and performance. Thus, the current results align with previous literature indicating that supportive stakeholder relationships can buffer teaching-related anxiety and create a more positive educational environment.

**Table 5. Teaching Anxiety-Related Factors in terms of Stakeholders**

|  |  |  |
| --- | --- | --- |
| **Statements** | **Mean** | **Interpretation** |
| The teacher feels anxious when communicating with parents about a child’s academic performance, particularly when the student struggles in mathematics. | 2.38 | Low Anxiety |
| The teacher worries about how parents perceive their teaching methods and whether they meet expectations. | 2.36 | Low Anxiety |
| The teacher feels anxious during parent-teacher conferences, fearing negative feedback regarding the student's progress, teaching style, or classroom management. | 2.32 | Low Anxiety |
| The teacher feels pressured to meet the expectations of parents, which increases anxiety about teaching effectively. | 2.27 | Low Anxiety |
| The teacher feels nervous when community members express concerns about the school’s performance or specific teaching practices. | 2.26 | Low Anxiety |
| The teacher feels stressed about the possibility of public scrutiny or criticism from the community regarding school-related outcomes. | 2.25 | Low Anxiety |
| The teacher feels nervous when attending community meetings or events, concerned that their teaching may be evaluated or criticized by those outside the school. | 2.18 | Low Anxiety |
| The teacher feels uncomfortable when parents or community members are involved in school activities, sensing that expectations weigh heavily on them. | 2.17 | Low Anxiety |
| The teacher worries that pressure from parents may hinder their ability to deliver effective instruction. | 2.10 | Low Anxiety |
| **Grand Mean** | **2.25** | **Low Anxiety** |

Summary of the Teaching Anxiety-Related Factors

As observed in Table 6, the summary of teaching anxiety-related factors revealed that the highest level of anxiety among the respondents was associated with technology-related factors (M=2.58), followed closely by school-related factors (M=2.56), both interpreted as low anxiety. These findings suggest that while anxiety remains within manageable levels, challenges related to integrating and keeping up with technology, as well as school-based responsibilities, are slightly more pressing compared to other domains. On the other hand, the three domains with the lowest levels of anxiety were personal and family-related factors (M=2.03), stakeholder-related factors (M=2.25), and teacher-related factors (M=2.26). These results indicate that internal concerns related to personal relationships and external interactions with stakeholders are not major sources of teaching anxiety among the respondents.

In general, the overall grand mean of 2.34 indicates a low level of anxiety across all five teaching-related factors. This suggests that respondents are generally coping well with the demands of teaching mathematics, with anxiety levels remaining low in all domains.

The overall findings are consistent with the study by Klassen and Kim (2010), which found that while teachers may experience stress in multiple areas, their anxiety levels tend to be moderated by teaching experience and institutional support. Similarly, Skaalvik and Skaalvik (2015) emphasized that school environment and resources, particularly concerning technology and administrative demands, are more likely to influence anxiety than personal or external stakeholder factors. Additionally, Lamberte and Adalla (2025) highlighted that despite the challenges experienced by the teachers during the pandemic, teachers reported a high level of wellness. These results suggest that bolstering teacher training in instructional technology and strengthening supportive school environments can further reduce anxiety and enhance teaching efficacy.

**Table 6. Summary of the** **Teaching Anxiety-Related Factors**

|  |  |  |
| --- | --- | --- |
| **Teaching Anxiety-Related Factors** | **Grand Mean** | **Interpretation** |
| A. Teachers | 2.26 | Low Anxiety |
| B. School | 2.56 | Low Anxiety |
| C. Technology | 2.58 | Low Anxiety |
| D. Personal and Family | 2.03 | Low Anxiety |
| E. Stakeholders | 2.25 | Low Anxiety |
| **Overall Grand Mean** | **2.34** | **Low Anxiety** |

**Level of Pedagogical Competencies**

Instructional Strategies

Table 7 presents the level of pedagogical competencies of the respondents in terms of instructional strategies. Among the listed indicators, the top three areas where teachers demonstrated the highest competence include: using formative assessments to evaluate student progress and adapt teaching strategies accordingly (M=4.45); employing questioning techniques to stimulate curiosity and critical thinking (M=4.44); and incorporating real-world applications to demonstrate the relevance of mathematical concepts (M=4.38). These results suggest that the respondents excel at using assessment-driven instruction, fostering higher-order thinking skills, and making mathematics meaningful and applicable to students’ lives.

Conversely, the bottom three indicators were: areas were differentiating instruction to address diverse student needs and learning styles (M=3.97), incorporating technology in instruction (M=4.08), and applying various instructional approaches to make content accessible (M=4.14). These suggest potential areas for professional development, especially in the integration of diverse strategies and educational technologies that can cater to different learning preferences and improve inclusivity in mathematics instruction.

Generally, the computed grand mean of 4.25 shows that the junior high school math teachers were very highly competent in terms of instructional strategies. This affirms that teachers are capable of planning and delivering instruction that is engaging, responsive, and aligned with best practices in mathematics education.

These findings align with those of Darling-Hammond et al. (2017), who emphasized that effective mathematics instruction is strongly linked to the teacher’s ability to differentiate, adjust strategies based on formative assessment, and connect lessons to real-life contexts.

**Table 7. Level of Pedagogical Competencies** **in terms of Instructional Strategies**

|  |  |  |
| --- | --- | --- |
| **Statements** | **Mean** | **Interpretation** |
| The teacher uses formative assessments to evaluate student progress and adapt teaching strategies accordingly. | 4.45 | Very Highly Competent |
| The teacher uses questioning techniques to stimulate student curiosity and critical thinking. | 4.44 | Very Highly Competent |
| The teacher incorporates real-world applications to demonstrate the relevance of mathematical concepts. | 4.38 | Very Highly Competent |
| The teacher uses structured and clear explanations to introduce and elaborate new mathematical concepts effectively. | 4.33 | Very Highly Competent |
| The teacher plans lessons that incorporate feedback from students to improve the learning experience. | 4.32 | Very Highly Competent |
| The teacher adjusts teaching pace and content delivery based on the needs and understanding of the students. | 4.30 | Very Highly Competent |
| The teacher employs collaborative learning techniques to encourage mathematical discussions and teamwork. | 4.29 | Very Highly Competent |
| The teacher encourages student independence by providing opportunities for exploration and discovery in mathematics. | 4.25 | Very Highly Competent |
| The teacher uses hands-on activities to help students understand abstract mathematical concepts. | 4.25 | Very Highly Competent |
| The teacher fosters active learning by using engaging strategies such as games, problem-solving tasks, and activities. | 4.24 | Very Highly Competent |
| The teacher selects teaching methods that actively engage students and promote critical thinking in mathematics. | 4.20 | Very Highly Competent |
| The teacher scaffolds instruction to help students grasp complex mathematical ideas progressively. | 4.16 | Highly Competent |
| The teacher applies various instructional approaches to make mathematical content accessible to all learners. | 4.14 | Highly Competent |
| The teacher incorporates technology to enhance mathematical instruction and improve student engagement. | 4.08 | Highly Competent |
| The teacher differentiates instruction to address diverse student needs and learning styles. | 3.97 | Highly Competent |
| **Grand Mean** | **4.25** | **Very Highly Competent** |

Classroom Management and Student Engagement

Table 8 presents the level of pedagogical competencies of the respondents in terms of classroom management and student engagement. The data revealed that teachers demonstrate a consistently high degree of competence across various indicators, with all items rated as “very highly competent.” Among these, the top three competencies include: providing clear and concise instructions to help students understand classroom activities and expectations (M=4.47); monitoring student participation to support those who need additional encouragement (M=4.42); and promoting active student participation through lessons that encourage questioning, collaboration, and exploration of mathematical concepts (M=4.42). These findings highlight teachers’ strong command over instructional clarity, responsiveness to student engagement, and promotion of active learning—factors essential for creating an effective and inclusive learning environment.

Meanwhile, the competencies with the lowest mean were: fostering a classroom culture that supports risk-taking and learning from mistakes (M=4.21), addressing student distractions constructively (M=4.27), and fostering curiosity through engaging content (M=4.27). These may represent areas where continuous reflection and refinement could help maximize student growth mindsets and deeper mathematical inquiry.

Overall, the computed grand mean of 4.35 shows that the junior high school math teachers were very highly competent in terms of classroom management and student engagement. This reflects the teachers' ability to create positive learning environments, maintain student discipline, and encourage active involvement in mathematics, a balance that is crucial for effective teaching and sustained learner success.

These findings are aligned with the work of Marzano and Marzano (2003) who emphasized that effective classroom management is a foundational element of student achievement and that proactive engagement strategies reduce behavioral problems while enhancing learning. Similarly, according to Pianta, Hamre, and Allen (2012), emotionally supportive classrooms with clear instructional structures significantly improve student motivation, participation, and academic outcomes.

**Table 8. Level of Pedagogical Competencies in terms of Classroom Management and Student Engagement**

|  |  |  |
| --- | --- | --- |
| **Statements** | **Mean** | **Interpretation** |
| The teacher provides clear and concise instructions to help students understand classroom activities and expectations. | 4.47 | Very Highly Competent |
| The teacher monitors student participation to identify and support those who need additional encouragement. | 4.42 | Very Highly Competent |
| The teacher promotes active student participation by designing lessons that encourage questioning, collaboration, and exploration of mathematical concepts. | 4.42 | Very Highly Competent |
| The teacher creates an inclusive classroom environment where all students feel valued and encouraged to participate in mathematical discussions. | 4.38 | Very Highly Competent |
| The teacher creates a learning atmosphere that builds student confidence and motivation in mathematics. | 4.38 | Very Highly Competent |
| The teacher gives constructive feedback to encourage student improvement and sustained engagement. | 4.38 | Very Highly Competent |
| The teacher organizes activities that promote collaboration and teamwork among students. | 4.36 | Very Highly Competent |
| The teacher ensures every student has the opportunity to contribute to class discussions and activities. | 4.36 | Very Highly Competent |
| The teacher sets and communicates clear rules and expectations for behavior in the mathematics classroom. | 4.35 | Very Highly Competent |
| The teacher manages student behavior effectively to maintain a positive and productive mathematics learning environment. | 4.33 | Very Highly Competent |
| The teacher uses strategies to maintain student engagement and focus throughout mathematics lessons. | 4.31 | Very Highly Competent |
| The teacher creates opportunities for students to take the lead in exploring and solving mathematical problems. | 4.31 | Very Highly Competent |
| The teacher addresses student distractions or disruptions promptly and constructively. | 4.27 | Very Highly Competent |
| The teacher fosters curiosity and interest in mathematics through engaging and relevant content. | 4.27 | Very Highly Competent |
| The teacher fosters a classroom culture that supports risk-taking and learning from mistakes in mathematics. | 4.21 | Very Highly Competent |
| **Grand Mean** | **4.35** | **Very Highly Competent** |

Assessment and Feedback

Table 9 presents the level of pedagogical competencies of the respondents in terms of assessment and feedback. The data revealed that teachers demonstrate a consistently high degree of competence across various indicators, with all items rated as “very highly competent.” Among these, the top three competencies include: using a variety of assessment methods, including tests, quizzes, and projects to evaluate student understanding (M=4.51); aligning assessments with specific learning objectives to ensure relevance and accuracy (M=4.47); and utilizing both formative and summative assessments to monitor student progress and refine teaching strategies (M=4.44). These findings highlight the teachers’ strong ability to design comprehensive, standards-based assessments and use results to improve instructional practices.

Meanwhile, the competencies with the lowest mean were: providing opportunities for students to receive constructive feedback from peers (M=4.26), involving students in self-assessment activities to promote reflection and growth (M=4.30), and using rubrics to communicate expectations and criteria for success (M=4.32). These may represent areas where further emphasis could enhance student agency, reflection, and transparency in the assessment process.

Generally, the computed grand mean of 4.38 shows that the junior high school math teachers were very highly competent in terms of assessment and feedback. This reflects the teachers’ capacity to evaluate student learning effectively, provide timely and constructive feedback, and make data-informed adjustments to instruction practices that are vital to promoting student achievement and continuous improvement.

These findings are aligned with the work of Black and Wiliam (1998), who emphasized that formative assessment and quality feedback are central to improving learning outcomes. Likewise, Andrade and Cizek (2010) highlighted that involving students in self- and peer-assessment fosters metacognitive skills and accountability, leading to deeper understanding and performance in academic tasks.

**Table 9. Level of Pedagogical Competencies in terms of Assessment and Feedback**

|  |  |  |
| --- | --- | --- |
| **Statements** | **Mean** | **Interpretation** |
| The teacher provides timely and constructive feedback to help students improve their mathematical understanding and skills. | 4.33 | Very Highly Competent |
| The teacher uses a variety of assessment methods, including tests, quizzes, and projects, to evaluate student understanding. | 4.51 | Very Highly Competent |
| The teacher aligns assessments with specific learning objectives to ensure relevance and accuracy in measuring student achievement. | 4.47 | Very Highly Competent |
| The teacher uses both formative and summative assessments to monitor student progress and refine teaching strategies. | 4.44 | Very Highly Competent |
| The teacher evaluates the effectiveness of teaching practices using student performance data as a guide. | 4.44 | Very Highly Competent |
| The teacher offers feedback that highlights students’ strengths and specific areas for improvement. | 4.39 | Very Highly Competent |
| The teacher ensures that assessments are equitable and accessible to all students, regardless of their learning needs. | 4.38 | Very Highly Competent |
| The teacher designs assessments that measure both conceptual knowledge and the application of mathematical skills in real-world contexts. | 4.37 | Very Highly Competent |
| The teacher designs assessments that encourage critical thinking and problem-solving. | 4.37 | Very Highly Competent |
| The teacher involves students in setting academic goals based on their assessment results to promote accountability and motivation. | 4.36 | Very Highly Competent |
| The teacher responds to assessment outcomes by adjusting lesson pacing to address student needs. | 4.36 | Very Highly Competent |
| The teacher tracks student progress systematically and uses the data to adjust instructional strategies. | 4.33 | Very Highly Competent |
| The teacher uses rubrics to communicate expectations and criteria for success in assignments and assessments. | 4.32 | Very Highly Competent |
| The teacher involves students in self-assessment activities to encourage reflection on their learning and identify areas for growth. | 4.30 | Very Highly Competent |
| The teacher provides opportunities for students to receive constructive feedback from peers to enhance their understanding. | 4.26 | Very Highly Competent |
| **Grand Mean** | **4.38** | **Very Highly Competent** |

Summary of the Level of Pedagogical Competencies

Table 10 presents the summary of the level of pedagogical competencies of the respondents across three key domains: instructional strategies, classroom management and student engagement, and assessment and feedback. The data revealed that teachers consistently demonstrated a high level of pedagogical competence in all areas, with each domain rated as “very highly competent.”

Specifically, the highest competency was observed in the domain of assessment and feedback (M=4.38), highlighting the teachers’ strong ability to evaluate student performance, provide timely and constructive feedback, and adjust instruction based on assessment results. This was closely followed by classroom management and student engagement (M=4.35), indicating their effectiveness in maintaining a positive and inclusive learning environment while encouraging active participation. Instructional strategies (M=4.25) also reflected very high competence, showing that teachers can implement diverse and effective methods to deliver mathematical instruction clearly and meaningfully.

Overall, the computed grand mean of 3.77 shows that the junior high school math teachers were very highly competent, confirming the strength of the teachers’ pedagogical practices.

These findings reflect the importance of comprehensive pedagogical skills in ensuring student success, aligning with the view of Darling-Hammond (2017), who emphasizes that teacher quality is the single most important school-related factor influencing student achievement.

**Table 10. Level of Pedagogical Competencies**

|  |  |  |
| --- | --- | --- |
| **Level of Pedagogical Competencies** | **Weighted Mean** | **Interpretation** |
| A. Instructional Strategies | 4.25 | Very Highly Competent |
| B. Classroom Management and Student Engagement | 4.35 | Very Highly Competent |
| C. Assessment and Feedback | 4.38 | Very Highly Competent |
| **Overall Grand Mean** | **4.33** | **Very Highly Competent** |

**Test of** **Relationship Between the Teaching Anxiety-Related Factors and Pedagogical Competencies**

Table 11 presents the relationship between teaching anxiety-related factors and the pedagogical competencies of teachers in terms of instructional strategies, classroom management and student engagement, and assessment and feedback. Pearson correlation analysis was also utilized to determine whether significant relationships exist between each anxiety-related factor and the three domains of pedagogical competence.

The results showed that school-related factors, technology-related factors, and stakeholders-related factors were not significantly correlated with any of the three competency domains, as all their p-values are greater than the 0.05 level of significance. This suggests that these anxiety-related factors do not have a measurable impact on teachers' classroom strategies, engagement with students, or feedback practices.

On the other hand, teacher-related factors demonstrated a significant negative relationship with two domains: classroom management and student engagement (r=-0.223, p=.023) and assessment and feedback (r=-0.209, p=.033). These indicate that the higher level of teacher-related anxiety is associated with lower effectiveness in managing classrooms and providing constructive feedback.

This is supported by the work of Kyriacou (2001) emphasized that anxiety may impair teachers’ emotional regulation and decision-making during instructional delivery, which may hinder timely and effective feedback.

Moreover, personal and family-related factors also showed a significant negative correlation with the domain of assessment and feedback (r=-0.239, p=.015), implying that external stressors such as family responsibilities, financial strain, or emotional concerns may reduce a teacher’s ability to design and deliver meaningful assessments. According to Skaalvik and Skaalvik (2017), personal life stress contributes to emotional exhaustion, thereby diminishing teachers’ attentiveness to student needs and responsiveness in feedback-giving. Similarly, Beilock, Gunderson, Ramirez, and Levine reported that personal stress undermines cognitive functioning and reduces a teacher’s confidence in evaluating and guiding students’ learning progress.

**Table 11. Relationship Between the Teaching Anxiety-Related Factors and Pedagogical Competencies**

|  |  | | **Instructional Strategies** | **Classroom Management and Student Engagement** | **Assessment and Feedback** |
| --- | --- | --- | --- | --- | --- |
| **Teachers**  **Factor** | | *Pearson Correlation* | -.126 | **-.223\*** | **-.209\*** |
| *Sig. (2-tailed)* | .203 | **.023** | **.033** |
| *Interpretation* | Not Significant | **Significant** | **Significant** |
| **School**  **Factor** | | *Pearson Correlation* | -.106 | -.152 | -.078 |
| *Sig. (2-tailed)* | .285 | .124 | .432 |
| *Interpretation* | Not Significant | Not Significant | Not Significant |
| **Technology Factor** | | *Pearson Correlation* | -.118 | -.088 | -.125 |
| *Sig. (2-tailed)* | .232 | .375 | .206 |
| *Interpretation* | Not Significant | Not Significant | Not Significant |
| **Personal and Family Factor** | | *Pearson Correlation* | -.037 | -.138 | **-.239\*** |
| *Sig. (2-tailed)* | .709 | .164 | **.015** |
| *Interpretation* | Not Significant | Not Significant | **Significant** |
| **Stakeholders Factors** | | *Pearson Correlation* | .017 | -.064 | -.120 |
| *Sig. (2-tailed)* | .864 | .521 | .226 |
| *Interpretation* | Not Significant | Not Significant | Not Significant |

\*Significant at p<.05

**Conclusion**

The respondents experienced a low level of anxiety concerning teaching-related factors under the teacher domain. This implies that teachers possess a relatively stable and composed mindset in handling their mathematics teaching responsibilities.

The junior high school math teachers experienced a low level of anxiety in relation to school-based factors. This implies that while certain school-related issues moderately affected their emotional state, particularly those involving resources, administrative support, and evaluation systems, the general level of anxiety remained manageable.

The respondents experienced a low level of anxiety concerning technology. This implies that anxiety related to the use of technology in mathematics instruction is generally manageable.

The respondents experienced a low level of anxiety associated with personal and family-related concerns. This implies that while the profession requires considerable time and emotional investment, respondents are largely able to maintain balance and manage their familial roles without significant psychological strain.

The respondents experienced a low level of anxiety in relation to teaching-related factors concerning stakeholders. This implies that while certain interactions with parents and community members may be challenging, they do not contribute significantly to elevated anxiety levels.

In general, there was a low level of anxiety across all five teaching-related factors. This implies that respondents are generally coping well with the demands of teaching mathematics, with anxiety levels remaining low in all domains.

The junior high school math teachers were very highly competent in terms of instructional strategies. This affirms that teachers are capable of planning and delivering instruction that is engaging, responsive, and aligned with best practices in mathematics education.

The respondents were very highly competent in terms of classroom management and student engagement. This reflects the teachers' ability to create positive learning environments, maintain student discipline, and encourage active involvement in mathematics, a balance that is crucial for effective teaching and sustained learner success.

The respondents were very highly competent in terms of assessment and feedback. This reflects the teachers’ capacity to evaluate student learning effectively, provide timely and constructive feedback, and make data-informed adjustments to instruction—practices that are vital to promoting student achievement and continuous improvement.

Overall, the junior high school math teachers were very highly competent, confirming the strength of the teachers’ pedagogical practices.

The teacher-related factor demonstrated a significant negative relationship with classroom management and student engagement and assessment and feedback. These indicate that the higher level of teacher-related anxiety is associated with lower effectiveness in managing classrooms and providing constructive feedback.

Personal and family-related factors showed a significant negative correlation with the domain of assessment and feedback, implying that external stressors such as family responsibilities, financial strain, or emotional concerns may reduce a teacher’s ability to design and deliver meaningful assessments.

**Recommendation**

As teacher-related and personal/family-related anxieties were shown to negatively affect classroom performance and assessment practices, schools may offer counseling services, wellness programs, and stress-management workshops. Creating safe spaces for teachers to discuss personal concerns and access support services can help mitigate anxiety and improve teaching performance holistically.

**Consent**

The respondents were fully informed about the purpose of the study and were given a consent form before the administration of the study.

**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

This research utilized ChatGPT, a language model developed by OpenAI, for paraphrasing paragraphs and checking grammatical errors. The Free ChatGPT App was employed as a tool to enhance the grammar, clarity, and readability of the text.

Details of the AI usage are given below:

1. Used ChatGPT for paraphrasing for clarity and readability of paragraphs.
2. Used ChatGPT for checking grammatical errors.

**COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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