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# CLASSROOM MANAGEMENT STYLES AND MATHEMATICS TEACHERS' ATTITUDES TOWARD STUDENTS' USE OF GENERATIVE ARTIFICIAL INTELLIGENCE

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## ABSTRACT

The instant emergence of generative artificial intelligence such as ChatGPT, Copilot, and Gemini has significantly affected the educational systems, posing opportunities and risks. Hence, this study is aimed at investigating the relationship between mathematics teachers' classroom management styles and their attitudes toward students' use of generative AI tools. Using a descriptive-correlational research design, the study examined how certain classroom management style (interventionist, interactionist, and non-interventionist) relates to the attitudes of secondary mathematics teachers, focusing on three dimensions of attitude based on the Technology Acceptance Model: perceived usefulness, perceived ease of use, and perceived risk, alongside various respondent profiles. Based on the findings, Perceived Risk is the most dominant factor shaping teachers' attitudes toward AI. According to the data, the composite mean for perceived risk was interpreted as "Strongly Agree." This indicates a profound concern among educators regarding the potential negative impacts of AI on academic integrity and student mastery of mathematical concepts. Furthermore, the analysis of classroom management styles showed a strong preference for the Interactionist style, suggesting that teachers favor a collaborative, shared-control environment to navigate these technological risks.,When grouped according to profile variables, the study found that teaching experience is a critical determinant of teacher attitude, as the data indicated that it was the only variable with a statistically significant difference. Meanwhile, age, gender, grade level, and educational attainment showed no significant impact. Post hoc analysis further specified that novice teachers with 0 – 3 years of experience exhibited a significantly more positive attitude compared to those with 4 – 7 years and those with more than 10 years. This suggests a distinct generational gap in tech-readiness and acceptance within the profession. Crucially, it was also established that there was a statistically significant moderate positive correlation between classroom management styles and attitudes toward students' use of AI (Pearson r = 0.439, p = 0.027). This relationship suggests that a teacher's pedagogical approach to maintaining order and engagement in the classroom is intrinsically linked to how they perceive and manage AI tools in the teaching and learning environment. Teachers with more structured or collaborative management frameworks tend to have more defined and proactive attitudes toward the technology.

***Keywords:*** *Generative Artificial Intelligence, Classroom Management Styles, Mathematics, Teacher Attitudes, Secondary Education, Technology Acceptance Model*

## INTRODUCTION

With the advent of technology, education across the globe is undergoing a rapid transformation, and leading the way is Artificial Intelligence, or simply AI. You may have heard about it in the news, where AI-like humans deliver sports updates, on social media where people are hooked on posting generative AI images of themselves, from friends who enjoy AI-generated videos or memes, or even from older people who are upset about fake news created by AI. Yet beyond these popular uses, AI in education is also redefining how lessons are delivered, accessed, and experienced globally.

Artificial Intelligence is now being embraced globally in the education field, not just as a passing trend, but as a phenomenon that is reshaping our education. Based on the reports from the World Economic Forum (2024), AI provides a lot of potential, which includes making learning more personalized, making administrative tasks easier, and even being integrated into schools. This ushers in a change in the way the education sector will transform. In fact, artificial intelligence has now become a real part of education, with about 60 percent of teachers using and integrating AI into their teaching (World Economic Forum, 2025). Teachers have used AI to generate practice exercises or assessments, grade them, monitor student progress, and a lot more. AI technology has made a lot of teacher tasks easier, becoming helpful in addressing serious challenges like teacher burnout and workload stress. Meanwhile, 86 percent of the students globally are now using AI in their studies, and more than two-thirds of students have used it to search for information (Digital Education Council, 2024). With both the teachers and the students now widely using it, AI has become something inevitable and cannot be disregarded moving forward.

As AI continues to transform the direction of where education is headed, it introduces tools that go beyond traditional learning platforms. Applications such as ChatGPT, Microsoft's Copilot, and Google Gemini are now capable of producing explanations, generating solutions, writing essays, and even creating instructional materials. In mathematics, for instance, these tools can show complete step-by-step solutions, explain where a student made an error, or provide alternative methods for solving a problem. These developments ensure that education becomes more engaging, efficient, accessible, and inclusive. However, if the teacher does not allow the use of such technology, then its full potential is not being maximized. And if education is meant to prepare students for the future, while industries and businesses are already using AI, then schools should not completely close their doors to it.

However, the use of generative AI in classrooms also raises questions about academic honesty, student dependence, and the teacher's role in guiding responsible use. In fact, teachers are divided in how they respond to these challenges, and their reactions may depend not only on their beliefs about technology but also on how they manage and control their classrooms.

As countries around the world respond to these emerging challenges, various education systems have already begun establishing structured policies and guidelines on the use of artificial intelligence in schools.

In China, national guidelines for AI use in education have already been released. Primary students are not allowed full access to AI chatbots, middle school students are allowed to use them for understanding logical structures, and high school students are encouraged to use AI for inquiry-based learning (Pessarlay, 2025). This shows that AI use is regulated depending on the level of the learner.

Similarly, in Hong Kong, the government promotes AI literacy among students through the Generative AI Technical and Application Guideline. Since 2023, students in upper primary and lower secondary levels have been receiving AI and coding lessons, and by 2025, the government committed to building an AI literacy framework, integrating AI into the curriculum, and expanding teacher training (Digital Policy Office, 2025).

Singapore also developed an AI-in-Education Ethics Framework in 2024, which focuses on fairness, accountability, transparency, and safety. This provides clear guidance on how teachers and students should use AI responsibly in classrooms (Singapore Student Learning Space, n.d.).

In the Philippines, most especially in basic education, while many teachers are already using AI for lesson plans, test construction, and reports, the classroom remains an uncertain space when it comes to students' use of AI. When students begin using AI tools to generate essays, solve mathematics problems, or produce outputs, teachers are often left to decide on their own whether to allow it or not. But just very recently, however, the Philippine education system has already taken a major step in addressing this gap. In February 2026, the Department of Education officially allowed the use of artificial intelligence in public schools through Department Order No. 003, series of 2026, also known as the Foundational Guidelines on Artificial Intelligence in Basic Education (Sevillano, 2026). According to the policy, AI is recognized as a support tool in teaching and learning, and its use will not be prohibited as long as it follows ethical, pedagogical, and human-centered standards.

The guidelines emphasize that AI should serve as a supplementary tool only, and it should not replace the fundamental role of teachers. Because of this, it was still deemed necessary that human judgment must remain the most important factor in all educational decisions. However, AI can be allowed to be used in creating instructional materials, developing assessments, analyzing data, and supporting research tasks such as grammar checking and citation verification, yet all outputs must still be validated by teachers.

The policy also introduces classifications of AI applications based on risk. High-risk applications such as those used in grading, admissions, and disciplinary actions require strict human oversight, audit logging, and an appeal mechanism. On the other hand, tools like chatbots and AI-generated content, such as texts, photos, and videos, are considered limited risk AI. While spam filters, grammar correction tools, and automation systems are considered minimal risk. The policy also requires students to disclose how they use AI in their outputs, promoting transparency and responsible use.

Even though these national policies give the stakeholders a general direction for AI integration in the Philippine educational system, the actual implementation may still vary across different localities. Of course, in urban public school systems such as Marikina City, where access to technological advancements and the needed internet connection is relatively more available compared to rural areas, students are more likely to be more familiar with generative AI tools both inside and outside the classroom. In addition, Marikina City is also known for putting a premium on its educational quality and innovation, making it a relevant setting to examine how these technological advancements are being encountered or adapted in real classroom situations.

Thus, in this context, teachers in Marikina may be more familiar with the immediate and frequent challenges related to students' use of AI, requiring them to make practical decisions on whether to allow, regulate, or restrict its use. This makes the locale a particularly suitable setting for investigating how mathematics teachers' classroom management styles influence their attitudes toward generative AI. By focusing on Marikina, the study is able to provide a grounded and context-specific understanding of how national AI policies are interpreted and applied at the classroom level.

These developments highlight that while policy frameworks for artificial intelligence in education are rapidly evolving at the national level, classroom-level responses still depend heavily on teachers' decisions and management practices.

According to The Glossary of Education Reform (2014), classroom management, a term commonly used in education, refers to the wide variety of skills and techniques that teachers use to keep students organized, orderly, focused, attentive, on task, and academically productive during a class. In other words, it can help students stay on track so that they can finish their work and learn in class. If classroom management techniques are applied effectively, teachers can lessen unnecessary behaviors that would interfere with the learning for both the student involved and other classmates, while strengthening behaviors that support and improve learning.

And while classroom management gives teachers the foundation to maintain an orderly and supportive learning environment, teachers may have different ways of implementing it. These differences are based on their classroom management styles, which can determine how teachers establish their own rules in the class, respond to student behavior, create the learning environment, and approach instructional decisions. Based on Martin and Baldwin (1993), classroom management styles can be categorized into interventionist, interactionist, and non-interventionist approaches. The interventionist style is more controlling and focuses on managing student behavior through rules, rewards, and consequences. On the other hand, the non-interventionist style is less controlling and believes that students have an inner drive that should be allowed to develop with minimal teacher control. In between these two is the interactionist style, which focuses on shared responsibility between teacher and students, where both work together in shaping the classroom environment.

In this case, a teacher's management style may shape whether they would allow integration of technology such as artificial intelligence or restrict it.

Despite the growing use of artificial intelligence in education and the increasing number of studies on classroom management, there is still limited research that examines how classroom management styles are related to teachers' attitudes toward students' use of generative AI. This gap becomes important because teachers play a key role in deciding how AI is used inside the classroom, especially in subjects like Mathematics, where AI can directly influence how students solve problems and demonstrate understanding.

Thus, this study aimed to investigate the relationship between classroom management styles and attitudes toward students' use of generative artificial intelligence among secondary mathematics teachers in Marikina City.

**Background of the Study**

The main reason why this study was conducted is that there is little to no research about how classroom management styles influence teachers' attitudes toward their students' use of generative artificial intelligence such as ChatGPT, Microsoft Copilot, and Gemini. While there are many studies talking about classroom management and there are also many studies talking about the opportunities and challenges of AI, there seems to be no available study yet that directly connects these two variables. After searching through Google Scholar, which is one of the largest and most reliable databases for academic research, the researcher found no specific study that examines how teachers' classroom management styles may influence their attitudes toward students using generative AI. This made the researcher interested in exploring how the way teachers manage their class may also affect how they feel about students using generative AI tools for learning.

This gap becomes more important when we look at how artificial intelligence is already being recognized at the national and global levels. During the APEC 2025 Summit held in Busan, South Korea, President Ferdinand "Bongbong" Marcos Jr. emphasized that the Philippines needs to take advantage of AI and must learn to use it as quickly as possible. He even compared AI to an unstoppable wave, saying that even if we try to avoid it, we will still be affected, and those who do not learn how to adapt will be left behind (Domingo, 2025; Geducos, 2025). This shows that AI is not just a trend but something that will continue to shape the future, including education.

Now that we've seen how the national government recognizes the importance of Artificial Intelligence, let's take a closer look at where the Department of Education currently stands in terms of AI in education. Over the past year, there has been a clear movement toward integrating AI into the educational landscape. In October 2024, DepEd announced that it was developing a policy on the use of AI in schools, marking the beginning of formal discussions on how AI could be incorporated into the country's basic education framework (Marcelo, 2024). Then, in January 2025, DepEd publicly advocated for the responsible and ethical use of AI, calling it a tool for empowerment (Hernando-Malipot, 2025a).

Soon after, in February 2025, the Department launched its own AI Center, which is considered a milestone in advancing technology-driven education reforms (Hernando-Malipot, 2025b). By April 2025, this vision became official through DepEd Order No. 13, series of 2025, establishing the Education Center for Artificial Intelligence Research or ECAIR. This center was tasked to lead the agency's research and development on AI innovations.

In July 2025, it was also announced that the curriculum would be revised to include responsible AI use, which shows a stronger institutional commitment to integrating AI in education (Untalan, 2025). And most recently, in September 2025, DepEd reported significant progress in AI integration through several projects under ECAIR (Sevillano, 2025).

Among these projects are Project TALINO, a digital mapping system showing real-time school data; Project DUNONG, an automated testing system for school heads; Project SALIKSEEK, a generative AI tool that helps personnel access validated education data; Project SIGLA, an AI-based screening tool for detecting malnutrition; Project SABAY, which screens for dyslexia and speech disorders; and Project LIGTAS, a multi-hazard analytics platform for school resilience (Hernando-Malipot, 2025c). These are all impressive initiatives because they show how DepEd is actively integrating AI into its systems and operations.

However, if we look closely, most of these projects are focused on administrative functions and data systems. There is still limited evidence that these AI initiatives are directly used in classroom instruction or in the actual teaching and learning process. So it raises a very important question: Is AI in Philippine education currently being developed only for administrative use?

Despite these national developments and their relevance in the local context, such as that of Marikina City, the presence of a national guideline does not automatically resolve the challenges faced in actual classroom situations. Teachers are still left to interpret how these policies should be applied in their own classes, especially in terms of allowing or restricting students' use of AI in learning tasks. This means that even with the existence of guidelines, differences in teachers' decisions and attitudes may still exist.

Some teachers welcome it and see AI as an opportunity to improve learning, while others are more hesitant because of concerns about dependency, originality, and fairness in assessment. However, even if teachers try to restrict it, students can still access AI tools outside the classroom. This makes it difficult to fully control its use.

Because of this situation, it becomes important to understand how teachers form their attitudes toward students' use of AI. These attitudes can influence whether AI becomes a helpful learning tool or a source of conflict in the classroom.

Another reason is from the researcher's own experience as a mathematics teacher. The researcher has directly observed how teachers respond differently to the growing use of AI in schoolwork. Some teachers take a stricter stance and do not allow

students to use AI, while others are more open and flexible in letting students try it as part of their learning process. These differences may not only come from their personal beliefs about technology but also from their classroom management styles.

In any classroom, how a teacher responds to new tools or new behaviors is often connected to how they manage their class. Classroom management styles such as interventionist, interactionist, and non-interventionist approaches reflect whether a teacher is more controlling, more collaborative, or more permissive in handling classroom situations. These differences may influence how teachers respond to the use of generative AI.

Lastly, the study was also chosen because it is a timely and relevant topic that can give valuable insights that may improve educational practices. As generative AI becomes more common in classrooms, it is important to understand how teachers' management styles and their attitudes affect how this technology is used by students.

The findings in this paper are expected to contribute in several ways. It can provide information for professional development programs by identifying which groups of teachers would need greater support in learning and adapting to AI. This can also guide school leaders, policymakers, and curriculum developers in creating programs that balance classroom order with innovation in teaching mathematics in the modern world. In a broader sense, the findings may add to the growing body of research on AI in education by providing a local perspective that connects classroom management with technology integration.

## Classroom Management: Definitions and Styles

As defined earlier, classroom management is an important aspect of the teaching process, as it ensures that there is a smooth flow in the discussion despite the occurrence of disruptive behaviors from the students. While it serves as the foundation for effective teaching, teachers can have different approaches to the implementation of these management skills. Effective teacher-student relationships are shaped by the behavior of the teachers, which represents their classroom management rather than just their personality, whether they look strict or how friendly they appear. These behaviors, which define classroom management, include showing proper levels of dominance, cooperation, and attending to the needs of students who require more support (Marzano & Marzano, 2003). This means that what really builds a strong connection between teachers and students is not whether a teacher looks nice or approachable, but how the teacher acts and responds in different scenarios in class. When the teacher shows the right amount of control while still being understanding, it creates respect and trust that help learning happen smoothly. In a study, Putra and Yanto (2025) discovered that effective classroom management has a positive impact on student achievement in all sorts of situations, contexts, and education levels. This means that educators should prioritize skills that will make them better managers of their classrooms so that students can learn better as well.

Classroom management has been studied for decades as researchers seek to understand how teachers create effective learning environments. A key influence in this area is B. F. Skinner, whose theory of operant conditioning introduced the use of reinforcement to encourage desired behaviors. Grounded in B. F. Skinner's theory, positive reinforcement became a powerful classroom management tool that encourages students to repeat desired behaviors by recognizing and rewarding them (Youngstown State University, 2025). Over the years, researchers have built on these ideas and developed different models to understand how teachers manage their classrooms. One of the most well-known frameworks to explain teacher beliefs toward discipline was by Wolfgang and Glickman (1980). Their framework became the foundation of the Beliefs on Discipline Inventory (BDI). Based on psychological interpretations, the framework illustrates three approaches to classroom interaction, which are non-interventionists, interventionists, and interactionalists (Martin and Baldwin, 1993).

These three styles determine how much control a teacher thinks they should have over the classroom and how they view the role of their students in learning and discipline:

### *Interventionist Classroom Management Style*

Teachers who use the interventionist classroom management style believe that the way students learn and behave is mostly shaped by the external environment and that teachers play a major role in guiding and controlling it. This style is described by Martin and Baldwin (1993) as the one that gives more emphasis on what the teacher can do to shape the learners. According to Đigić and Stojiljković (2014), teachers with this style think that the students' growth and learning are their sole responsibility, so they tend to be strict and set control over the classroom. This is supported by Amalia (2025), who explained that interventionist teachers believe that learners' behaviors and outcomes are primarily shaped by the environment, prompting them to exert more control over classroom activities. Teachers using this style usually apply strict rules and structured behavior modification techniques to maintain order and discipline (Chambers and Hardy, 2005). This way, students will always follow clear routines but may have fewer chances to make independent decisions.

### *Non-Interventionist Classroom Management Style*

The non-interventionist style, on the other hand, is the opposite of the interventionist. Teachers who follow this approach believe that students have inner motivation and self-control, and so the teacher's role is mainly to support this natural process of growth (Đigić & Stojiljković, 2014). Martin and Baldwin (1993) explained that the non-interventionist view assumes that the child has an inner drive that will naturally express itself in the real world. This is also supported by Amalia (2025), who stated that non-interventionist teachers believe that students are naturally curious and eager to learn, which allows them to share their thoughts and ideas more freely in class. Because of this, non-interventionist teachers tend to give students more freedom and responsibility in the classroom. Chambers and Hardy (2005) described this style as the least directive and controlling, where

students are encouraged to manage themselves. However, if not balanced properly, the teacher might lead to challenges in maintaining order, especially in large classes.

### *Interactionist Classroom Management Style*

The interactionist style is considered a balanced approach between the two extremes. Teachers with this style believe that classroom behavior and learning are the result of both the student's internal motives and the teacher's influence (Martin and Baldwin, 1993). This is also supported by Amalia (2025), who explained that interactionist teachers fall between the two extremes, acknowledging that students influence their surroundings, while the learning environment can also shape students' behaviors and experiences. From the constructivist point of view, Đigić and Stojiljković (2014) said that this style focuses on shared responsibility between the teacher and students. Teachers and students should agree on rules and boundaries, although the teacher should still provide guidance and structure. Chambers and Hardy (2005) explained that the way issues are resolved, both teachers and students should negotiate and satisfy themselves. This way, the classroom becomes more collaborative and flexible, where both parties contribute to maintaining discipline and engagement.

Understanding the three classroom management styles helps in seeing how teachers differ in managing their classes and maintaining discipline among students. These styles do not only affect how lessons are effectively delivered but also shape the kind of relationships the teachers build with their students. Because of this, it becomes important to look deeper into how classroom management contributes to positive learning experiences and better student outcomes. According to Đigić and Stojiljković (2014), most teachers actually use all three styles at some point, but one usually becomes more dominant than the others. The way these styles appear in teaching can also depend on the teacher's personal beliefs, experience, and classroom context. In general, knowing a teacher's dominant classroom management style can give a clearer idea of how they approach control, discipline, and student participation in learning.

## The Role of Classroom Management

The way teachers manage their classrooms is reflected in how they build relationships with students and how orderly their classes become. A teacher's classroom management style can affect whether students will feel at ease, motivated, or scared. When teachers show care and fairness while setting clear expectations and boundaries, students are more likely to trust and cooperate with them. On the other hand, being too strict or too controlling can make students feel demotivated or less involved in learning. Parsonson (2012) defined effective classroom management strategies as those techniques that help prevent and reduce disruptive behaviors while supporting positive and appropriate student actions. This idea is supported by a study by He et al. (2024), who found that teachers' behavior management strategies have a strong connection with students' learning behavior and engagement. The study suggests that when teachers are able to apply the appropriate classroom management strategies, students become more

active and motivated to participate in class discussions. The findings highlight the necessity of improving teachers' classroom management skills in order to create an environment where both discipline and positive relationships can grow.

Several other studies have shown that effective classroom management has a big influence on how teachers make their instructional decisions and how students become more engaged and achieve academic excellence. Nisar, Khan, and Khan (2019) found that teachers who have strong classroom management skills usually have students with better academic performance. The findings revealed that when teachers are prepared, time is well-managed, and student behaviors are controlled properly, a learning environment that supports success is created. Also, in the study of Adedigba and Sulaiman (2020), they found that classroom management styles affect pupils' motivation and achievement. Thus, teachers are encouraged to use proper management strategies so that students stay motivated to learn. Larson et al. (2021) also showed that when teachers use positive behavior to support management of the classroom, students become more engaged and participate actively in class. Similarly, Mason (2025) found that the development of good classroom management programs like the Well Managed Schools (WMS) helps improve teacher-student relationships, which in turn will also enhance learning. Overall, these studies show that classroom management is more than just keeping students disciplined. It also plays an important role in making students learn better, more engaged, and successful in school.

Thus, it has been established that classroom management plays a very important role in shaping the overall learning experience of the students. It shapes how teachers connect with their students, keep them on track, and help them become more self-motivated and engaged in learning. The different management styles show that teachers use several ways to balance control and support, which can affect how well the students will behave and perform in class. When classroom management is handled effectively, it creates a positive and organized space where students can learn and grow.

**Generative Artificial Intelligence in Education**

Teachers today are facing many challenges in how students learn independently because of new technologies like artificial intelligence, or AI. Many students now use generative AI tools like ChatGPT, Gemini, or Copilot to help them with their lessons, which makes some teachers feel positive while others feel worried. Some think AI can help students learn faster and become more creative, while others believe it might make them too dependent or even use it for cheating. Because of this, teachers' attitudes toward students using AI is becoming a relevant topic to study, especially now that there are no clear and specific guidelines or policies about how AI can be integrated into basic education classrooms.

Before understanding teachers' attitudes, it is important to know first what artificial intelligence really is and how it is being used in education today. In recent years, many students have started using generative AI tools like ChatGPT to help them write, solve problems, and study better.

Artificial intelligence (AI) is becoming more common in education because it helps both teachers and students do various learning tasks more easily. It can check grammar, give feedback, solve problems, or even make quizzes and other materials that support learning. According to UNESCO (2020), AI systems are built from data, algorithms, and machines that allow computers to do things that are supposed to be done by the human brain, like problem-solving, communication, and creativity. In the field of education specifically, UNESCO also explained that AI plays a role in supporting the goals of the 2030 Agenda for Sustainable Development. For example, it would be helpful for teachers in rural areas with limited resources to track their students' progress and provide them with the tools that students need to learn better.

Around the world, the use of AI in schools continues to grow fast. Co (2025) mentioned that AI has changed the way teachers teach and students learn through smart tutoring programs, automated assessments, customized learning platforms, and easier school operations. These technologies make learning more personalized and convenient for both teachers and students. One of the most common kinds of AI now used in education is generative AI. This type of AI is easily accessible and can easily produce different content like essays, summaries, or explanations when a user gives a prompt. It would also make sure that outputs are different despite similarities in prompts. Tools such as ChatGPT, Microsoft Copilot, and Google Gemini are examples that many students use to write assignments, solve math problems, or review lessons.

In the Philippines, there is also growing attention on how generative AI will shape education in the coming years. Maghirang (2025) said that AI is starting to become a part of everyday life in the country, with mixed opinions from different sectors about its benefits and possible risks. Ocampo (2025) shared that the Department of Education (DepEd), under Secretary Sonny Angara, is taking steps to modernize the education system through projects like the Education Centre for Artificial Intelligence Research (ECAIR) and the nationwide digital connectivity program. These programs aim to make schools more prepared for future technologies while following international standards through an AI Governance Framework. In a statement, Undersecretary Fatima Panontongan (DepEd, 2025) reminded educators to use AI as a tool that helps people become better, not one that replaces human effort, stressing that students should learn to use it wisely and responsibly.

Overall, AI, especially generative AI, is already transforming education both globally and locally. Although it offers several advantages, it also challenges teachers to guide students in using these tools appropriately. This makes it important to understand how teachers view students' use of AI and how their own classroom management styles may influence those views.

**Benefits and Challenges of AI in Education**

Artificial intelligence (AI) brings many advantages to teaching and learning, but it also comes with challenges that the schools need to address. Studies from different countries have shown that AI can definitely improve how teachers teach and how students learn, but its use depends on whether teachers are actually trained, whether students and teachers have equal access, and whether teachers have a guiding principle in managing it in the classroom. According to Al-Shahrani, Albahiri, and Alhaj (2025), the biggest benefits of AI in education include its ability to provide adaptive learning experiences and to support teachers in formative assessment, which helps improve teaching effectiveness. However, they also found major challenges, such as the lack of AI experts, poor infrastructure, and the risk that AI systems may create a "one-size-fits-all" approach that limits creativity. This clearly shows that while AI can make learning more personalized, it still needs proper support and balance to make sure that it truly provides equal opportunities to both teachers and students.

In another study, Ibeh et al. (2025) explored how ChatGPT is used by students in exam-centered systems like Nigeria and India. The findings of the study mentioned that while many students appreciate ChatGPT for helping them with summaries, exam preparation, and other writing tasks, some students worry about depending on it too much, while some are getting inaccurate answers. These mixed views show that AI tools can be useful, but can also be damaging, as their reliability is most of the time unchecked. In addition, ethical use is still a bigger issue that both students and teachers must consider carefully. Similarly, Efe and Efe (2025) found that science educators recognize the potential of AI in improving engagement, assessment, and personalized learning, but they also face problems like a lack of training, privacy concerns, and limited access. The study suggested that schools need stronger and clearer policies on AI use, appropriate funding, and comprehensive teacher training to make AI integration more successful. This supports the idea that teachers' skills and attitudes play a big role in how effective AI use can be in classrooms.

In the Philippines, researchers have also started examining the benefits and difficulties of AI in education, although commonly in tertiary education. Albano et al. (2025) said that AI could transform Philippine education through features like automated grading, personalized learning, and smart tutoring. But they also pointed out several challenges, such as limited digital infrastructure, high internet costs, and cultural resistance to new technology. Giray et al. (2024) shared that Filipino teachers and administrators already use AI tools to make teaching and research easier, but they are also aware of its limits, such as a lack of personal connection, risks of cheating, and reduced creativity. It was agreed upon that there is a dire need for clear policies to ensure ethical use of AI tools. This reflects how teachers in the country are open to using AI but remain cautious about its negative effects on students' values.

When it comes to mathematics education, several local studies have shown both positive and challenging sides of using AI tools. Muktar (2025) found that senior high school students viewed AI tools as helpful and accessible for learning math, especially in improving motivation and problem-solving skills. However, they were not fully convinced of AI's effectiveness in developing a deeper understanding of mathematics concepts. This suggests that AI can be a good learning support but cannot fully replace direct teaching.

Medrano, Engi, and Yurango (2025) also discovered that ChatGPT helps boost students' confidence in solving math problems and enhances their engagement, showing that generative AI can improve how students feel about learning. Meanwhile, Infante, Corocoto, and Nobis (2025) noted that students appreciate AI's accessibility and personalized features but also warned about problems with reliability, over-reliance, and accuracy. They concluded that while AI can make learning more interactive and independent, schools must still promote critical thinking and academic honesty when using it.

Overall, these studies show that AI in education has great potential to improve teaching and learning, but it also brings many challenges that the teachers need to look into carefully. For teachers, especially those in Mathematics, it is important to find the balance between using AI tools to support learning and keeping students disciplined and motivated to think on their own. Understanding these benefits and challenges can help explain why teachers may have different attitudes toward students' use of generative AI, depending on their classroom management style.

**Teachers' Attitudes Toward Students' Use of Artificial Intelligence**

Since AI tools are now becoming more accessible among students, it is important to understand how teachers actually feel about students' use of these tools. Teachers' attitudes toward AI can shape how they guide their students, whether they will allow its use or discourage it inside the classroom.

Several studies have explored how teachers view the use of artificial intelligence in education. Generally, many teachers are becoming more and more open to the use of AI, but some still have their doubts and concerns. Their attitudes are shaped by their experiences, knowledge, and how they see the possible effects of using AI in teaching and learning. Some teachers believe AI can make their work easier and more effective, while others feel unsure or even worried about it. These mixed feelings show that teachers' attitudes toward AI are still developing as the technology continues to grow.

In the study by Derinalp and Halife (2025), it was found that male teachers and those who already had experience using AI showed more positive attitudes compared to those who were not familiar with it. However, many participants still had limited knowledge about the benefits of AI in education, and some were hesitant to include it in their teaching. This makes it clear that while teachers are already aware of what AI can do, not all of them are ready to apply it in real classroom situations. Likewise, Çayak (2024) discovered that teachers generally have a high positive attitude and a low negative attitude toward AI. This means that teachers are in favor of or supportive of AI, while they rarely feel skeptical about it. The study also found that those with higher AI literacy tend to show better attitudes, suggesting that knowledge and understanding can affect how teachers accept AI in education. This means that when teachers are properly trained with AI, their attitude towards it becomes positive.

Meanwhile, Mujahidah et al. (2025) found that teachers are especially interested in how AI can improve creativity, problem-solving, and teaching performance. The results

of the study show that teachers are excited to use AI if it makes their classes more engaging and effective. On the other hand, Aletras (2025) pointed out that some teachers are still doubtful about how well AI applications can help students with their schoolwork. Many are not yet ready to use it in teaching, and they do not believe that AI will replace human tutors or teachers. This means that while teachers can see the potential of AI, they still find it hard to trust or depend on it fully in the classroom. Another study by Bezjak (2024) emphasized that teachers also have strong ethical concerns about AI. More than half of the teachers in the study are worried about the risk of students' personal information being misused or exposed. Some also feared that AI could heighten surveillance and give too much control to several companies in schools. These concerns show that even though teachers acknowledge the good side of AI, they are still careful about the risks that may come with it.

Overall, these studies reveal that teachers' attitudes toward AI are shaped by their positive expectations and existing concerns. Many see AI as a helpful tool for improving teaching and learning, but some are still unsure how to use it properly or are afraid of its possible risks. This shows that teachers' acceptance of AI depends on how they view its value, how easy it is for them to use it, and what concerns they may have about it. To understand this better, it is important to look at the main factors that shape teachers' attitudes and influence whether they choose to accept or avoid the use of AI in education.

**Technology Acceptance Model (TAM) and its Extension**

The Technology Acceptance Model (TAM) developed by Davis, Bagozzi, and Warshaw (1989) is one of the most well-known theories that explains how people accept and use new technology. According to Iriani and Andjarwati (2020), the TAM is an information systems theory that focuses on how users accept and use technology. This agrees with what Nguyen et al. (2019) highlighted about TAM, that adopting new technology usually takes time and depends on factors such as perceived usefulness and perceived ease of use.

Furthermore, Marikyan and Papagiannidis (2025) explained that TAM suggests people's decision to use a technology depends on how useful they think it is and how easy it is for them to use it. This means that if teachers believe that a certain technology can help them perform their tasks better and it is not that hard to use, then they are more likely to adopt it in their classroom. Worthington and Burgess (2025) also mentioned that TAM was first created to understand how people accept computers. Later on, it was used to study the acceptance of other technologies such as telemedicine, digital tools for teachers, mobile apps, and e-learning platforms. This shows that TAM can also help explain how teachers accept the use of generative AI tools in the classroom.

The first main part of TAM is *perceived usefulness*, which refers to how much a person believes that a certain technology can improve the performance in accomplishing a task. In the context of this study, the teachers may view generative AI tools as useful to students if they believe that it can help students complete their learning tasks more efficiently or it can enhance creativity in their outputs. The second part is *perceived ease of use*, which refers to how simple and effortless the technology is to use. If the teachers

think that generative AI tools are easy to use or user-friendly even for students, then they may develop a more positive attitude toward their use in schoolwork. Lastly, the model was later expanded to include *perceived risk*, which refers to the possible negative outcomes or dangers that users think might happen when using the technology (Pavlou, 2003, as cited in Worthington & Burgess, 2025). For teachers, these risks may include fear of over-reliance by the students, academic dishonesty, or inaccurate content. As perceived risks become higher, teachers' acceptance of students' use of generative AI tools tends to decrease.

By using these three factors, TAM helps explain why some teachers are open about generative AI while others are still unsure or hesitant. It also provides a useful way to understand how classroom management style may influence how teachers view these aspects when it comes to students' use of generative AI in class.

For example, Iriani and Andjarwati (2020) applied TAM in the context of online shopping, which became rampant during the lockdowns and quarantines brought by the pandemic. Their study also included three main dimensions, which are perceived usefulness, perceived ease of use, and perceived risk. They used these to analyze how customers' attitudes influenced their decisions to shop online. This shows that people's attitude toward technology, either for business or personal use, can be described by how useful, easy, or risky they think the technology is. Even though this study is not in education, it provides a good foundation in understanding how attitudes are shaped when new tools, like generative AI, are introduced.

In education, TAM is also used to explore how teachers and students view new technologies. Again, in the study by Çayak (2024), the relationship between teachers' attitudes toward artificial intelligence and their AI literacy was examined. Using the original model of Davis, Bagozzi, and Warshaw (1989), which includes perceived usefulness, perceived ease of use, attitude toward using, and behavioral intention to use, the findings showed that teachers generally had high positive attitudes toward AI. This means that if the teachers are familiar with AI and capable of using it, then they are more open to adopting it into their classrooms.

A similar framework was also used by De Alday, Gatdula, and Macatangay (2024) in their Project TEACHnology, which aimed to improve indigenous education students' digital skills and literacy through various applications. Based on TAM, the project emphasized perceived ease of use and usefulness as the main factors for technology adoption. Their findings revealed that if the tools are easy to use and beneficial for the participants, then they will be more engaged and confident to integrate technology in their future teaching. This highlights how TAM can explain not only the participants' behavior toward technology but also how digital competence can empower teachers and learners in different educational contexts.

The study by Darayseh and Mersin (2025) further applied TAM in exploring STEM teachers' perceptions of using generative AI in their classes. The model focused on expected benefits and ease of use, but the researchers also mentioned that TAM continues to develop over time by adding external factors like social impact, anxiety, and

self-efficacy (Güner, 2020). This shows that while the model started simple with only two factors, it now considers more complex factors that affect teachers' preparedness to use AI. Teachers may not only think of how useful or easy AI is, but also how confident or pressured they feel about using it in class.

In another study, Balaskas, Tsiantos, Chatzifotiou, and Rigou (2025) extended the TAM by including perceived trust and perceived risk in investigating the determinants of ChatGPT adoption. Their study shows that even though usefulness and ease of use are still the main factors of whether technology can be adopted or not, people can also think about how safe or reliable a tool is before using it. This extension is important because, in generative AI applications like ChatGPT, issues of trust and data security often affect how people shape their attitudes.

Sallam et al. (2024) studied the factors influencing the attitudes and use of ChatGPT among university students. The results showed that their usage and perceptions were influenced by usefulness, ease of use, risk, and psycho-social factors. This means that the students who think that AI is useful and easy to use tend to have a more positive attitude. However, some still worry about risks and negative impacts. These findings are useful for this study because they reflect the same concerns that the teachers may have toward students' use of generative AI. In both cases, acceptance of AI greatly depends on balancing the benefits and the possible risks.

In the Philippines, a study by Bernardo, Canatoy, and Yurango (2023) aimed to investigate the influence of teachers' attitudes on technology integration in mathematics classes. To determine the level of attitudes of mathematics teachers, they used perceived usefulness, perceived ease of use, confidence, and self-efficacy as their main factors. In general, the study found that mathematics teachers hold positive attitudes toward technology. This significantly influences technology integration into their instructional practices. Key factors such as perceived usefulness, ease of use, and self-efficacy were strongly associated with actual technology use, supporting the relevance of the Technology Acceptance Model (Davis et al, 1989).

These studies show that the Technology Acceptance Model continues to be useful in explaining how people form their attitudes toward technology, including generative artificial intelligence. It is clear that when users see technology as useful and easy to use, they are more likely to have positive attitudes toward it, but when they feel uncertain or see more risks, they tend to resist it.

However, one question arises from the studies reviewed, since they focus on the actual use of the technology rather than participants who are merely observers: Would the Technology Acceptance Model (TAM) still be applicable if the participants are non-users?

This concern is addressed by other studies showing that TAM can be extended beyond direct users of technology. The model was originally based on the Theory of Reasoned Action (TRA), which explains that a person's behavior is shaped by their beliefs and attitudes (Ndebele and Mbodila, 2022). Since TAM focuses on perceptions of

usefulness and ease of use rather than actual experience, it can still apply to people who only observe or evaluate how technology is used. For example, teachers may not be the ones directly using a certain AI tool in class, but through their preconceived experiences and understanding, they can still form beliefs about how useful or easy that tool might be for their students. This supports the idea that perceptions can exist even without being the direct user of the technology (Ching and Jamaludin, 2025).

There are also studies that directly involve respondents who are not the actual users of the technology. For example, Shannaq (2024) investigated how instructors decide whether or not to allow students to use smartphones during lectures. By using TAM, the study looked at factors that affect teachers' acceptance and satisfaction with students' mobile technology use. This means that although the teachers themselves were not the ones who would be using the devices, their perceptions still influenced how technology was integrated in class. In another case, Kusumadewi, Lubis, Prastiyo, and Tamara (2021) used TAM to explore how parents accepted online learning applications used by their elementary school children during the pandemic. The parents were not the main users of these applications, but their acceptance and beliefs about the system were still studied using TAM. This shows that TAM can also capture the perspectives of people who guide or supervise technology use rather than directly using it.

In short, teachers in schools act as facilitators and mediators of technology. They are the ones who decide when, how, and whether students are allowed to use certain technological tools or not. Even though students are the end users of AI or other technological applications, teachers should be familiar with these tools themselves in order to form decisions and perceptions, shaping how they are adopted in the classroom, whether their use is allowed or not. It is similar to using educational games where students are the ones playing, but teachers choose to allow it and integrate it into their lessons. Because of this, teachers naturally develop attitudes toward students' use of technology, even if they are not the direct users themselves. This supports the idea that TAM can be meaningfully applied to teachers' perceptions of their students' technology use since teachers still evaluate usefulness, ease of use, and even potential risks based on their professional judgment and experience.

**Classroom Management Style and Attitudes Toward Technology**

Teachers' classroom management style can play a big role in how they accept or reject new tools and technologies in teaching. Those who are more open, flexible, and student-centered in managing their classrooms are usually more willing to try new innovations that could improve learning. For example, teachers who use a more interactionalist style often encourage participation and adapt easily to new strategies or tools. On the other hand, teachers who use stricter or more controlling management styles may find it harder to allow new technologies, like generative AI, because they worry it might reduce their control or cause distractions in class.

According to the study of Özgün and Saritepeci (2021), there was a significant relationship between classroom management profiles, teachers' perceptions of management competence, and their beliefs about technology use in lessons. They found

out that teachers who have negative beliefs about technology tend to have lower perceptions of their classroom management competence in technology-assisted courses. This means that the teachers' confidence and openness to allow the use of technology might be linked to how they manage their classroom. If teachers can see the effectiveness and manageability of technology, then they are more willing to integrate it into their teaching. But if they see it as disruptive, then they tend to avoid it.

In the study by Borova, Nuri, and Bağlama (2023), it was found that there is a positive connection between special education teachers' attitudes toward assistive technology and their classroom management skills. Teachers who had positive perceptions and beliefs about using assistive technologies were also better at managing classroom behavior and learning tasks. This means that being open to innovation might help teachers create a more efficient learning space, especially for students with special needs. And teachers who are confident in their management skills are not afraid to try new approaches that could help students learn better.

Another important insight comes from the research of Chacón-Prado (2023), who found that some teachers resist technology because of their misconceptions about its role in the classroom. Many teachers feared that integrating technology might weaken their control over the class or, worse, lose their authority as classroom managers. This fear caused them to adopt more traditional and teacher-centered methods because they view technology as a threat rather than a support. Some also believed that technology lets students rely too much on the tools, preventing them from fully understanding the lessons. This mindset might limit innovation in the classroom. Thus, it shows that the best way to encourage teachers to adopt new technology, like generative AI, is by managing fear and control.

Overall, these studies suggest that how teachers manage their classrooms can affect how open or resistant they are to new technologies. Teachers with flexible and student-centered management styles are usually more willing to explore technological tools like generative AI in the classroom, while those who value strict control may hesitate to use it because they fear losing classroom order. This makes classroom management a key factor in shaping teachers' attitudes toward adopting or allowing students' use of new technologies, including generative AI.

**Theory**

This study is guided by two main theories: the Classroom Management Theory and the Technology Acceptance Model (TAM). These theories help explain how teachers' management styles and their perceptions of technology influence their attitudes toward students' use of generative AI in the classroom.

The Classroom Management Theory provides the foundation for understanding how teachers maintain order, guide behavior, and create a learning environment where students can perform well. One of the earliest and most influential contributors to this is B.F. Skinner. Skinner was a well-known psychologist who introduced his own classroom management theory based on the principles of behavioral science, specifically operant

conditioning. His theory believes that student behavior can be shaped and controlled by external factors in the environment, such as reinforcements. According to Psychology Writing (2024), Skinner's approach combines different strategies to achieve positive learning results through behavior modification. He described two main approaches. The first one is the coercive approach that uses penalties and punishments to reduce unwanted behavior, and the second one is the positive approach that uses rewards to encourage and strengthen good behavior (Schlinger, 2021). Skinner's idea suggests that students' actions are influenced by reinforcement, and teachers play a big role in guiding and shaping those behaviors inside the classroom.

Building on this idea, Wolfgang and Glickman (1980) expanded the understanding of how teachers manage classrooms and conceptualized a framework that classifies teachers into three main styles, which are interventionist, interactionist, and non-interventionist. These styles reflect different beliefs about how much control teachers should have over their students and how discipline should be maintained. The *interventionist* style connects closely to Skinner's behavioral principles because it assumes that teachers must take control and use reinforcement to guide student behavior. In contrast, *non-interventionist* teachers believe that students have their own inner motivation and should enjoy their freedom to take responsibility for their own learning. The *interactionist* style, on the other hand, lies between these two extremes and suggests that both teacher and students share the responsibility for maintaining discipline and creating a positive learning environment.

This theory helps explain that teachers' beliefs and approaches in classroom management are not only about keeping order but also about how they see students' capacity for self-control and cooperation. In this study, it is assumed that a teacher's classroom management style may be related to how open or resistant they are to allowing students to use generative artificial intelligence as a learning tool. Teachers who practice a more flexible and interactive style may be more accepting, while those with more controlling or traditional views may feel hesitant toward it.

The Technology Acceptance Model (TAM) by Davis, Bagozzi, and Warshaw (1989) serves as the second theoretical foundation of this research. TAM became a foundational theory for explaining the adoption of technology in almost all fields because it explains how users decide to accept or reject new technology based on two main factors: perceived usefulness and perceived ease of use. Perceived usefulness refers to how much a person believes the technology can help them improve their performance, while perceived ease of use means how simple and effortless it is for the technology to operate. Perceived risk was later added as an important factor in the extended model because it represents the possible negative outcomes that people worry about when using technology (Pavlou, 2003, as cited in Worthington & Burgess, 2025).

Together, these two theories provide the foundation of the present study. The Classroom Management Theory explains the independent variable, which is the teacher's classroom management style, while the Technology Acceptance Model explains the dependent variable, which is the teachers' attitude toward students' use of AI. Combining them helps in understanding how classroom management behaviors and perceptions

toward technology work together to influence teachers' openness or resistance to educational innovations.

## Research Questions

This study aimed to investigate the relationship between classroom management styles and attitudes toward students' use of generative artificial intelligence (AI) among secondary mathematics teachers in Marikina City.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents with respect to:
    1.1. Age
    1.2. Sex
    1.3. Years of Teaching Experience
    1.4. Grade Level Taught
    1.5. Highest Educational Attainment
    1.6. Teaching Position
2. What characteristic features of interventionist, interactionist, and non-interventionist approaches are predominantly practiced by the mathematics teachers?
3. What is the level of teachers' attitudes toward students' use of generative AI in terms of:
    3.1. Perceived Usefulness
    3.2. Perceived Ease of Use
    3.3. Perceived Risk
4. Is there a significant difference in the level of teachers' attitudes toward students' use of generative AI when grouped according to profile?
5. Is there a significant relationship between the respondents' classroom management styles and their attitudes toward students' use of generative AI?
6. Based on the findings of the study, what program can be proposed?

## Hypotheses

$H_o1$: There is no significant difference in teachers' attitudes toward students' use of generative AI when grouped according to their profile.

$H_o2$: There is no significant relationship between teachers' classroom management styles and their attitudes toward students' use of generative AI.

## Scope and Delimitation

This study focused on examining the relationship between mathematics teachers' classroom management styles and their attitudes toward their students' use of generative artificial intelligence in learning. It specifically sought to determine how different classroom management styles may shape teachers' perceptions of the usefulness, ease of use, and risks associated with students using generative AI in their learning. The respondents of the study were fifty-nine (59) mathematics teachers selected using quota sampling from

selected public secondary schools in Marikina City during the school year 2025–2026. Specifically, the selected schools are Concepcion Integrated School – Secondary Level, Malanday National High School, Marikina High School, Nangka High School, Parang High School, Sta. Elena High School, and Sto. Niño National High School. These schools were chosen because they were categorized by the Department of Education as large to very large secondary schools with junior and senior high schools, which makes the group relatively homogeneous. This helped ensure that the teachers work in similar school settings and that the data come from comparable teaching environments, allowing for a more consistent and fair analysis.

The study also took into account the demographic characteristics of the respondents, including age, sex, years of teaching experience, grade level taught, highest educational attainment, and teaching position. These factors were analyzed only as control variables and not as the main focus of the research to check whether they have any possible influence on the relationship between the main variables. In correlational studies, control variables help enhance internal validity of a study. Meaning, they ensure that any observed relationship between the independent and dependent variables is not simply due to these background characteristics. They allow for a more accurate interpretation of results by minimizing the effect of other factors that might influence the findings (Bhandari, 2021).

The study was delimited to the attitudes of mathematics teachers only and did not include students, teachers from other disciplines, or those teaching at the elementary level. Likewise, private schools were excluded to maintain a consistent context within the public-school system. The scope of AI use was confined solely to generative tools, such as ChatGPT and Microsoft Copilot, and excluded non-generative or domain-specific applications like Photomath and Wolfram Alpha. Moreover, the study did not measure how effective these AI tools were on student learning or classroom outcomes but focused solely on teachers' perceptions of these tools being used by their students and how they are shaped by their management styles. It must also be noted that the findings relied on self-reported survey data, which may not fully capture classroom realities, and that the research is geographically limited to public secondary schools in Marikina City only where permission to conduct the study is secured. Thus, it may not be generalized to all teachers or schools in different contexts.

## METHODOLOGY

### Research Design

This study used a quantitative descriptive and correlational research design. The quantitative method was used because it collected numerical data through a survey questionnaire that was given to secondary mathematics teachers in Marikina City.

Descriptive research design, as explained by Creswell (cited by the Survey Point Team, 2023), aims to present the characteristics of a population or a specific phenomenon. It is mainly used to develop a clearer understanding of people or phenomena by collecting data through surveys, observations, interviews, or focus group

discussions. This type of research aims to address questions such as what, where, when, who, why, and how.

Correlational research, as explained by Putri, Rezani, and Hermina (2025), is used to identify and analyze the relationship between two or more variables without changing or controlling them. In this study, the correlational part examined if there was a significant relationship between the teachers classroom management styles and their attitudes toward students AI use. It also looked into the teachers' demographic characteristics, such as age, sex, years of teaching experience, grade level taught, highest educational attainment, and teaching position, which were related to both their classroom management styles and AI-related attitudes.

This design was considered suitable for the study because it did not manipulate any variable but only observed and analyzed how the variables were related to each other. By using this design, the study aimed to explain how classroom management and demographic factors influenced the teachers' attitudes toward students' use of generative AI, whether they were open or resistant.

**Locale of the Study**

The study was conducted in Marikina City, one of the highly urbanized cities in Metro Manila that is known worldwide as the Shoe Capital of the Philippines. Marikina is a multi-awarded city, often lauded for its vibrant business life, highly skilled workforce, and a responsive local government that puts a premium on governance, sustainable urban development, and public service (Marikina City, 2023). Marikina City has two districts. The first district comprises nine (9) barangays, namely: Barangka, Tañong, Jesus dela Peña, Industrial Valley Complex, Kalumpang, San Roque, Sta. Elena, Sto. Niño and Malanday. The second district comprises seven (7) barangays, namely Concepcion Uno, Concepcion Dos, Nangka, Parang, Marikina Heights, Fortune, and Tumana.

In the academe, Marikina is known for its strong programs for education and community involvement. The city prides itself on having a high-quality and well-managed local educational system with strong support for public schools, well-trained teachers, and innovative education programs that promote academic excellence and character development. Discipline has long been engraved as one of the city's core values that is reflected among Marikeño students. It is reflected in students' well-behaved and respectful conduct. Along with discipline, good taste and excellence are also valued and practiced by people of Marikina, shaping their character and way of life.

In pursuit of excellence, the city continues to advance through innovation and modernization. Efforts to promote digitalization and technology-driven education have been recognized and continue to gain momentum in recent years, reflecting the city's vision of a modern and future-ready community. Local initiatives, such as the city government's push for the digitalization of services, exemplify this vision (Rico, 2025). While the call of Marikina's first district representative for tech-enabled public schools

further highlights the city's commitment to embracing a more digitally literate society (Quismorio, 2025).

Building on this strong educational foundation, the present study was conducted in Marikina City, where eight public secondary schools with complete junior and senior high school programs across its two districts were selected as the research locale. These schools are Concepcion Integrated School – Secondary Level, Malanday National High School, Marikina High School, Nangka High School, Parang High School, Sta. Elena High School, and Sto. Niño National High School. They are large to very large schools, as categorized by the Department of Education, making sure that the diversity of Marikina's public education system was well-represented and provided a rich context for exploring teachers' perceptions and experiences with generative AI in mathematics instruction. This also made the group of schools more homogeneous and suitable for comparison. Having a homogeneous group is good because it reduces the differences that might come from very small or very large schools, so the results could focus more on the connection between classroom management style and teachers' attitudes toward students' use of generative AI.

**Respondents of the Study**

The respondents of the study were the fifty-nine (59) secondary mathematics teachers from eight public high schools in Marikina City, namely Concepcion Integrated School – Secondary Level, Malanday National High School, Marikina High School, Nangka High School, Parang High School, Sta. Elena High School, and Sto. Niño National High School.

The study used quota sampling to select the respondents. Quota sampling is a non-probability sampling method that relies on the non-random selection of a predetermined number of units (Nikolopoulou, 2022). It involves choosing a specific number or percentage of people or things. Selection of respondents was done by first dividing the population into mutually exclusive subgroups (called strata) and then recruiting sample units until the quota was reached. These units share specific characteristics, determined by the researcher prior to forming the strata.

In the context of this study, since the schools are categorized as large and very large, fifty percent (50%) of the mathematics teachers from each school were included to ensure that there is proportional or fair representation. The selection for the quota for each school was based on the official list of mathematics teachers obtained from the school office. All mathematics teachers were invited to participate, and those who gave their consent were included until the quota for their school was reached. This method helped the researcher make sure that every school was represented fairly while still keeping the participation voluntary. Only mathematics teachers were included since they have direct experience in classroom management and in guiding students who may use digital technologies such as AI.

In detail, a total of 118 mathematics teachers were identified from seven schools, from which 50% or 59 were selected as respondents. Sta. Elena High School had the

highest number with 26 teachers, contributing 13 respondents, followed by Marikina High School with 20 teachers and 10 respondents. Nangka High School contributed 9 respondents, Concepcion Integrated School – Secondary Level contributed 8, while Parang High School and Sto. Niño National High School contributed 7 respondents. Malanday National High School had the smallest number with 5 respondents. This distribution shows that the sample was proportionally drawn from each school, ensuring fair representation across the selected public secondary schools in Marikina City.

**Research Instrument**

The study used two research instruments to gather the needed data. The first instrument was the Inventory for Teachers' Self-Assessment in Classroom Management Styles (ITSCMS), developed by Dr. Gordana Đigić with Dr. Snežana Stojiljković (2014). The inventory had thirty items that measured three main classroom management styles, which were interventionist, interactionist, and non-interventionist. Each style had ten items, and the questions were grouped into three dimensions of classroom management, which were personality, teaching, and discipline. It used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The instrument was already tested for validity and reliability in previous studies, and it was used in this research to identify the classroom management style of the respondents.

The second instrument was adapted with modifications from several sources that measured respondents' attitudes toward artificial intelligence (AI), in order to reflect the specific context of this study. The primary adaptation was based on the work of Robinos et al. (2024), who developed a questionnaire assessing students' and teachers' attitudes toward AI integration and its perceived usefulness as users of AI technology. In contrast, the present study focuses on teachers' attitudes toward students' use of AI technology; thus, the items were modified to align with this perspective. Furthermore, the researcher-developed questionnaire was informed by constructs and ideas derived from previous studies, including Chai et al. (2021), which focused on primary education students, as well as Wang and Wang (2022), Stein et al. (2024), and Schepman and Rodway (2020), which examined attitudes toward AI among the general population. The questionnaire employed a five-point Likert scale and was designed to measure three dimensions, which were perceived usefulness, perceived ease of use, and perceived risk.

To ensure the validity of the second instrument, that is adapted but with modifications, content validation was conducted by a panel of three experts in educational technology and mathematics instruction. The experts reviewed the items for clarity, relevance, and alignment with the objectives of the study, providing feedback that guided minor revisions to improve wording and contextual appropriateness.

**Data Gathering Procedure**

The data gathering process of this study had two main phases, which were the preparation and planning phase, and the actual administration of the instruments.

During the preparation and planning phase, the researcher first wrote a formal letter to the Schools Division Superintendent of the Division of Marikina, to ask permission to conduct the study among selected public secondary schools in Marikina City. After the approval from the division superintendent was received, letters were then sent to the principals of the selected schools, which were Concepcion Integrated School – Secondary Level, Malanday National High School, Marikina High School, Nangka High School, Parang High School, Sta. Elena High School, and Sto. Niño National High School. The letters explained the purpose of the research and asked permission to allow the researcher to orient the mathematics teachers about the study and to distribute the survey instruments.

After getting permission, the researcher visited each school and explained the objectives and procedures of the study to the mathematics teachers. Ethical considerations were also discussed, including the voluntary nature of the study, the confidentiality of the responses, and the participants' right to withdraw at any given time. They were then assured that the information they had provided would be solely used for research and that their identities would remain anonymous.

Afterwards, the instrument was distributed together with a cover letter that stated the ethical guidelines previously discussed.

During the data gathering phase, the researcher personally administered and collected the questionnaires to ensure proper distribution and retrieval. Respondents were given enough time to answer all items carefully. After completion, the instruments were gathered and checked for completeness before being organized for data encoding and analysis.

**Statistical Treatment of Data**

The data gathered from the questionnaires were organized and analyzed using statistical methods that were suited to the research questions of the study.

*Research Question No. 1: What is the profile of the respondents with respect to age, sex, years of teaching experience, grade level taught, highest educational attainment, and teaching position?*

For the first part, which described the profile of the respondents, such as age, sex, years of teaching experience, grade level taught, educational attainment, and teaching position, these were analyzed using frequency counts and percentage distributions. These tools were used to summarize and describe the general characteristics of the mathematics teachers who participated in the study.

*Research Question No.2: Which classroom management style among the interventionist, interactionist, and non-interventionist approaches is predominantly practiced by the mathematics teachers?*

To determine the classroom management styles practiced by the teachers and their attitudes toward students' use of generative AI, the ITSCMS instrument assigns

scores for each style: interventionist, interactionist, and non-interventionist. By getting the weighted mean of the responses and computing the composite mean, the study determined which style is most commonly practiced among the sample.

*Research Question No. 3: What is the level of teachers' attitudes toward students' use of generative AI in terms of perceived usefulness, perceived ease of use, and perceived risk?*

To analyze the level of teachers' attitudes toward students' use of generative AI, focusing on three dimensions, weighted mean scores were computed for each dimension. Composite mean was also computed to describe the level of attitudes based on the verbal interpretation of the scale toward students' use of AI.

*Research Question No. 4: Is there a significant difference in the level of teachers' attitudes toward students' use of generative AI when grouped according to profile?*

For the analysis of the difference between the level of teachers' attitudes toward students' use of generative AI when grouped according to profile, inferential statistical tests were applied to determine if there were significant differences. Two statistical treatments were used. For demographic variables with two groups, such as sex and highest educational attainment, an independent samples t-test was used. Meanwhile, for variables with more than two groups, such as age, years of teaching experience, grade level taught, and teaching position, one-way analysis of variance (ANOVA) was used. When significant differences were found, post hoc analysis was conducted to determine which groups differed significantly.

*Research Question No. 5: Is there a significant relationship between the respondents' classroom management styles and their attitudes toward students' use of generative AI?*

Lastly, for the relationship between classroom management style and teachers' attitude toward students' use of AI, the Pearson Product-Moment Correlation Coefficient (r) was used to determine if there is a statistically significant relationship between these two variables, helping to see whether classroom management style is related to teachers' openness or resistance to AI in the classroom.

All statistical tests were computed at the 0.05 level of significance to determine whether to reject or fail to reject the null hypothesis.

**Ethical Consideration**

Before conducting the study, the researcher made sure that all ethical standards in research were followed. Permission to conduct the study was first obtained from the Schools Division Superintendent of Marikina City and from the principals of the participating schools. The respondents were informed about the purpose of the study and how the data would be used. Each participant received an informed consent form together with the questionnaire. The consent clearly stated that their participation was voluntary and that they could choose not to answer or withdraw at any given time. The identity of

all participants was kept anonymous to protect their privacy. No personal information that could identify a teacher was collected or recorded. The study did not expose the teacher-respondents to any form of physical, psychological, or social harm. All responses were treated with full confidentiality and were used only for this research study. The collected data were stored securely and not shared with anyone else outside of this study. After completing this research, the data were disposed of properly to ensure the privacy and protection of all participants. The researcher also respected the schools' policies and schedules during data gathering, making sure that the study did not interrupt regular teaching activities. Overall, every step of this research was done with honesty, respect, and concern for the rights and welfare of the participants.

## RESULTS

Table 1.1 presents the profile of the respondents in terms of their age.

**Table 1.1**
**Profile of the Respondents in Terms of Age**

| Age | Frequency | Percentage |
|---|---|---|
| 25-30 years old | 8 | 13.6 |
| 31-35 years old | 10 | 16.9 |
| 36-40 years old | 11 | 18.6 |
| 41-45 years old | 11 | 18.6 |
| 46-50 years old | 3 | 5.1 |
| 51-55 years old | 3 | 5.1 |
| Above 55 years old | 13 | 22.0 |
| **Total** | **59** | **100.0** |

Table 1.2 presents the profile of the respondents in terms of their sex.

**Table 1.2**
**Profile of the Respondents in Terms of Sex**

| Sex | Frequency | Percentage |
|---|---|---|
| Female | 42 | 71.2 |
| Male | 17 | 28.8 |
| **Total** | **59** | **100.0** |

Table 1.3 presents the profile of the respondents in terms of the years of their teaching experience.

**Table 1.3**
**Profile of the Respondents in Terms of Years of Teaching Experience**

| Teaching Experience | Frequency | Percentage |
|---|---|---|
| 0-3 years | 2 | 3.4 |
| 4-7 years | 8 | 13.6 |
| 8-10 years | 7 | 11.9 |

| | | |
|---|---|---|
| More than 10 years | 42 | 71.2 |
| **Total** | **59** | **100.0** |

Table 1.4 presents the profile of the respondents in terms of the grade level they are currently teaching.

**Table 1.4**
**Profile of the Respondents in Terms of Grade Level Taught**

| Grade Level Taught | Frequency | Percentage |
|---|---|---|
| Grade 7 | 15 | 25.4 |
| Grade 8 | 11 | 18.6 |
| Grade 9 | 15 | 25.4 |
| Grade 10 | 11 | 18.6 |
| Grade 11 | 7 | 11.9 |
| **Total** | **59** | **100.0** |

Table 1.5 presents the profile of the respondents in terms of their highest educational attainment.

**Table 1.5**
**Profile of the Respondents in Terms of Highest Educational Attainment**

| Educational Attainment | Frequency | Percentage |
|---|---|---|
| Bachelor's Degree | 42 | 71.2 |
| Master's Degree | 17 | 28.8 |
| **Total** | **59** | **100.0** |

Table 1.6 presents the profile of the respondents in terms of their teaching position based on the Department of Education’s classification.

**Table 1.6**
**Profile of the Respondents in Terms of Teaching Position**

| Teaching Position | Frequency | Percentage |
|---|---|---|
| Teacher I | 15 | 25.4 |
| Teacher II | 22 | 37.3 |
| Teacher III | 17 | 28.8 |
| Master Teacher I | 3 | 5.1 |
| Master Teacher II | 2 | 3.4 |
| **Total** | **59** | **100.0** |

Table 2.1 below presents the assessment of the classroom management style among the interventionist approach as perceived by the respondents. It shows the weighted mean (WM) and corresponding verbal interpretation (VI) for each of the ten items under this dimension. The results provide an overview of how teachers respond to

interventionist practices in managing classroom behavior, as well as the overall tendency based on the computed composite mean.

**Table 2.1**
**Assessment of the Classroom Management Style Among the Interventionists**

| Description | WM | VI |
|---|---|---|
| 1. *A1: When a student laughs loudly or starts crying during class, I feel irritated because it disrupts the lesson, and I address the behavior by scolding him/her.* | 2.37 | D |
| 2. *A2: I tend to reward student achievement with good grades and respond to poor performance with low grades or criticism.* | 3.56 | A |
| 3. *A3: I try to activate students in class by calling on them.* | 4.34 | SA |
| 4. *A4: I get angry when a student disturbs class or harasses other students; I immediately demand him/her to stop such behavior, or I'll have to punish him/her.* | 3.17 | N |
| 5. *A5: If a student does not work during the class, I require him/her to stay during the break to complete the task, give more extensive homework, or give a low mark.* | 2.95 | N |
| 6. *A6: When I notice inappropriate or disrespectful behavior, I always reprimand the students for that.* | 3.86 | A |
| 7. *A7: During the classes, students are expected to remain quiet and listen to me in order to learn.* | 3.78 | A |
| 8. *A8: When students are restless during the class, I interrupt the lesson explicitly requiring them to behave normally.* | 3.78 | A |
| 9. *A9: In order to ensure that students will work sitting at their desks, I closely monitor them and guide their behavior.* | 4.31 | SA |
| 10. *A10: I require students to do exactly what I tell them because I know that this is the only way they could learn the material.* | 3.27 | N |
| **Composite Mean** | **3.54** | **A** |

*Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-.4.20) - Agree (A), 3(2.61-3.40) - Neither Agree nor Disagree (N), 2(1.81-2.60) - Disagree (D), 1(1.00-1.80) - Strongly Disagree (SD)*

The next data presented in Table 2.2 is the assessment of the classroom management style among the interactionist approach as perceived by the respondents. It displays the weighted mean (WM) and corresponding verbal interpretation (VI) for each of the ten items under this dimension. The results provide an overview of how teachers balance guidance and student participation in managing classroom behavior, as well as the overall tendency based on the computed composite mean.

**Table 2.2**
**Assessment of the Classroom Management Style Among the Interactionist**

| Description | WM | VI |
|---|---|---|
| 1. *B1: Students learn best when I allow them to freely express their opinions, ideas, and suggestions during class activities.* | 4.59 | SA |
| 2. *B2: I use a variety of teaching strategies to encourage active participation from all students during the lesson.* | 4.49 | SA |
| 3. *B3: While students work on their places, I stand in the place from which I have a view of the whole classroom and access to the students who seek help.* | 4.44 | SA |
| 4. *B4: Students should know that their success is my success as well and that they have the right to make a mistake, because they can be corrected with my guidance.* | 4.47 | SA |
| 5. *B5: It is important for students to understand the relevance of what they are learning so they can be free to choose the way in which they would like to learn.* | 4.46 | SA |
| 6. *B6: It is important to me to consider my students' feelings and needs in the teaching-learning process.* | 4.56 | SA |
| 7. *B7: If a student disturbs the class or other students, I remind him/her on the classroom rules that all of us in the class are trying to respect.* | 4.46 | SA |
| 8. *B8: When one of the students does not work during the class, I approach him/her, check the situation, and provide assistance to help him/her engage in the task.* | 4.37 | SA |
| 9. *B9: A positive learning environment is important to me, so when I perceive an undisciplined student, I want to solve the problem together with him/her in order to proceed with further work.* | 4.34 | SA |
| 10. *B10: In order to maintain discipline in class, I remind students of the classroom rules that were established with their participation.* | 4.46 | SA |
| **Composite Mean** | **4.46** | **SA** |

*Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-.4.20) - Agree (A), 3(2.61-3.40) - Neither Agree nor Disagree (N), 2(1.81-2.60) - Disagree (D), 1(1.00-1.80) - Strongly Disagree (SD)*

The next data presented in Table 2.3 shows the assessment of the classroom management style among the non-interventionist approach as perceived by the respondents. It shows the weighted mean (WM) and corresponding verbal interpretation (VI) for each of the ten items under this dimension. The results provide an overview of how teachers allow student autonomy and self-regulation in managing classroom behavior, as well as the overall tendency based on the computed composite mean.

**Table 2.3**
**Assessment of the Classroom Management Style Among the Non-Interventionist**

| Description | WM | VI |
|---|---|---|
| 1. *C1: While students are working at their desks, I attend to other tasks at my own desk.* | 2.31 | D |
| 2. *C2: Referring to classroom rules does not significantly help in managing students' behavior.* | 2.08 | D |
| 3. *C3: When I assign the task to students for work in the classroom, I believe students should complete them independently without assistance or supervision.* | 3.07 | N |
| 4. *C4: My role is mainly to assess students, not to explain them my views regarding their efforts.* | 2.51 | D |
| 5. *C5: It is not my responsibility to shape students' behavior during class.* | 1.97 | D |
| 6. *C6: During class, my attention is focused on teaching the appropriate lesson, and it is only up to the students whether or not they will participate in group work.* | 2.56 | N |
| 7. *C7: I do not react to inappropriate behavior of some students, but occasionally point out that each student is responsible for his/her own behavior and learning.* | 2.98 | N |
| 8. *C8: I believe students should determine for themselves how relevant the lesson is to them.* | 3.86 | A |
| 9. *C9: It's not my job to deal with the feelings and needs of the students.* | 2.12 | D |
| 10. *C10: While teaching a lesson, I do not pay much attention to students' reactions.* | 1.98 | D |
| **Composite Mean** | **2.54** | **D** |

*Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-.4.20) - Agree (A), 3(2.61-3.40) - Neither Agree nor Disagree (N), 2(1.81-2.60) - Disagree (D), 1(1.00-1.80) - Strongly Disagree (SD)*

Table 3.1 presents the level of teachers' attitudes toward students' use of generative artificial intelligence in terms of perceived usefulness. It shows the weighted mean (WM) and corresponding verbal interpretation (VI) for each of the six items under this dimension. The results provide an overview of how teachers perceive the usefulness of AI tools in supporting students' learning, as well as the overall tendency based on the computed composite mean.

**Table 3.1**
**Teachers' Attitudes Towards Students' Use of GenAI in Terms of Perceived Usefulness**

| Perceived Usefulness | WM | VI |
|---|---|---|
| 1. *PU1: I feel that Generative AI (e.g., ChatGPT, Gemini, or Copilot) is a practical way to help students reach their math learning targets more effectively.* | 3.32 | N |
| 2. *PU2: Integrating AI into math lessons gives students a better framework for building comprehensive action plans when they are trying to solve problems.* | 3.46 | A |
| 3. *PU3: I believe that using AI tools allows me to better capitalize on the individual strengths of my students, especially during more complicated math tasks.* | 3.46 | A |
| 4. *PU4: Using AI helps students adapt to changing learning situations in my classroom.* | 3.39 | N |
| 5. *PU5: I see AI as a helpful way for students to make corrections to their own system of thinking, allowing them to identify and correct their misconceptions in math lessons.* | 3.63 | A |
| 6. *PU6: Overall, I am convinced that using Generative AI significantly raises the standard and quality of math learning in my classroom.* | 3.37 | N |
| **Composite Mean** | **3.44** | **A** |

*Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-.4.20) - Agree (A), 3(2.61-3.40) - Neither Agree nor Disagree (N), 2(1.81-2.60) - Disagree (D), 1(1.00-1.80) - Strongly Disagree (SD)*

Table 3.2 presents the level of teachers' attitudes toward students' use of generative artificial intelligence in terms of perceived ease of use. It shows the weighted mean (WM) and corresponding verbal interpretation (VI) for each of the six items under this dimension. The results provide an overview of how teachers perceive the ease with which students can use AI tools in learning mathematics, as well as the overall tendency based on the computed composite mean.

**Table 3.2**
**Teachers' Attitudes Towards Students' Use of GenAI in Terms of Perceived Ease of Use**

| Perceived Ease of Use | WM | VI |
|---|---|---|
| 7. *PEU1: I feel that students can easily navigate and use AI tools during math lessons without constant guidance.* | 3.37 | N |
| 8. *PEU2: I believe that using AI in the classroom is simple enough that students can manage it independently.* | 3.37 | N |
| 9. *PEU3: I am confident that AI tools are intuitive, user-friendly, and can be used by students without requiring complicated instructions or extensive supervision.* | 3.54 | A |

| | | |
|---|---|---|
| *10. PEU4: I feel that integrating AI into class activities does not create unnecessary difficulties for my students.* | 3.15 | N |
| *11. PEU5: I believe that students can quickly learn how to use AI tools effectively to solve math problems.* | 3.44 | A |
| *12. PEU6: I am confident that AI tools function in a consistent way that makes them easy for students to use regularly.* | 3.29 | N |
| **Composite Mean** | **3.36** | **N** |

*Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-.4.20) - Agree (A), 3(2.61-3.40) - Neither Agree nor Disagree (N), 2(1.81-2.60) - Disagree (D), 1(1.00-1.80) - Strongly Disagree (SD)*

Table 3.3 presents the level of teachers' attitudes toward students' use of generative artificial intelligence in terms of perceived risk. It shows the weighted mean (WM) and corresponding verbal interpretation (VI) for each of the six items under this dimension. The results provide an overview of how teachers perceive the potential risks and challenges associated with students' use of AI tools in learning mathematics, as well as the overall tendency based on the computed composite mean.

**Table 3.3**
**Teachers' Attitudes Towards Students' Use of GenAI in Terms of Perceived Risk**

| Perceived Risk | WM | VI |
|---|---|---|
| *13. PR1: I am concerned that using AI might lead students to become overly dependent on AI where they just look for a single, computer-made answer instead of exploring unusual ways to solve a problem.* | 4.29 | SA |
| *14. PR2: I worry that students will use AI as a shortcut to avoid the effort of thinking through the math and reflecting on how they got their answer.* | 4.34 | SA |
| *15. PR3: I am concerned that allowing students to use AI in the classroom may lead to situations where they submit AI-generated work as their own.* | 4.36 | SA |
| *16. PR4: I am afraid that the availability of AI tools may increase the likelihood of students engaging in academic dishonesty.* | 4.32 | SA |
| *17. PR5: I am worried that AI-generated responses may sometimes contain incorrect or misleading information.* | 4.29 | SA |
| *18. PR6: I am concerned that if students rely too much on AI, they may accept AI-generated answers without verifying whether the information is accurate.* | 4.41 | SA |
| **Composite Mean** | **4.33** | **SA** |

*Legend: 5(4.21-5.00) - Strongly Agree (SA), 4(3.41-.4.20) - Agree (A), 3(2.61-3.40) - Neither Agree nor Disagree (N), 2(1.81-2.60) - Disagree (D), 1(1.00-1.80) - Strongly Disagree (SD)*

Table 4.1 presents the difference in the level of teachers' attitudes toward students' use of generative artificial intelligence when grouped according to selected demographic

profile variables. It shows the mean scores with corresponding verbal interpretations, as well as the computed test values, p-values, decisions, and interpretations for each profile category. The table provides an overview of whether significant differences exist in teachers' attitudes when classified according to age, gender, years of teaching experience, grade level taught, highest educational attainment, and teaching position.

**Table 4.1**
**Difference in the Level of Teachers' Attitudes Towards Students' Use of Generative AI When Grouped According to Profile**

| Profile | Mean/VI | Computed Value | p-value | Decision | Interpretation |
|---|---|---|---|---|---|
| **Age** | | | | | |
| 25-30 years old | 3.64 (A) | Computed ANOVA Value = 2.133 | 0.065 | Do not Reject the Hypothesis | Not Significant |
| 31-35 years old | 3.98 (A) | | | | |
| 36-40 years old | 3.79 (A) | | | | |
| 41-45 years old | 3.34 (N) | | | | |
| 46-50 years old | 4.28 (SA) | | | | |
| 51-55 years old | 3.41 (A) | | | | |
| Above 55 years old | 3.73 (A) | | | | |
| **Sex** | | | | | |
| Female | 3.68 (A) | Computed T-Test Value = 0.928 | 0.357 | Do not Reject the Hypothesis | Not Significant |
| Male | 3.3.82 (A) | | | | |
| **Teaching Experience** | | | | | |
| 0-3 years | 4.97(SA) | Computed ANOVA Value = 4.328 | 0.008 | Reject the Hypothesis | Significant |
| 4-7 years | 3.58 (A) | | | | |
| 8-10 years | 3.80 (A) | | | | |
| More than 10 years | 3.66 (A) | | | | |
| **Grade Level Taught** | | | | | |
| Grade 7 | 3.79 (A) | Computed ANOVA Value = 2.081 | 0.096 | Do not Reject the Hypothesis | Not Significant |
| Grade 8 | 3.76 (A) | | | | |
| Grade 9 | 3.45 (A) | | | | |
| Grade 10 | 3.64 (A) | | | | |
| Grade 11 | 4.13 (A) | | | | |
| **Educational Attainment** | | | | | |
| Bachelor's Degree | 3.73 (A) | Computed T-Test Value = 0.537 | 0.593 | Do not Reject the Hypothesis | Not Significant |
| Master's Degree | 3.64 (A) | | | | |
| **Teaching Position** | | | | | |
| Teacher I | 3.93 (A) | Computed ANOVA | 0.350 | | |
| Teacher II | 3.60 (A) | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Teacher III | 3.65 (A) | Value = 1.135 | | Do not Reject the Hypothesis | Not Significant |
| Master Teacher I | 3.52 (A) | | | | |
| Master Teacher II | 4.09 (A) | | | | |

*Note: p-value ≤ 0.05 – significant, p-value > 0.05 – not significant*

Following the results presented in Table 4.1, table 4.2 presents the post hoc analysis on the level of teachers' attitudes toward students' use of generative artificial intelligence when grouped according to teaching experience. It shows the pairwise comparisons between groups, including the mean differences, corresponding p-values, and interpretations, in order to identify which specific groups differ significantly from one another.

**Table 4.2**
**Post Hoc Analysis on the Level of Teachers' Attitudes Towards Students' Use of Generative AI When Grouped According to Teaching Experience**

| Profile-Teaching Experience | Mean Difference | p-value | Interpretation |
|---|---|---|---|
| 0-3 years vs 4-7 years | 1.386 | 0.014 | Significant |
| 0-3 years vs 8-10 years | 1.174 | 0.055 | Not Significant |
| 0-3 years vs more than 10 years | 1.309 | 0.011 | Significant |
| 4-7 years vs 8-10 years | -0.212 | 0.889 | Not Significant |
| 4-7 years vs more than 10 years | -0.077 | 0.985 | Not Significant |
| 8-10 years vs more than 10 years | 0.134 | 0.938 | Not Significant |

*Note: p-value ≤ 0.05 – significant, p-value > 0.05 – not significant*

Table 5 presents the relationship between the respondents' classroom management styles and their attitudes toward students' use of generative artificial intelligence. It shows the computed Pearson Product-Moment Correlation Coefficient (r), along with its corresponding description, p-value, decision, and interpretation. The table provides an overview of whether a significant relationship exists between teachers' classroom management styles and their attitudes toward the use of AI in the learning process.

**Table 5**
**Relationship Between the Respondent's Classroom Management Styles and Their Attitudes Towards' Students' Use of Generative AI**

| Variable | Computed Pearson r Value | Description | p-value | Decision | Interpretation |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Management Styles vs Attitudes Towards' Students' Use of Generative AI | 0.439 | Moderate Correlation | 0.027 | Reject the Hypothesis | Significant |

*Note: p-value ≤ 0.05 – significant, p-value > 0.05 – not significant*

## DISCUSSION

### Answering Research Questions

*Research Question No. 1: What is the profile of the respondents with respect to:*

*1.1. Age*

As shown in Table 1.1, the largest proportion of the respondents falls under the age group above 55 years old, with 13 or 22.0% of the respondents, followed by the groups aged 36 – 40 years old and 41 – 45 years old, with both 11 or 18.6% each. Meanwhile, the least represented among the groups are those aged 46 – 50 years old and 51 – 55 years old, with only 3 or 5.1% of the mathematics teacher-respondents.

This distribution indicates that a considerable number of respondents are in the later stages of their professional careers, suggesting a mature teaching workforce with potentially extensive experience and established teaching practices.

*1.2. Sex*

Based on the data, out of 59 mathematics teachers, 42 or 71.2% are female, while only 17 or 28.8% are male. This is an indication that there is a predominantly female respondent base, which is consistent with the general demographic of the teaching force in Marikina City's public secondary schools. Even though sex is considered a control variable in this study, the fact that a high representation of female educators is involved, this ensures that the findings on classroom management and AI attitudes are largely informed by their experiences and perspectives.

*1.3. Years of Teaching Experience*

The data shows that a vast majority of the mathematics teachers, totaling 42 or 71.2%, have been in the profession for more than 10 years. This is followed by those with 4 - 7 years of experience with a huge gap (8 or 13.6%) and 8 - 10 years (7 or 11.9%). Only a small fraction (2 or 3.4%) are novice teachers with 0 - 3 years of experience. These findings indicate that the sample of respondents is

composed of highly experienced mathematics teachers. In the context of this study, this high level of experience is an important factor because it would suggest that the attitudes toward generative artificial intelligence that were gathered from the sample are grounded in teachers with long-standing classroom management practices and deep familiarity with the curriculum in high school mathematics.

*1.4. Grade Level Taught*

The data reveals that the highest number of participants are teachers teaching Grades 7 and 9, each with 15 respondents or 25.4% of the total sample. These are followed by teachers from Grades 8 and 10, both with 11 respondents or 18.6% each. The smallest group consists of Grade 11 teachers, with only 7 respondents or 11.9%.

This distribution indicates that the study's findings are primarily drawn from Junior High School mathematics teachers. In the context of the research, this is significant as the complexity of mathematics topics and the maturity of students vary across these levels, which may influence how teachers manage their classrooms and perceive the utility or risks of generative artificial intelligence tools like ChatGPT and Microsoft Copilot in their specific curricula. On the other hand, no respondents were recorded for Grade 12 since there is no mathematics subject offered at that level in the current curriculum.

*1.5. Highest Educational Attainment*

The data shows that out of 59 mathematics teachers, 42 or 71.2% have attained a Bachelor's Degree, while 17 or 28.8% have completed a Master's Degree. This suggests that while most teachers meet the minimum qualification for teaching, a significant portion have pursued advanced academic training. In the context of this study, this distribution is noteworthy as educational background often shapes an educator's classroom management philosophy and their openness to emerging technologies. The mix of perspectives gathered in this study ensures that the findings regarding attitudes toward generative artificial intelligence reflect a range of skills and knowledge from the professional expertise and academic competence of the teachers within the public school system of Marikina City, even though no respondents indicated a doctoral degree.

*1.6. Teaching Position*

Based on the table, it was revealed that the majority of the participants hold the rank of Teacher II with 22 or 37.3% and Teacher III with 17 or 28.8% of the sample respondents, indicating that the respondent base is largely composed of mid-level career professionals. This is followed by Teacher I respondents with 15 or 25.4%, while a combined 5 teachers or 8.5% 5 hold the position of Master Teacher I and II. These findings suggest a well-distributed range of professional ranks within the mathematics departments. In this study, this diversity is really important because teaching positions or roles often show how much experience

and professional training an educator has, which are both key factors in shaping classroom management styles and determining how teachers perceive the integration of generative artificial intelligence in student learning environments.

*Research Question No. 2: What characteristic features of interventionist, interactionist, and non-interventionist approaches are predominantly practiced by the mathematics teachers?*

In terms of interventionist approach, as revealed in Table 2.1, a Composite Mean of 3.54, which corresponds to a verbal interpretation of “Agree,” suggests that the respondents generally lean toward a high-control management style. Notably, the teachers expressed the strongest agreement with items A3 (WM = 4.34) and A9 (WM = 4.31), both interpreted as “Strongly Agree.” Item A3, which involves *“activating students by calling on them during class,”* indicates that the teachers actively engage learners while maintaining control of classroom participation. Similarly, item A9, which refers to *“closely monitoring students and guiding their behavior to ensure they remain on task,”* reflects how teachers have a strong tendency toward supervising and regulating their classes. Conversely, item A1 received the lowest mean of 2.37, indicating a disagreement with that specific interventionist practice, which is *“scolding a student who laughs loudly or starts crying during class because of disruption.”*

Overall, the findings indicate that mathematics teachers in Marikina City's public secondary schools predominantly adopt a structured and teacher-led environment, characterized more by active guidance and monitoring rather than strict disciplinary reactions. In relation to the study's focus on generative artificial intelligence, this interventionist tendency suggests that these teachers likely prefer maintaining oversight and direct regulation of students' use of AI tools during the instructional process to ensure academic order and discipline. This finding supports the interventionist perspective described by Đigić and Stojiljković (2014), which emphasizes that one of the main roles of teachers is to shape student behavior through control and guidance. Similarly, Martin and Baldwin (1993) explained that interventionist teachers focus on external factors in influencing learners. This is further supported by Amalia (2025), who stated that interventionist teachers view that students do well if it is positively influenced by their surroundings, so they try to have more control over what happens in the classroom. This explains why the respondents in this study demonstrate a tendency toward structured monitoring and active regulation of student behavior.

As for interactionist approach, the data reveals a Composite Mean of 4.46, which falls under the verbal interpretation of “Strongly Agree.” This indicates a very high level of endorsement for a shared-control management philosophy. Notably, all ten items (B1-B10) received 'Strongly Agree' ratings, with item B1 garnering the highest weighted mean of 4.59. Item B1 emphasizes *“allowing students to freely express their opinions, ideas, and suggestions during class activities,”* reflecting a strong preference for student participation and open communication in the classroom. With this finding, it seems like most mathematics teachers in Marikina City’s public secondary schools view themselves as facilitators who share the responsibility for classroom dynamics with their students. Given the study's focus on generative artificial intelligence, these findings suggest that

teachers are likely to adopt a collaborative stance when students use AI tools, favoring mutual understanding and negotiated rules over strict, teacher-centered control.

This finding strongly supports the interactionist classroom management style described by Martin and Baldwin (1993), which emphasizes shared responsibility between teachers and students. Đigić and Stojiljković (2014) further explained that this approach reflects a constructivist perspective where both teacher guidance and student participation are important. This is also supported by Amalia (2025), who explained that interactionist teachers fall between the two extremes, acknowledging that students influence their surroundings, while the learning environment can also shape students' behaviors and experiences. The result is also consistent with Chambers and Hardy (2005), who highlighted that classroom issues are best resolved through negotiation and collaboration.

Lastly, in terms of non-interventionist approach, the data reveals a Composite Mean of 2.54, which corresponds to a verbal interpretation of “Disagree.” This finding indicates that the mathematics teachers generally do not subscribe to a management philosophy characterized by low teacher control and high student autonomy. Specifically, seven out of the ten items were rated as 'Disagree,' with items C5 (WM = 1.97) and C10 (WM = 1.98) garnering the lowest scores. Item C5, which suggests that *“shaping students’ behavior is not the teacher’s responsibility,”* and item C10, which reflects a *“lack of attention to students’ reactions during lessons,”* both received low ratings, indicating that teachers strongly reject these passive approaches. Conversely, item C8 (WM = 3.86), which refers to *“allowing students to determine the relevance of the lesson for themselves,”* was the only practice with which teachers agreed, suggesting that some level of student independence is still acknowledged. In the context of this research, the overall disagreement with the non-interventionist approach suggests that these educators believe in maintaining active oversight of the classroom environment. This suggests that their views on generative AI are quite important because it seems that they are probably not keen on letting students use AI tools without any supervision, and they’d rather see a more organized and teacher-facilitated approach to learning.

This disagreement with the non-interventionist approach supports the explanation of Đigić and Stojiljković (2014), who emphasized that this style is heavily reliant on student self-control while teacher intervention is only minimal. While Martin and Baldwin (1993) described this approach as promoting student independence, Chambers and Hardy (2005) warned that it maintaining classroom order can become challenging, which may explain why teachers in this study did not favor it. This is also supported by Amalia (2025), who stated that non-interventionist teachers assume that the learners are intrinsically driven to learn on their own and express themselves, which further explains why this approach is usually not preferred by teachers who value an organized classroom environment.

*Research Question No. 3: What is the level of teachers’ attitudes toward students’ use of generative AI in terms of:*

*3.1. Perceived Usefulness*

The data reveals a Composite Mean of 3.44, which falls under the verbal interpretation of “Agree.” This indicates that the respondents generally recognize the potential of AI tools to improve student performance and efficiency in completing mathematical tasks. Specifically, item PU5 garnered the highest weighted mean of 3.63, which highlights *“teachers’ recognition of AI as a tool that helps students reflect on and correct their own misconceptions in mathematics.”* This is followed by items PU2 and PU3, both at 3.46, all interpreted as “Agree,” which emphasize *“the role of AI in supporting problem-solving processes and allowing teachers to address individual student strengths during complex tasks.”* However, a significant portion of the assessment remains neutral, with items PU1, PU4, and PU6 receiving ratings of “Neither Agree nor Disagree.” These items relate to the overall effectiveness of AI in *“achieving learning targets, helping students adapt to different learning situations, and improving the overall quality of mathematics learning.”* This suggests that while teachers acknowledge the creative and productive advantages of AI, they maintain a degree of uncertainty regarding its overall impact on student learning.

In the context of the study, these findings imply that the participants have a moderately positive attitude toward the utility of AI, seeing it as a beneficial resource rather than a purely disruptive force, provided it is used to enhance rather than replace academic effort. This finding supports the Technology Acceptance Model (Davis et al., 1989), which states that perceived usefulness influences users’ acceptance of technology. Similarly, Bernardo, Canatoy, and Yurango (2023) found that mathematics teachers’ positive perceptions of usefulness significantly influence technology integration. The results are also consistent with Sallam et al. (2024), who reported that users tend to develop positive attitudes when they perceive AI as beneficial.

### *3.2. Perceived Ease of Use*

The data shows a Composite Mean of 3.36, which corresponds to a verbal interpretation of “Neither Agree nor Disagree.” This indicates that the respondents maintain a neutral or undecided stance regarding how effortless and user-friendly these AI tools are for students. While items PEU3 and PEU5 received “Agree” ratings with weighted means of 3.54 and 3.44, respectively, which highlights teachers’ confidence that *“AI tools are user-friendly, intuitive, and can be learned quickly by students,”* the remaining four items (PEU1, PEU2, PEU4, and PEU6) were all rated as neutral. These items relate to *“students’ ability to independently navigate AI tools, manage them without constant guidance, experience minimal difficulty during integration, and use them consistently over time.”* Notably, item PEU4, which refers to the *“absence of difficulties when integrating AI into class activities,”* received the lowest mean of 3.15.

These findings imply that while mathematics teachers acknowledge that the AI tools can be accessible and learnable, they are not yet fully convinced that students can navigate and utilize these technologies independently and consistently without challenges. In the context of the study, this neutral stance on ease of use may act as a barrier to fully integrating AI in the mathematics curriculum, as teachers may feel students require more technical support or structured training to use these tools effectively. The finding is also consistent with the Technology Acceptance Model, which identifies

perceived ease of use as a factor influencing technology acceptance (Davis et al., 1989). Bernardo et al. (2023) also found that ease of use significantly affects teachers' willingness to integrate technology. However, the neutral responses suggest that teachers may still experience uncertainty, which aligns with De Alday, Gatdula, and Macatangay (2024), who emphasized the need for tools to be both accessible and user-friendly to encourage adoption.

### *3.3. Perceived Risk*

The data shows a Composite Mean of 4.33, which corresponds to a verbal interpretation of "Strongly Agree." This indicates an exceptionally high level of concern among the 59 respondents regarding the potential drawbacks of AI technology in the classroom. Notably, all six items in the assessment received "Strongly Agree" ratings, with item PR6 garnering the highest weighted mean of 4.41, while items PR1 and PR5 received the lowest (though still very high) means of 4.29.

Item PR6 highlights teachers' concern that *"students may rely on AI without verifying the accuracy of the information,"* while PR1 reflects on the students becoming *"overly dependent on AI and limiting their problem-solving exploration."* Similarly, PR5 points to concerns about the *"possibility of AI generating incorrect or misleading information."* The consistently high ratings across all items, including concerns about "academic dishonesty" in PR3 and PR4 and "reduced cognitive effort" in PR2, indicate that teachers share strong reservations about the negative academic and ethical implications of AI use.

This uniformity in responses from the mathematics teachers in Marikina City might indicate that they are feeling a bit worried about AI, especially how it could affect keeping things fair in the classroom while helping students really understand the material. In the context of the study, the high level of perceived risk stands as the most influential dimension of teacher attitude, significantly outweighing perceptions of utility or ease of use. This suggests that while teachers recognize the potential benefits of AI, their primary stance is one of caution and structured oversight, reinforcing their preference for management styles that allow for direct teacher involvement and regulation of student activities.

The high level of perceived risk supports the findings of Ibeh et al. (2025), who reported concerns about overdependence and inaccurate outputs from AI tools. Similarly, Infante, Corocoto, and Nobis (2025) highlighted issues related to reliability and over-reliance among students. Ethical concerns such as academic dishonesty and data privacy are also consistent with the findings of Bezjak (2024) and Giray et al. (2024), who emphasized teachers' apprehensions about misuse and reduced critical thinking.

*Research Question No. 4: Is there a significant difference in the level of teachers' attitudes toward students' use of generative AI when grouped according to profile?*

The results show that there is no significant difference in teachers' attitudes when grouped according to age ($p = 0.065$), sex ($p = 0.357$), grade level taught ($p = 0.096$),

highest educational attainment (p = 0.593), and teaching position (p = 0.350), as all p-values are greater than the 0.05 level of significance.

For age, although the p-value is close to the threshold, the difference in attitudes across age groups was not statistically significant. However, notable variations exist, with teachers aged 46 – 50 years obtaining the highest mean score (4.28, “Strongly Agree”), indicating the most positive attitude among all age ranges, while those aged 41 – 45 years recorded the lowest mean (3.34, “Neither Agree nor Disagree”), reflecting a comparatively more neutral stance toward the students’ use of generative artificial intelligence.

Also, the grade level assigned to teachers did not significantly affect their attitudes. All grade levels (7-11) had “Agree” ratings, with Grade 11 teachers showing the highest mean (4.13). Moreover, teachers with a Bachelor's Degree (3.73) and those with a Master's Degree (3.64) showed no significant difference in their attitudes. This suggests that advanced education does not necessarily correlate with more positive or negative views toward AI.

While the teaching position (from Teacher I to Master Teacher II) is the same, it did not significantly influence attitudes. Interestingly, Master Teacher II had the highest mean (4.09), while Master Teacher I had the lowest (3.52), but these differences were not statistically significant.

For sex, no significant difference was found between female (3.68) and male (3.82) teachers. Both groups had “Agree” ratings, indicating that sex does not influence attitudes toward generative AI. However, this contradicts the study of Derinalp and Halife (2025), who found that male teachers tend to show more positive attitudes compared to others. This difference may imply that in the context of this study, both male and female teachers may have similar levels of exposure or familiarity with AI, leading to comparable perceptions.

However, a significant difference was found when the respondents were grouped according to years of teaching experience (p = 0.008), which is less than the 0.05 level of significance. This result led to the rejection of the null hypothesis, indicating that teachers’ attitudes toward generative AI vary depending on their length of teaching experience. Notably, teachers with 0 – 3 years of experience obtained the highest mean score (4.97, “Strongly Agree”), suggesting a more favorable attitude toward AI use, while those with more years of experience reported relatively lower mean scores, although still within the “Agree” range. This finding suggests that newer teachers, who are likely younger and more familiar with digital technologies, are more open to integrating generative AI into their teaching practice. They may view AI as a natural extension of modern educational tools rather than a disruptive threat.

These findings suggest that teaching experience plays a significant role in shaping teachers’ perceptions of generative AI, with less experienced teachers showing greater openness compared to their more experienced counterparts. The significant difference found in terms of teaching experience supports the study of Derinalp and Halife (2025), which emphasized that experience and familiarity with AI can influence teachers’ attitudes

toward its use. In contrast, other demographic factors do not appear to significantly influence teachers' attitudes, indicating a generally consistent perspective toward AI use across different groups. The absence of significant differences across other profile variables such as age, educational attainment, grade level taught, and teaching position may indicate that these factors may not strongly influence teachers' attitudes in this study, and may require further research to better understand their possible effects. Meanwhile, the results in Table 4.2 indicate that the significance found in the initial ANOVA is primarily driven by the 0 - 3 years of experience cohort. Specifically, teachers in this novice group exhibited significantly different attitudes compared to those with 4-7 years of experience ($p = 0.014$, Mean Diff = 1.386) and those with more than 10 years of experience ($p = 0.011$, Mean Diff = 1.309). This indicates that novice teachers demonstrate significantly more favorable attitudes toward the use of generative AI compared to their more experienced counterparts.

Interestingly, no significant differences were found between teachers with 0–3 years and those with 8–10 years of experience ($p = 0.055$), as well as among the remaining group comparisons, including 4–7 years versus 8–10 years ($p = 0.889$), 4–7 years versus more than 10 years ($p = 0.985$), and 8–10 years versus more than 10 years ($p = 0.938$), since all p-values exceed the 0.05 level of significance. These findings suggest that the variation in attitudes is primarily driven by the difference between the least experienced teachers and those with longer teaching experience, while attitudes among the more experienced groups tend to be relatively similar. Furthermore, this implies that while veteran teachers maintain a consistent and cautious "Agree" stance, the most recent entrants to the profession are nearly unanimous in their "Strongly Agree" attitude, likely due to higher digital literacy or more recent exposure to AI during their own academic training.

*Research Question No. 5: Is there a significant relationship between the respondents' classroom management styles and their attitudes toward students' use of generative AI?*

The results show a computed Pearson r value of 0.439, which indicates a moderate positive correlation between the two variables. The corresponding p-value of 0.027 is less than the 0.05 level of significance, leading to the rejection of the null hypothesis. This means that there is a statistically significant relationship between teachers' classroom management styles and their attitudes toward the use of generative AI.

The moderate positive correlation suggests that as teachers' classroom management styles become more structured and defined, their attitudes toward students' use of generative AI also tend to become more noticeable. In the context of the study, this implies that the way teachers manage their classrooms is associated with how they perceive and respond to the use of AI in the learning process. The way teachers manage their classrooms can really affect whether they will encourage or regulate students' use of AI tools. It will all come down to how they will strike a balance between control, interaction, and student autonomy within the classroom.

The significant relationship between classroom management style and attitudes toward AI supports the findings of Özgün and Saritepeci (2021), who found a connection between classroom management profiles and teachers' beliefs about technology use. Similarly, Borova, Nuri, and Bağlama (2023) reported that teachers with positive attitudes toward technology tend to demonstrate stronger classroom management skills. Furthermore, Chacón-Prado (2023) explained that teachers who are more controlling in their management style may resist technology due to fear of losing classroom control, which reinforces the connection between management practices and attitudes toward AI.

Overall, this finding highlights the importance of classroom management style as a factor to teachers' perspectives on integrating generative artificial intelligence, suggesting that pedagogical approaches and attitudes toward technology are related in the teaching and learning environment. Consequently, curriculum planners' efforts in integrating AI into the mathematics curriculum should consider the diverse classroom management styles of the teachers, as these styles are significant predictors of how they will perceive and regulate AI use among their students.

*Research Question No.6: Based on the findings of the study, what program can be proposed?*

Based on the findings of the study, a data-driven program with five components for the responsible integration of generative AI in mathematics instruction, titled Structured Model for Accountable and Responsible Teaching with AI in Mathematics (SMART-AI Math), is proposed. The program's components are anchored on the study's key findings, particularly the high perceived risk (Composite Mean = 4.33), neutral perception of ease of use (Composite Mean = 3.36), and the significant difference in attitudes based on teaching experience ($p = 0.008$), as well as the established relationship between classroom management styles and attitudes toward AI ($r = 0.439$). These results highlight how important it is to have a well-thought-out, experience-based, and management-friendly approach when bringing generative AI into math classes.

## PROPOSED PROGRAM:
## Structured Model for Accountable and Responsible Teaching with AI in Mathematics (SMART-AI Math)

**Rationale:**

Based on the results of this research, although mathematics teachers generally view how useful generative artificial intelligence is in improving student outcomes, they still can't get rid of the fact that its ease of use is concerning, while expressing a high level of concern toward its possible risks, such as academic dishonesty, overdependence, and the reliability of AI-generated outputs. Additionally, the study found that teaching experience is significant in influencing teachers' attitudes, and that classroom management styles are also significant in relating how teachers perceive and regulate AI tools for use in the classroom.

With these, it can be said that there is a need to prepare teachers with the necessary knowledge, skills, and strategies to effectively and responsibly integrate

generative AI in mathematics instruction. This program, therefore, aims to address these concerns by providing structured training that aligns AI use with appropriate classroom management practices.

**Objectives:**

The program aims to:

1. Enhance teachers' understanding of generative AI and its applications in mathematics education;
2. develop teachers' skills in integrating AI tools effectively in classroom instruction;
3. address teachers' concerns regarding the risks of AI, including academic dishonesty and overdependence;
4. strengthen classroom management strategies in AI-supported learning environments; and
5. promote responsible, ethical, and guided use of AI among students.

**Proposed Program Components**

| COMPONENT | DESCRIPTION/ FOCUS | BASIS (RESEARCH FINDING) | ACTIVITIES | TIME FRAME | FUNDING | EXPECTED OUTCOMES |
|---|---|---|---|---|---|---|
| **I. Process-Oriented Assessment Training** | Emphasizes assessment focusing on problem-solving process, reasoning, and reflection rather than final answers. | High perceived risk | Workshops on designing process-based math assessments and using AI for analysis | 1–2 days | School MOOE / Training fund | Improved assessment design; reduced AI misuse |
| **II. Peer-to-Peer AI Mentorship Program** | Mentorship between novice and experienced teachers for AI integration support. | Significant difference in attitudes based on teaching experience | Mentoring sessions, peer coaching, demonstration teaching | 1 semester (continuous) | School/ Division support | Increased teacher confidence and collaboration |
| **III. Guided AI Integration Workshops** | Hands-on training in using AI tools for instruction and assessment. | Neutral perceived ease of use | Practical workshops using ChatGPT/Copilot for lesson planning and activities | 2–3 sessions per quarter | ICT / school training funds | Improved AI literacy and classroom application |
| **IV. Classroom Management Strategies for AI Use** | Aligns classroom management styles with AI-supported instruction. | Significant relationship between classroom management and attitudes | Training on rules, monitoring systems, and AI use protocols in class | 1 training session and follow-ups | School MOOE | Better classroom control and structured AI use |

| | | | | | | |
|---|---|---|---|---|---|---|
| **V. Ethical and Responsible AI Use Framework** | Development of AI ethics guidelines and school-based policy. | High concern on AI risks and academic integrity | Creation of AI use policy, DepEd-aligned guidelines, orientation sessions | 1–2 months policy development | School + Division office | Responsible and ethical AI use among students and teachers |

**Component I: Process-Oriented Assessment Training.** This addresses the high level of perceived risk (Composite Mean = 4.33), particularly concerns related to academic dishonesty, overdependence, and misuse of AI. In this component, conducting workshops on guiding teachers in designing mathematics assessments that emphasize the problem-solving process rather than final answers will be the focus. Through this approach, AI is utilized as a tool for error analysis and conceptual understanding rather than a shortcut for students to generate solutions and answers, thereby helping reduce the risks identified in the study.

**Component II: Peer-to-Peer AI Mentorship Program.** This component responds to the significant difference in attitudes based on the teaching experiences ($p = 0.008$), where teachers with 0 – 3 years of experience showed the most favorable attitudes (Mean = 4.97). In this component, there will be the establishment of a mentorship system where novice teachers are paired with more experienced teachers. In this arrangement, novice teachers will serve as “digital coaches” who will demonstrate practical and manageable ways of integrating AI tools into instruction. This collaborative approach aims to bridge the gap in attitudes, increase confidence among more experienced educators, and promote shared learning within the teaching community.

**Component III: Guided AI Integration Workshops.** This addresses the neutral perception of ease of use (Composite Mean = 3.36), suggesting uncertainty among teachers regarding the usability of AI tools. In this component, there will be involvement in conducting hands-on workshops where teachers are actively engaged in the use of generative AI tools such as ChatGPT and Copilot for lesson planning, making assessments, instructional delivery, and problem-solving activities. Through guided practice and simulated classroom scenarios, teachers are given opportunities to explore the functionality of AI tools in a structured manner, thereby improving their confidence and ability to integrate AI effectively in their teaching.

**Component IV: Classroom Management Strategies for AI Use.** This is grounded in the significant relationship between classroom management styles and attitudes toward AI ($r = 0.439$). It focuses on training teachers to align their classroom management approaches, particularly interventionist and interactionist styles, with the use of AI in the classroom. The main focus of this training is to guide teachers in developing clear rules, monitoring systems, and structured procedures for AI use during instruction. This will ensure that AI integration is not only effective but also consistent with their management practices, promoting both control and student engagement.

**Component V: Ethical and Responsible AI Use Framework.** This will reinforce the findings related to high perceived risk by establishing a framework for ethical and

responsible AI use. It involves developing a school-based code of conduct anchored on the guidelines set by the Department of Education that outlines proper use of AI tools, including guidelines on academic integrity, verification of AI-generated information, and appropriate use during learning activities. This framework is designed to tackle teachers' worries by encouraging everyone to be accountable, aware, and mindful of how they use generative AI.

Overall, the proposed program directly addresses the key findings of the study by enhancing teachers' skills, addressing their concerns, and aligning classroom management with the responsible use of generative artificial intelligence. It aims to support effective, guided, and ethical integration of AI in mathematics instruction.

**Summary of Findings**

Among the important findings of this research were:

1. **Profile of the Respondents**
   Most of the respondents were aged above 55 years old, indicating a mature teaching workforce. The majority were female, and most had more than 10 years of teaching experience. In terms of grade level taught, most were Junior High School teachers, particularly from Grades 7 and 9. Most respondents held a Bachelor's Degree, while a smaller portion had completed a Master's Degree. In terms of teaching position, the majority were Teacher II and Teacher III.
2. **Classroom Management Styles Practiced by Teachers**
   The findings revealed that teachers generally agreed with the interventionist classroom management style, indicating a tendency toward structured and teacher-led practices. The interactionist approach received a "Strongly Agree" rating, showing a very high level of endorsement for shared control and active student participation. On the other hand, the non-interventionist approach was rated "Disagree," indicating that teachers do not favor a management style characterized by minimal teacher control and high student autonomy.
3. **Level of Teachers' Attitudes Toward Students' Use of Generative AI**
   In terms of AI's perceived usefulness, teachers generally agreed that generative AI can support student learning and improve performance, although some uncertainty has remained. For the perceived ease of use, teachers showed a neutral stance, indicating that they are not fully convinced that students can independently and consistently use AI tools without a challenge. In contrast, perceived risk received a "Strongly Agree" rating, showing that a high level of concern regarding issues such as academic dishonesty, overdependence on AI, and the accuracy of AI-generated outputs is risky for the students.
4. **Difference in Teachers' Attitudes When Grouped According to Profile**
   There was no significant difference in teachers' attitudes toward generative AI when grouped according to age, sex, grade level taught, highest educational attainment, and teaching position. However, a significant difference was found when grouped according to years of teaching experience. Meanwhile, teachers with 0 – 3 years of experience showed the highest level of agreement toward AI use, while those with more years of experience had comparatively lower, though

still positive, attitudes. Post hoc analysis further revealed that significant differences existed between teachers with 0 – 3 years of experience and those with 4 – 7 years and more than 10 years of experience.

5. **Relationship Between Teachers' Classroom Management Styles and Attitudes Toward Students' Use of Generative AI**

   The study found a statistically significant relationship between classroom management styles and teachers' attitudes toward students' use of generative AI. The computed Pearson r value indicated a moderate positive correlation, suggesting that teachers' management styles are associated with their attitudes toward AI use in the classroom.

## Conclusions

Based on the foregoing findings, the following conclusions were drawn:

1. First, the respondents of the study are mostly experienced mathematics teachers, which implies that their attitudes toward generative artificial intelligence are shaped by established classroom practices and long-term exposure to teaching environments.
2. Second, it can be concluded that mathematics teachers in Marikina City's public secondary schools generally practice a balanced classroom management approach, though they strongly preferred an interactionist style, followed by an interventionist style. However, the non-interventionist approach is not commonly observed among the respondent-teachers. This means that teachers still want to maintain sufficient control in the classroom, but at the same time, they allow their students to participate and express their ideas, rather than giving them full independence without guidance.
3. Third, in terms of teachers' attitudes toward students' use of generative artificial intelligence, the findings show that teachers can still recognize its usefulness in helping students with their learning tasks, especially in problem-solving and correcting misconceptions. However, they are still not sure if it will be easy for students to use these tools independently, suggesting that students still need guidance when using AI. At the same time, teachers have shown a very high level of concern when it comes to the risks of AI, particularly on issues like overdependence, inaccuracy of information, and academic dishonesty. This shows that even if the teachers can see the benefits of AI, they are still cautious and do not fully trust its use in the classroom without proper monitoring.
4. Fourth, when grouped according to profile, it was found that most variables, such as age, sex, grade level taught, educational attainment, and teaching position, do not significantly affect teachers' attitudes toward AI, which means that teachers generally share similar views regardless of their background. However, teaching experience was found to be significant, where less experienced teachers tend to have a more positive attitude compared to those who have been teaching longer. This may suggest that newer teachers are more open and adaptable to the use of emerging technologies like AI, while more experienced teachers may be more cautious in adopting them.

5. Finally, the study found that there is a significant relationship between classroom management styles and teachers' attitudes toward students' use of generative AI. This means that how teachers manage their classrooms is somehow connected to how they view and regulate the use of AI in learning. Teachers who apply more structured or balanced management styles may be more likely to guide and control how AI is used, rather than completely allowing or rejecting it. Overall, the findings suggest that while teachers are open to the potential of generative AI, they still prefer a controlled and guided approach in using it inside the classroom to make sure that learning is still meaningful and not overly dependent on technology.
6. Overall, the study concludes that while mathematics teachers recognize the usefulness of generative artificial intelligence, their attitudes are largely influenced by perceived risks and their preferred classroom management styles. These findings highlight that successful integration of AI in education depends not only on the technology itself but also on teachers' beliefs, experiences, and management practices.

**Recommendations**

In light of the conclusions drawn from the study, the following are hereby recommended:

1. Since most of the respondents are experienced mathematics teachers, it is recommended that schools and administration from the Department of Education should provide continuous professional development activities that will update their knowledge on emerging technologies like generative artificial intelligence. This will be able to help them adjust their established teaching practices while making them more flexible in integrating AI tools in instruction, especially in planning lessons, making assessments, and even in checking students' outputs. It is also important that these programs will not only focus on technical skills but also on pedagogical strategies so that teachers will be guided properly on how AI can be used effectively in an actual classroom setting.
2. For classroom management practices, it is suggested that teachers should continue to strengthen their interactionist approach since it was found to be the most preferred style. Furthermore, trainings and seminars may also be conducted to help teachers balance classroom control and student participation, especially when integrating AI tools in the teaching-learning activities. Teachers are also encouraged to slowly explore more flexible strategies without losing classroom structure, and to reflect more on how their management decisions can affect student engagement, discipline, and even the responsible use of AI inside the classroom. Additional sharing of best practices among teachers may also help in improving classroom management approaches.
3. In terms of teachers' attitudes toward students' use of generative AI, it is recommended that schools provide orientation or workshops for both teachers and students on the appropriate, ethical, and responsible use of AI tools. Since it was found out that teachers have concerns about risks such as academic dishonesty and misinformation, clearer guidelines and monitoring systems should be established to reduce these risks and improve trust in AI-assisted learning.

Schools may also consider developing simple classroom-based rules or agreements on how AI should be used by students so that expectations are clearer and more consistent across different teachers. Students are encouraged to use generative AI responsibly and as a tool to support their learning rather than depend on it. With teachers showing concerns about over-reliance and academic dishonesty, students should be guided to develop critical thinking, verify AI-generated outputs, and actively engage in the learning process to maximize the benefits of AI while avoiding misuse. While parents and guardians are encouraged to support schools by reinforcing responsible AI use at home and encouraging students to utilize AI tools ethically and appropriately.

4. Since most profile variables did not significantly affect teachers' attitudes, it is suggested that interventions and training programs should be designed for all teachers regardless of age, sex, educational attainment, or teaching position. However, since teaching experience was found to influence attitudes, more targeted support may be given to more experienced teachers to help them become more open and confident in using these new technologies, especially AI, which will be at the forefront of educational innovation in the coming years. There may also be mentoring or peer support systems where less experienced teachers and more experienced teachers can share ideas and practices regarding AI integration in teaching.
5. Given that there is a significant relationship between classroom management styles and attitudes toward AI use, it is recommended that future training programs integrate both classroom management and technology integration strategies. This can help teachers to have better alignment of their classroom management approach with the responsible use of AI inside the classroom, especially in mathematics instruction. It may also help teachers understand that managing classroom behavior and integrating technology like AI should not be seen separately but rather as connected aspects of effective teaching practice.
6. Lastly, it is recommended that future studies further explore other factors that can influence teachers' attitudes toward generative artificial intelligence, such as AI literacy, school policies, access to technology, and students' readiness in using AI tools. Future research may also be conducted using a larger sample size with more varied teaching experience, including participants from different locations or school settings, to improve the generalizability of the findings and to provide a more comprehensive understanding of teachers' attitudes. Moreover, further research may examine the impact of classroom management styles on actual classroom practices involving AI to provide more concrete evidence of how these variables interact in real educational settings.

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