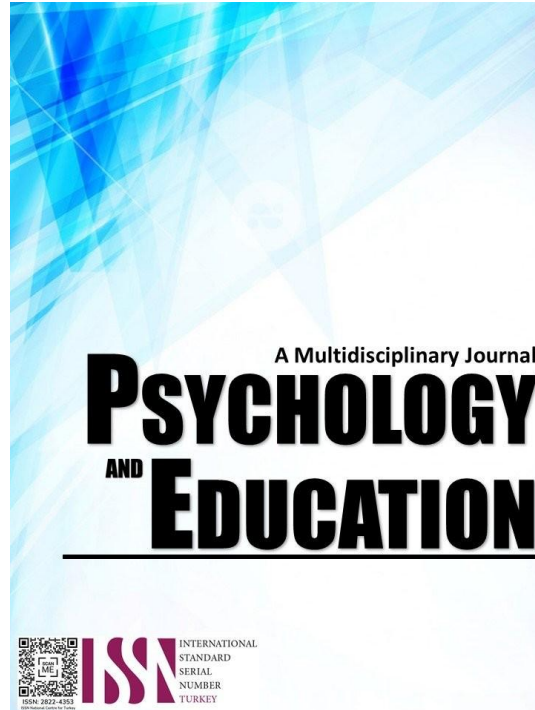


# TEACHERS' READINESS ON THE IMPLEMENTATION OF MATATAG CURRICULUM



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## Teachers' Readiness on the Implementation of MATATAG Curriculum

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### Abstract

This study examined the socio-demographic profile, 21st-century skills, and Teachers' readiness to implement the MATATAG Curriculum of Pangantucan South and West District, Division of Bukidnon. It explored their competencies in information, media, technology, communication, and life and career skills, as well as their preparedness in pedagogical strategies, access to materials, and professional development. Additionally, it investigated how these factors influenced their ability to adapt to the evolving demands of curriculum implementation. Findings showed that most teachers were female (83.5%), aged 31–50, with 11 years or above of experience. They demonstrated high 21st-century skills, particularly in information and communication, but had moderate proficiency in technology-related tasks, such as using specialized digital tools. Teachers were highly prepared for the MATATAG Curriculum, though areas such as assessment methods, differentiated instruction, and access to digital resources required improvement. Statistical analysis found no significant relationship between teachers' socio-demographic profiles, 21st-century skills, and their readiness for curriculum implementation, indicating that external support and contextual factors play a crucial role in their overall preparedness. The study recommends targeted professional development, enhanced access to digital tools and learning resources, and stronger collaboration among teachers, administrators, parents, and stakeholders to ensure the successful and sustainable implementation of the MATATAG Curriculum. Strengthening mentorship programs, continuous training, and policy support will empower teachers to deliver quality education and foster a future-ready learning environment.

**Keywords:** *21st-century skills, teacher readiness, MATATAG Curriculum, professional development, digital literacy, differentiated instruction, curriculum implementation, technology integration, teacher demographics, education stakeholders*

### Introduction

Transition to the MATATAG Curriculum: Context and Rationale. The shift from the K to 12 Enhanced Basic Education Curriculum to the MATATAG Curriculum represents a major educational reform in the Philippines to improve student performance. The Pangantucan South and West Districts, under the Division of Bukidnon, are among the pioneers of this implementation, which is set to commence in the 2024–2025 academic year. This new curriculum prioritizes a deeper understanding of key competencies, promotes learner agency, and equips students with the skills needed to thrive in an increasingly dynamic world. Of particular importance is the focus on inquiry-based learning and creative design thinking—approaches that aim to cultivate students' critical thinking and problem-solving skills.

However, this transition brings to light pressing concerns, particularly regarding educators' preparedness for delivering the curriculum. The MATATAG Curriculum introduces more complex content and pedagogical demands, especially in critical stages such as Kindergarten, Grade 1, Grade 4, and Grade 7. Teachers are expected to adapt to new subject matter and adopt more learner-centered and inquiry-driven teaching methods. Given the demands of these instructional strategies, questions have arisen about whether teachers, especially those accustomed to the K to 12 curriculums, are adequately prepared to meet the new expectations.

Despite the scale of this educational reform, there is a lack of research on implementing the MATATAG Curriculum, particularly regarding teacher preparedness. With its emphasis on higher-level learning outcomes and student-centered teaching practices, it is vital to explore teachers' challenges. Key areas of concern include their understanding of the new curriculum, the availability of instructional materials, opportunities for professional development, and the realities of managing large classrooms. These factors could significantly impact the success of the curriculum and, by extension, student achievement.

This proposed study aims to address this gap by assessing the readiness of teachers in the Pangantucan South and West Districts to implement the MATATAG Curriculum. The study can inform school-based initiatives to enhance teacher capability and effectiveness by identifying specific areas where educators need further training or support. In doing so, it seeks to support the successful implementation of the MATATAG Curriculum, ensuring it fulfills its objectives of improving learning outcomes, promoting inquiry, and fostering creativity among students. Ultimately, the study argues that teacher preparedness is a critical factor in the success of this curricular reform.

### Research Questions

This study generally investigated the teachers' socio-demographic profile and their level of 21st-century skills in their readiness to implement the MATATAG Curriculum at Pangantucan South and West District, Division of Bukidnon, for the school year 2024–2025. Specifically, sought to answer the following questions:

1. What are the teachers' demographic profiles of teachers in Pangantucan South and West District in terms of age, sex, and years of teaching experience?
2. What is the level of teachers' 21st-century skills in the following areas: information, media, and technology skills, Learning and innovation skills, communication skills, and life and career skills?
3. What is the extent of teacher readiness for implementing the MATATAG Curriculum regarding knowledge and understanding of the new curriculum? Knowledge and understanding of the new curriculum, application of pedagogical strategies, access to curriculum materials, training and professional development, preparedness to meet curriculum demands?
4. Is there any significant difference in teachers' readiness to implement the MATATAG Curriculum when grouped according to socio-demographic profile?
5. Is there any significant relationship between teachers' 21st-century skills in information, media, and technology, Learning and innovation skills, communication skills, and life and career skills, and their readiness to implement the MATATAG Curriculum?

## Methodology

### Research Design

The study employed a descriptive survey research design to provide a thorough review of teachers' readiness to implement the MATATAG Curriculum in schools within the Pangantucan South and West District, Division of Bukidnon, specifically for the School Year 2024–2025.

### Respondents

The respondents of this study were teachers assigned to the Pangantucan South District, Division of Bukidnon, who taught kindergarten, Grades 1, 4, and 7. These teachers were critical to the practical implementation of the MATATAG Curriculum since these grade levels served as primary emphasis areas for the curriculum's new competencies. The research specifically targeted instructors with varying years of teaching experience, sectors of expertise, and socio-demographic backgrounds to ensure a thorough understanding of their preparation for the curriculum adjustment. The method of sampling for this study used Slovin's formula to obtain the appropriate sample size from a total population of 274 teachers who taught Kindergarten, Grades 1, 4, and 7 in the Pangantucan South and West District, Division of Bukidnon. Slovin's formula determined the sample size based on the total population and the required margin of error (usually 5%).

### Instrument

The investigation used a survey questionnaire to gather pertinent data on the variables explored in the study. The questionnaire covered three (3) sections.

**Demographic Profile.** The first section elicited information about the teacher-respondents' socio-demographic characteristics, including age, gender, years of teaching experience, bachelor's degree, and field of specialization.

**21st-Century Skills.** The second section assessed the teachers' level of 21st-century skills, which encompassed five parameters: information, media, and technology skills; learning and innovation skills; communication skills; and life and career skills. This section was adapted from the instrument developed by Ubias (2024).

**Teachers' Readiness for MATATAG Curriculum Implementation.** The third section measured the extent of the teachers' readiness to implement the MATATAG Curriculum, adopting items from the study of Quijano and Rapatan (2018).

A five-point Likert scale was used to gauge responses, with options ranging from "1 - Strongly Disagree" to "5 - Strongly Agree." Moreover, a field trial was conducted to ensure the instrument's reliability and validity. It involved piloting the questionnaire with a small group of respondents similar to the target sample. The try-out results were analyzed to refine and improve the survey before full-scale administration.

### Procedure

Before commencing data collection, permission to conduct the study was obtained from the Division Superintendent of Schools in Bukidnon. Before distributing the survey questionnaires, informed consent was secured from the teacher-respondents, ensuring their voluntary participation in the research. Once permission was granted, the respondents were briefed on the study's objectives and procedures. The researcher then administered the survey to gather data on teachers' readiness for implementing the MATATAG Curriculum. The collected data was compiled and analyzed using quantitative methods to draw meaningful insights.

### Data Analysis

The researcher utilized the following statistical procedures in the analysis and interpretation of the research data:

Descriptive statistics were employed using frequency counts and percentages to determine the demographic profile of the teacher-respondents. In contrast, the mean and standard deviation were used to ascertain the teachers' level of 21st-century skills and the extent

of their readiness to implement the MATATAG Curriculum.

Lastly, the variables were treated with Pearson's  $r$  product-moment correlation to establish relationships among variables and regression analysis to predict the factors influencing teachers' readiness to implement the MATATAG Curriculum.

## Results and Discussion

This section presents the findings on teachers' socio-demographic profile, 21st-century skills, and readiness to implement the MATATAG Curriculum in Pangantucan South and West District. It examines relationships between teachers' demographics, skills in information, media, technology, learning, communication, and life and career skills, and their preparedness for curriculum implementation. Statistical analyses determine significant correlations among these variables.

Table 1. *Demographic profile of the respondents in terms of age.*

Age	<i>F</i>	%
20 – 30	21	20.4
31 – 40	35	34.0
41 – 50	31	30.1
51 – 60	12	11.7
61 – 65	4	3.9
Total	103	100.0

Table 1 shows the demographic profile of the respondents in terms of age shows that the largest group belongs to the 31–40 age range ( $f = 35$ , 34.0%), followed closely by those in the 41–50 age range ( $f = 31$ , 30.1%). Respondents aged 20–30 comprise 20.4% ( $f = 21$ ), while those in the 51–60 age range constitute 11.7% ( $f = 12$ ). The smallest group comprises respondents aged 61–65 ( $f = 4$ , 3.9%).

The age distribution of teachers plays a significant role in shaping the educational system, as different age groups bring varying levels of experience, teaching styles, and professional perspectives. Ingersoll and Merrill (2017) emphasized that younger teachers (20-30 years old) often introduce innovative teaching methods and are more adaptable to new technologies, whereas mid-career teachers (31-50 years old) provide stability and mentorship to their younger counterparts. Meanwhile, senior teachers (51 years and above) contribute valuable expertise but may require support adapting to modern educational trends. Darling-Hammond (2015) further highlighted that teacher experience, often correlated with age, significantly impacts student learning outcomes.

Teachers in the 31-50 age bracket are typically at the peak of their careers, balancing pedagogical expertise with adaptability to evolving educational methodologies. A global study by the Organization for Economic Co-operation and Development (OECD, 2019) found that most educators fall within this mid-career age range, contributing to improved instructional quality and student performance. Additionally, Avalos (2018) emphasized that teachers at different career stages have distinct professional development needs, with younger teachers benefiting from training in classroom management, mid-career teachers requiring leadership opportunities, and older teachers needing continuous professional development in curriculum updates and technology integration.

Table 2. *Demographic profile of the respondents in terms of sex.*

Sex	<i>F</i>	%
Male	17	16.5
Female	86	83.5
Total	103	100.0

Table 2 shows the demographic profile of the respondents in terms of sex. The majority are female ( $f = 86$ , 83.5%), while male respondents make up a significantly smaller portion ( $f = 17$ , 16.5%). It indicates a strong female representation in the study, suggesting that women were more engaged or available as respondents.

Research has consistently shown a significant gender disparity in the teaching profession, with a higher representation of female educators, particularly in primary and secondary education. According to UNESCO (2021), teaching is predominantly occupied by women worldwide, as the profession is often associated with traditionally assigned nurturing roles. Drudy (2008) further explains that factors such as perceived job stability, flexible work hours, and societal expectations contribute to the higher number of women entering the teaching workforce.

However, Skelton (2012) highlights that while female teachers dominate the profession, the presence of male educators remains crucial in fostering diverse perspectives and serving as role models for students. The underrepresentation of male teachers may have implications for student development, particularly regarding discipline and mentorship.

Additionally, Shakeshaft (2016) points out that despite the large number of female teachers, men are more likely to hold leadership positions in education, suggesting that systemic barriers may limit women's career progression in administrative roles. These findings align with the demographic profile of teachers in Pangantucan South and West District, where female educators constitute the majority.

Table 3. *Demographic profile of the respondents in terms of Years of teaching experience.*

<i>Years of teaching experience</i>	<i>F</i>	<i>%</i>
1 – 2	5	4.9
3 – 4	12	11.7
5 – 6	12	11.7
7 – 8	23	22.2
9 – 10	18	17.5
Total	103	100.0

Table 3 reveals the respondents' demographic profile regarding years of teaching experience, showing a diverse range of teaching tenure. Most respondents, "11 Years and Above" ( $f = 33$ , 32.0%), have the most extensive teaching experience. It is followed by those with "7 – 8 Years" ( $f = 23$ , 22.2%), indicating a substantial proportion of mid-career educators. Additionally, respondents with "9 – 10 Years" ( $f = 18$ , 17.5%) and those with "5 – 6 Years" ( $f = 12$ , 11.7%) and "3 – 4 Years" ( $f = 12$ , 11.7%) contribute to the overall distribution. The least represented group comprises those with "1 – 2 Years" ( $f = 5$ , 4.9%), indicating a smaller proportion of early-career teachers. The data suggests that most respondents have considerable teaching experience, with a smaller segment of newer educators.

Teaching experience is crucial in shaping educators' effectiveness, career longevity, and impact on student achievement. Stronge, Ward, and Grant (2011) emphasized that teachers improve their instructional strategies, classroom management, and student learning outcomes as they gain more experience, particularly in their early years. It aligns with the findings in Bangahan Integrated School, where most teachers have less than six years of experience, indicating that many are still refining their teaching practices.

However, research by Ingersoll and Strong (2011) highlights that early-career teachers often face challenges such as workload stress and classroom management difficulties, leading to a higher likelihood of attrition within the first five years. The absence of teachers with over 11 years of experience in Pangantucan South and West District suggests potential retention concerns, which could be addressed through mentorship and professional development programs. Darling-Hammond (2017) also noted that continuous training and structured support systems significantly influence teacher retention, particularly in the early years of teaching. Moreover, Rivkin, Hanushek, and Kain (2005) found that while teachers significantly improve their first decade, their impact on student achievement tends to stabilize afterward.

Table 4. *Level of teachers' 21st-century skills in the area of information skills.*

<i>Indicator</i>	<i>Mean</i>	<i>SD</i>	<i>Interpretation</i>
Identify realities and make-beliefs in narratives (i.e., fictional, historical, personal)	4.64	0.482	Very High Level
Gather relevant information from valid sources and evaluate the accuracy of sources and information.	4.54	0.501	Very High Level
Differentiate facts and opinions in reports.	4.54	0.607	Very High Level
Compare information from various sources.	4.35	0.622	Very High Level
Discover patterns of classical and contemporary music.	3.88	0.758	High Level
Overall	4.39	0.323	Very High Level

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 4 presents the level of teachers' 21st-century skills in information skills, which is generally very high (Overall Mean = 4.39, SD = 0.323), indicating that teachers are highly prepared in this domain. Among the indicators, the highest-rated skill is "identifying realities and make-beliefs in narratives (i.e., fictional, historical, personal)" (Mean = 4.64, SD = 0.482), suggesting that teachers excel in distinguishing between reality and fiction across different types of narratives.

Other indicators also received a very high-level rating, including "gathering relevant information from valid sources and evaluating the accuracy of sources and information" (Mean = 4.54, SD = 0.501) and "differentiating facts and opinions in reports" (Mean = 4.54, SD = 0.607), highlighting teachers' strong ability to assess information credibility. Additionally, "comparing information from various sources" (Mean = 4.35, SD = 0.622) also falls within the very high level, indicating that teachers are proficient in cross-referencing data.

The lowest-rated indicator is "discovering patterns of classical and contemporary music" (Mean = 3.88, SD = 0.758), which, while still classified as a high level, shows that teachers are less prepared in this area than in the other information skills.

Recent studies emphasize the critical importance of teachers possessing 21st-century skills—encompassing information, media, and technology skills; learning and innovation skills; communication skills; and life and career skills—to effectively prepare students for the modern world. A study by Chongkolklang (2023) highlights that education must evolve to ensure students acquire these essential skills, necessitating that teacher adapts their instructional methods accordingly.

Similarly, research by Novia et al. (2024) underscores the need for teachers to integrate critical thinking, creativity, communication, and collaboration into English language learning, thereby equipping students to navigate contemporary challenges. Furthermore, a study published in 2024 investigated how 21st-century skills are incorporated into teachers' instructional plans and assessments,



revealing that effective integration requires deliberate planning and support.

Table 5. *Level of teachers' 21st-century skills in the area of media literacy.*

Indicator	Mean	SD	Interpretation
Effective multimedia presentation (audio, text, motion media)	4.50	0.608	Very High Level
Compare and contrast how media (i.e., TV, radio, social media, documentaries) cover.	4.45	0.573	Very High Level
Evaluate media reports about scientific issues (i.e., climate change, cloning, nuclear technology, pandemic, etc.)	4.06	0.790	High Level
Recognize the issues and laws related to media and information, such as copyright, intellectual property, and fair use.	3.96	0.685	High Level
Create a vlog to raise awareness about social issues.	3.00	1.163	Average Level
Overall	3.99	0.385	High Level

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 5 illustrates that teachers' 21st-century skills in media literacy are generally at a high level (Overall Mean = 3.99, SD = 0.385), indicating that they are well-prepared in this domain. The highest-rated indicator is "effective multimedia presentation (audio, text, motion media)" (Mean = 4.50, SD = 0.608), suggesting that teachers excel in using various forms of media to communicate information effectively.

Other indicators also reflect strong media literacy skills, including "comparing and contrasting how media (i.e., TV, radio, social media, documentaries) cover information" (Mean = 4.45, SD = 0.573), which received a very high-level rating. Meanwhile, "evaluating media reports about scientific issues (i.e., climate change, cloning, nuclear technology, pandemic, etc.)" (Mean = 4.06, SD = 0.790) and "recognizing issues and laws related to media and information such as copyright, intellectual property, and fair use" (Mean = 3.96, SD = 0.685) both fall within the high-level category, indicating that teachers have a solid understanding of media-related topics but may still need further enhancement in these areas.

The lowest-rated indicator is "creating a vlog to raise awareness about social issues" (Mean = 3.00, SD = 1.163), which falls under the average level category. While teachers are generally competent in media literacy, they may have less experience or confidence in producing digital content, such as vlogs, for advocacy and awareness.

Teachers' 21st-century skills, particularly in media literacy, are crucial in modern education. Trilling and Fadel (2009) emphasize that competencies such as critical thinking, communication, collaboration, and creativity are essential for effectively navigating digital environments. Similarly, Hobbs (2010) highlights the importance of media literacy in helping teachers critically evaluate media sources and understand key issues like copyright and intellectual property. The integration of technology in education, as discussed by Mishra and Koehler (2006) through the TPACK framework, underscores teachers' need to use multimedia tools effectively in the classroom.

However, while many educators are proficient in media use, Kimmons et al. (2018) point out that they may lack experience in digital content creation, such as producing vlogs for advocacy and awareness. Buckingham (2015) further notes that challenges in media literacy often stem from the rapid evolution of technology and the need for continuous professional development.

Table 6. *Level of teachers' 21st-century skills in the following areas: technology skills.*

Indicator	Mean	SD	Interpretation
Perform numerical data computations using calculators.	4.63	0.485	Very High Level
Use sports equipment and play musical instruments for recreational activities.	3.28	1.042	Average Level
Manipulate measuring tools and equipment used in Science and TLE activities.	3.21	0.571	Average Level
Assemble robotics parts following a manual set of procedures.	2.77	0.866	Average Level
Improve performance in playing musical instruments using an audio equalizer.	2.58	0.835	Low Level
Overall	3.30	0.357	Average Level

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 6 shows that the level of teachers' 21st-century skills in technology skills is generally at an average level (Overall Mean = 3.30, SD = 0.357), indicating moderate preparedness in this domain. Among the indicators, the highest-rated skill is "performing numerical data computations using calculators" (Mean = 4.63, SD = 0.485), which falls under the very high-level category. Teachers are highly proficient in using calculators for numerical computations, likely due to the frequent application of this skill in educational settings.

Other indicators fall within the average level, including "using sports equipment and playing musical instruments for recreational activities" (Mean = 3.28, SD = 1.042), "manipulating measuring tools and equipment used in Science and TLE activities" (Mean = 3.21, SD = 0.571), and "assembling robotics parts following a set of procedures in a manual" (Mean = 2.77, SD = 0.866).

The lowest-rated indicator is "improving performance in playing musical instruments using an audio equalizer" (Mean = 2.58, SD =

0.835), which falls under the low-level category. This suggests that teachers are only familiar with using audio equalizers to enhance musical performance, possibly due to the specialized nature of this skill.

The importance of 21st-century skills in education has been widely emphasized by scholars such as Trilling and Fadel (2009), who highlight educators' need to develop competencies in information and communication technology (ICT) literacy, critical thinking, problem-solving, and adaptability. These skills are essential in preparing students for the demands of the digital age. The findings in Table 6 indicate that while teachers excel in performing numerical computations using calculators, they exhibit only moderate preparedness in more advanced technological applications. It aligns with the Technological Pedagogical Content Knowledge (TPACK) framework proposed by Mishra and Koehler (2006), stressing that teachers need to integrate technology into their instructional strategies effectively. The study's results suggest that while educators are familiar with basic technology tools, they require further training in handling specialized digital tools such as robotics and audio equalizers.

Furthermore, Garet et al. (2001) emphasize that continuous professional development is crucial in enhancing teachers' competencies in ICT and innovative teaching methods. The study's findings indicate that teachers may benefit from additional training to improve their proficiency in manipulating advanced technological tools used in education. Similarly, Jenkins et al. (2006) discuss the growing significance of new media literacy, underscoring the need for teachers to be well-versed in digital tools to integrate them into the learning process effectively. The relatively lower scores in using an audio equalizer or assembling robotics parts suggest teachers may lack sufficient exposure or training in these specialized areas.

Additionally, Voogt and Roblin (2012) argue that integrative technology training is essential for teachers to foster 21st-century skills among students. Their research supports the findings that while teachers demonstrate competence in fundamental technological tasks, they need structured professional development programs to enhance their ability to use more advanced digital tools in the classroom.

*Table 7. The level of teachers' 21st-century skills in the following areas of Learning and innovation skills.*

<i>Indicator</i>	<i>Mean</i>	<i>SD</i>	<i>Interpretation</i>
Establish/detect patterns, connections, and relationships among given variables.	4.40	0.647	Very High Level
Demonstrate originality and inventiveness in work and understand the real-world limits to adopting new ideas (e.g., compose an original composition applying knowledge on musical patterns, notes, etc)	4.32	0.630	Very High Level
Elaborate, refine, analyze, and evaluate their ideas to improve and maximize creative efforts.	4.28	0.692	Very High Level
Examine things from others' perspectives.	4.17	0.720	High Level
Provide logical explanations on a given problem or difficulty.	4.16	0.683	High Level
Identify new connections between different concepts and ideas.	4.15	0.733	High Level
Analyze and interpret data and information gathered from relevant and credible sources.	4.01	0.810	High Level
Take time to review their behavior and consider their failures and successes, which may aid in self-awareness and improvement.	4.00	0.626	High Level
Generate relevant conclusions using logical, systematic, and/or scientific processes.	3.94	0.739	High Level
Recognize existing problems, impending threats, and future difficulties.	3.91	0.755	High Level
Formulate relevant recommendations, solutions, and alternatives to a perceived problem.	3.89	0.609	High Level
Overall	4.11	0.414	High Level

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 7 shows that teachers' 21st-century skills in learning and innovation are generally high (Overall Mean = 4.11, SD = 0.414), indicating that they are well-prepared in this domain. The highest-rated indicator is "establishing/detecting patterns, connections, and relationships among given variables" (Mean = 4.40, SD = 0.647), which falls under the very high-level category.

Other indicators that also received a very high-level rating include "demonstrating originality and inventiveness in work and understanding the real-world limits to adopting new ideas" (Mean = 4.32, SD = 0.630) and "elaborating, refining, analyzing, and evaluating their ideas to improve and maximize creative efforts" (Mean = 4.28, SD = 0.692).

Meanwhile, several indicators were rated at a high level, including "examining things from others' perspectives" (Mean = 4.17, SD = 0.720), "providing logical explanations on a given problem or difficulty" (Mean = 4.16, SD = 0.683), and "identifying new connections between different concepts and ideas" (Mean = 4.15, SD = 0.733). Additionally, skills related to data analysis, self-awareness, and problem-solving, such as "analyzing and interpreting data from relevant sources" (Mean = 4.01, SD = 0.810) and "taking time to review their behavior to aid in self-awareness and improvement" (Mean = 4.00, SD = 0.626), also fall under the high-level category.

The lowest-rated indicator is "formulating relevant recommendations, solutions, and alternatives to a perceived problem" (Mean = 3.89, SD = 0.609), though it is still categorized under the high level.

Several studies emphasize the importance of teachers' 21st-century skills, particularly in learning and innovation. Trilling and Fadel (2009) highlight the significance of the "4Cs"—critical thinking, creativity, communication, and collaboration—as essential for educators to foster innovation and real-world problem-solving among students. Similarly, the Partnership for 21st Century Skills (P21) Framework (2009) underscores the need for teachers to model and integrate these competencies into their teaching strategies to enhance student learning outcomes. Wegerif (2010) further explores how teachers play a crucial role in developing students' creativity and critical thinking, aligning with findings that educators must be able to analyze, evaluate, and refine their ideas to maximize instructional effectiveness.

Moreover, Saavedra and Opfer (2012) argue that mastering 21st-century teaching requires teachers to engage in continuous professional development to strengthen their problem-solving and reflective thinking abilities. Schleicher (2012) also supports this view, stating that equipping teachers with innovation skills, particularly in analyzing data, recognizing patterns, and proposing creative solutions, is necessary to meet future workforce demands. Additionally, Binkley et al. (2012) categorize 21st-century skills into cognitive, interpersonal, and intrapersonal domains, emphasizing the importance of educators' ability to establish connections between concepts, analyze information critically, and formulate relevant solutions to educational challenges.

Table 8. *The level of teachers' 21st-century skills in the following areas of communication skills.*

<i>Indicator</i>	<i>Mean</i>	<i>SD</i>	<i>Interpretation</i>
Approach other learners to start or join in a conversation	4.45	0.653	Very High Level
Take action based on the leader's instructions.	4.41	0.706	Very High Level
Perform a well-defined role/task toward the attainment of a shared goal.	4.29	0.723	Very High Level
Recognize and respond to eye and hand movements, facial expressions, and other gestures.	4.27	0.645	Very High Level
Examine their behaviors and how these affect them and the people around them.	4.24	0.649	Very High Level
Share information/resources with other members	4.23	0.717	Very High Level
Perform tasks requiring interdependence and role flexibility.	4.20	0.759	Very High Level
Plan how to address behaviors that usually produce unsatisfying consequences.	4.17	0.720	High Level
Use simple words and sentences when talking to children.	4.17	0.648	High Level
Use appropriate language register depending on the context (formal or informal)	4.17	0.702	High Level
Utilize body language (kinesics) and touch (haptics), as well as optimize the physical distance between the communicators (proxemics) to respond appropriately in a given situation.	4.15	0.633	High Level
Overall	4.25	0.364	Very High Level

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 8 shows that teachers' 21st-century communication skills are generally very high (Overall Mean = 4.25, SD = 0.364), indicating that they are highly prepared in this domain. The highest-rated indicator is "approach other learners to start or join in a conversation" (Mean = 4.45, SD = 0.653), signifying that those teachers are confident initiating and engaging in conversations, a fundamental skill for effective communication and collaboration.

Other indicators that also received a very high-level rating include "take actions based on the leader's instructions" (Mean = 4.41, SD = 0.706), "perform well-defined role/task toward the attainment of a shared goal" (Mean = 4.29, SD = 0.723), and "recognize and respond to eye and hand movements, facial expressions, and other gestures" (Mean = 4.27, SD = 0.645). Additional indicators such as "examine their behaviors and how these affect them, and the people around them" (Mean = 4.24, SD = 0.649), "share information/resources with other members" (Mean = 4.23, SD = 0.717), and "ask specific information and make follow-up comments about the topic of conversation" (Mean = 4.23, SD = 0.675) also fall within the very high-level category.

Meanwhile, the lowest-rated indicators, though still categorized at a high level, include "plan how to address behaviors that usually produce unsatisfying consequences" (Mean = 4.17, SD = 0.720), "use simple words and sentences when talking to children" (Mean = 4.17, SD = 0.648), "use appropriate language register depending on the context (formal or informal)" (Mean = 4.17, SD = 0.702), and "utilize body language (kinesics) and touch (haptics); as well as optimize physical distance between the communicators (proxemics) to respond appropriately in a given situation" (Mean = 4.15, SD = 0.633).

Effective communication is a fundamental 21st-century skill that plays a crucial role in teaching and learning. Trilling and Fadel (2009) highlight that strong communication abilities enhance collaboration, problem-solving, and professional effectiveness, allowing educators to foster active participation and teamwork in the classroom.

Similarly, the Partnership for 21st Century Learning (P21) (2015) emphasizes communication as one of the core competencies essential for success in modern education, noting the importance of verbal and non-verbal communication, listening skills, and the ability to express ideas clearly. Hargie (2017) further supports this by exploring how teachers' verbal and non-verbal communication proficiency



significantly impacts student engagement and learning outcomes. Using body language, tone, and appropriate language registers enables teachers to create more interactive and responsive learning environments.

Moreover, Gonzales and Alipio (2021) discuss the significance of effective communication in engaging students, particularly in an era where digital platforms have transformed the learning process. Their study suggests that teachers who actively share information, engage in meaningful discussions, and adapt their communication strategies to different contexts can better support student learning. Darling-Hammond et al. (2020) also emphasize that communication is integral to deeper understanding, professional collaboration, and classroom management.

Furthermore, the National Education Association (NEA) (2012) highlights communication as essential in fostering teamwork, critical thinking, and cultural awareness, stressing that teachers must adapt their communication styles to meet diverse student needs.

Table 9. *Level of teachers' 21st-century skills in Life and Career Skills.*

Indicator	Mean	SD	Interpretation
Conduct a cost-benefit analysis.	4.38	0.659	Very High Level
Read various texts and information on a topic to gain different perspectives before deciding.	4.25	0.710	
Make opportunities to develop the talents of others.	4.17	0.720	Very High Level
Set good examples for classmates and peers.	4.15	0.692	Very High Level
Participate in cultural activities in school.	4.07	0.744	High Level
Organize their time to exercise punctuality.	4.05	0.662	High Level
Show readiness, awareness, and ability to plan well when faced with natural calamities (e.g., typhoons, earthquakes, fires, etc.)	4.03	0.785	High Level
Show prudence in spending.	4.01	0.679	High Level
Set academic goals and persevere.	3.92	0.710	High Level
Exhibit honesty, especially with teachers, when they do not understand instructions.	3.92	0.776	High Level
Overall	4.09	0.319	High Level

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 9 shows that the level of teachers' 21st-century skills in Life and Career Skills is generally high (Overall Mean = 4.09, SD = 0.319), indicating that teachers are well-prepared in this domain. The highest-rated indicator is "conduct cost-benefit analysis" (Mean = 4.38, SD = 0.659), suggesting that teachers are highly skilled in evaluating the advantages and disadvantages of different options before making decisions, which is essential in their professional and personal lives.

Another indicator that falls under the very high-level category is "reading various texts and information on a topic to gain different perspectives before making a decision" (Mean = 4.25, SD = 0.710). It highlights teachers' ability to critically analyze information from multiple sources, enhancing their decision-making skills. Similarly, "make opportunities to develop the talents of others" (Mean = 4.17, SD = 0.720) and "set good examples for classmates and peers" (Mean = 4.15, SD = 0.692) are also rated at a very high level, reflecting their commitment to mentoring and serving as role models for students and colleagues.

Other indicators that were rated at a high level include "participate in cultural activities in school" (Mean = 4.07, SD = 0.744), "organize their time to exercise punctuality" (Mean = 4.05, SD = 0.662), and "listen to the opinions of people from other cultures" (Mean = 4.03, SD = 0.707). The lowest-rated indicators, though still at a high level, include "set academic goals and persevere" (Mean = 3.92, SD = 0.710) and "exhibit honesty, especially with teachers when they do not understand instructions" (Mean = 3.92, SD = 0.776).

Assessing teachers' 21st-century skills, particularly Life and Career Skills, is essential for fostering effective teaching practices. Trilling and Fadel (2009) emphasize that competencies such as critical thinking, problem-solving, and adaptability are vital for educators to navigate the evolving educational landscape. Similarly, Banks and Banks (2019) highlight the importance of cultural awareness and responsiveness in teaching, which aligns with the ability to listen to diverse perspectives and participate in cultural activities. These skills enhance teachers' professional growth and positively impact student outcomes by modeling lifelong learning and adaptability.

Table 10. *The extent of teacher readiness for implementing the MATATAG Curriculum in terms of knowledge and understanding of the new curriculum.*

Indicator	Mean	SD	Interpretation
"I am familiar with the key concepts and goals of the new curriculum."	4.45	0.622	Very Highly Ready
"I understand the philosophy behind the MATATAG Curriculum and its focus on inquiry-based learning."	4.42	0.552	Very Highly Ready
"I understand the competencies and learning outcomes required for my subject area."	4.37	0.642	Very Highly Ready
"I have a clear idea of how the new curriculum aligns with the previous curriculum."	4.34	0.680	Very Highly Ready
"I am aware of the changes in assessment methods introduced by the new curriculum."	4.24	0.678	Very Highly Ready
Overall	4.36	0.356	Very Highly Ready

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 10 shows that teacher readiness for implementing the MATATAG Curriculum is very high in terms of knowledge and understanding of the new curriculum (Overall Mean = 4.36, SD = 0.356). It indicates that teachers are well-prepared and confident in their knowledge of the curriculum framework, competencies, and assessment methods.

The highest-rated indicator is "I am familiar with the key concepts and goals of the new curriculum" (Mean = 4.45, SD = 0.622), suggesting that teachers have a firm grasp of the fundamental principles and objectives of the MATATAG Curriculum. Following closely: "I understand the philosophy behind the MATATAG Curriculum and its focus on inquiry-based learning." (Mean = 4.42, SD = 0.552). Other indicators include "I understand the competencies and learning outcomes required for my subject area." (Mean = 4.37, SD = 0.642) and "I have a clear idea of how the new curriculum aligns with the previous curriculum." (Mean = 4.34, SD = 0.680), also received highly ready ratings.

The lowest-rated indicator, though still at a very high readiness level, is "I am aware of the changes in assessment methods introduced by the new curriculum." (Mean = 4.24, SD = 0.678). While teachers are generally aware of the updated assessment strategies, further training and support may enhance their confidence and implementation of new evaluation techniques. Teacher readiness for curriculum implementation is a crucial factor in the success of educational reforms, particularly in the Philippine context. According to Darling-Hammond et al. (2017), professional development equips teachers with the necessary skills to adapt to new curricula, including understanding learning competencies and updated assessment methods.

Moreover, research by David and Dizon (2019) highlights that teachers who undergo comprehensive training programs exhibit higher confidence and preparedness in implementing curriculum changes, such as those introduced in the K to 12 reform and the MATATAG Curriculum. Inquiry-based learning, a core component of the MATATAG Curriculum, necessitates a shift from traditional teaching approaches to student-centered methodologies. Kuhlthau et al. (2015) assert that when teachers fully understand the principles of inquiry-based learning, they are more likely to create engaging and meaningful learning experiences for students. It aligns with the findings of Cruz and Llego (2021), who emphasize that Filipino teachers' ability to grasp new pedagogical approaches significantly affects student learning outcomes. Opfer and Pedder (2016) stress the need for continuous professional development, noting that teachers require sustained learning opportunities to stay updated on curriculum reforms and evolving assessment strategies.

Similarly, DeLuca et al. (2019) highlight the importance of equipping teachers with formative and summative assessment techniques to ensure proper curriculum alignment. Furthermore, Sevilla and Alonzo (2023) discuss how curriculum alignment is crucial in smooth transitions between educational frameworks, enabling teachers to integrate new content effectively. The study of Bernardo and Mendoza (2022) further underscores the role of institutional support in strengthening teachers' preparedness for curriculum implementation and advocating for increased access to professional development programs.

Table 11. *The extent of teacher readiness for implementing the MATATAG Curriculum in applying pedagogical strategies.*

Indicator	Mean	SD	Interpretation
"I am confident in using inquiry-based learning strategies in my classroom."	4.50	0.575	Very Highly Ready
"I can integrate creative thinking and problem-solving tasks into my lessons."	4.46	0.590	Very Highly Ready
"I can effectively implement student-centered teaching methods as required by the new curriculum."	4.44	0.621	Very Highly Ready
"I am prepared to adapt my teaching methods to promote higher-order thinking skills."	4.30	0.639	Very Highly Ready
"I feel comfortable applying differentiated instruction to meet diverse student needs under the new curriculum."	4.22	0.727	Very Highly Ready
Overall	4.38	0.332	Very Highly Ready

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 11 illustrates the extent of teacher readiness for implementing the MATATAG Curriculum in terms of applying pedagogical strategies at a very high readiness level (Overall Mean = 4.38, SD = 0.332). The highest-rated indicator is "I am confident in using inquiry-based learning strategies in my classroom" (Mean = 4.50, SD = 0.575). It suggests that teachers feel well-equipped to facilitate student-centered, exploratory learning approaches that promote critical thinking and active engagement.

Closely following is "I can integrate creative thinking and problem-solving tasks into my lessons" (Mean = 4.46, SD = 0.590), which highlights teachers' confidence in incorporating activities that develop students' analytical and problem-solving skills. Another strong area is "I can effectively implement student-centered teaching methods as required by the new curriculum" (Mean = 4.44, SD = 0.621). Other indicators, such as "I am prepared to adapt my teaching methods to promote higher-order thinking skills" (Mean = 4.30, SD = 0.639), show teachers recognize the importance of fostering deeper cognitive engagement. Meanwhile, the lowest-rated indicator, though still at a very high readiness level, is "I feel comfortable applying differentiated instruction to meet diverse student needs under the new curriculum" (Mean = 4.22, SD = 0.727).

According to Bernardo (2019), inquiry-based learning is essential in fostering critical thinking and problem-solving skills among Filipino students, aligning with teachers' high confidence in using this approach. Similarly, David et al. (2021) emphasize that student-centered teaching methods improve engagement and learning outcomes in the Philippine basic education system, reinforcing that teachers feel well-prepared for this instructional shift. Meanwhile, the Department of Education (DepEd, 2023) advocates for higher-order thinking skills (HOTS) as a core component of the MATATAG Curriculum, emphasizing that teachers must integrate creative

and analytical tasks to enhance students' cognitive development.

Research by Ocampo and Cabansag (2020) highlights that differentiated instruction is crucial for addressing diverse learning needs in multicultural classrooms. Yet, many Filipino teachers still require further professional development to implement this effectively. Additionally, Salazar and Manansala (2022) found that continuous teacher training and professional learning communities significantly impact the successful execution of curriculum reforms in the Philippines.

Table 12. *The extent of teacher readiness for implementing the MATATAG Curriculum regarding access to curriculum materials.*

Indicator	Mean	SD	Interpretation
"I have access to adequate teaching materials aligned with the new curriculum."	4.48	0.557	Very Highly Ready
"The learning materials available support the advanced competencies of the MATATAG Curriculum."	4.45	0.622	Very Highly Ready
"I have the textbooks and instructional guides for teaching the new curriculum."	4.42	0.586	Very Highly Ready
"I can easily access supplementary resources (e.g., online platforms, educational software) to enhance student learning."	4.32	0.675	Very Highly Ready
"The school provides sufficient digital and technological resources for the curriculum implementation."	3.24	1.124	Moderately Ready
Overall	4.18	0.346	Very Highly Ready

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 12 presents the extent of teacher readiness for implementing the MATATAG Curriculum in terms of access to curriculum materials. This readiness is very high (Overall Mean = 4.18, SD = 0.346). It indicates that teachers generally have access to essential materials needed for the curriculum, although certain areas may require further improvement.

The highest-rated indicator is "I have access to adequate teaching materials aligned with the new curriculum" (Mean = 4.48, SD = 0.557), suggesting that most teachers feel well-supported with the necessary instructional materials. Closely following is "The learning materials available support the advanced competencies of the MATATAG Curriculum." (Mean = 4.45, SD = 0.622), which signifies confidence in the quality and alignment of provided resources with curriculum standards. Another key strength is "I have the textbooks and instructional guides needed for teaching the new curriculum" (Mean = 4.42, SD = 0.586), emphasizing that teachers have access to foundational materials that facilitate lesson delivery. Other indicators, such as "I can easily access supplementary resources (e.g., online platforms, educational software) to enhance student learning" (Mean = 4.32, SD = 0.675), reflect that while teachers can generally obtain additional resources, accessibility may not be uniform across all areas. The lowest-rated indicator is "The school provides sufficient digital and technological resources for the curriculum implementation" (Mean = 3.24, SD = 1.124), which falls under the moderately ready category.

Access to curriculum materials is essential for ensuring teacher readiness in curriculum implementation. UNESCO (2016) emphasizes that well-structured instructional materials improve teacher confidence and efficiency during curriculum transitions. However, disparities in resource availability can impact readiness levels. Darling-Hammond (2017) highlights that challenges in accessing supplementary resources may arise due to financial or logistical constraints, leading to inconsistencies in curriculum implementation. In the Philippine context, Bernardo and Mendoza (2019) stress that access to quality instructional materials is a key factor in the effective implementation of new educational reforms, including the K-12 curriculum. Similarly, the Department of Education (DepEd, 2022) has recognized the need for continuous improvement in the distribution of teaching resources, particularly in remote and underserved areas. Additionally, Nuqui and Cruz (2021) found that teachers with access to digital resources and updated instructional materials exhibit higher confidence and adaptability in implementing curriculum changes.

Institutional support is critical in ensuring teachers have adequate teaching materials, as schools that invest in printed and digital resources meaningfully contribute to teacher preparedness. These findings align with the study results, where teachers reported a very high level of readiness regarding access to core teaching materials but identified gaps in the availability of digital and technological resources.

Table 13. *The extent of teacher readiness for implementing the MATATAG Curriculum in training and professional development.*

Indicator	Mean	SD	Interpretation
"I feel supported by ongoing professional development opportunities that address issues related to curriculum implementation."	4.43	0.636	Very Highly Ready
"I feel that the professional development sessions addressed the key challenges of the new curriculum."	4.37	0.594	Very Highly Ready
"I received adequate support in understanding the advanced competencies introduced in the MATATAG Curriculum."	4.31	0.686	Very Highly Ready
"I have had opportunities to engage in hands-on training specific to the new curriculum's methodologies."	4.30	0.684	Very Highly Ready
"My training has adequately prepared me to implement the new curriculum."	4.27	0.744	Very Highly Ready
Overall	4.34	0.322	Very Highly Ready

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 13 shows that teacher readiness for implementing the MATATAG Curriculum in terms of training and professional development is very high (Overall Mean = 4.34, SD = 0.322). It indicates that teachers feel well-supported through training programs and professional development activities that equip them for curriculum implementation.

The highest-rated indicator is "I feel supported by ongoing professional development opportunities that address issues related to curriculum implementation" (Mean = 4.43, SD = 0.636), suggesting that teachers appreciate continuous learning opportunities that help them navigate curriculum changes. The following closely: "I feel that the professional development sessions addressed the key challenges of the new curriculum" (Mean = 4.37, SD = 0.594), highlighting that training programs have been relevant and effective in tackling the challenges associated with curriculum adoption.

Other indicators, such as "I received adequate support in understanding the advanced competencies introduced in the MATATAG Curriculum." (Mean = 4.31, SD = 0.686) and "I have had opportunities to engage in hands-on training specific to the new curriculum's methodologies." (Mean = 4.30, SD = 0.684), demonstrate that teachers have been given substantial exposure to the curriculum's core competencies and instructional approaches. The lowest-rated indicator is "The training I received has adequately prepared me to implement the new curriculum" (Mean = 4.27, SD = 0.744), which, while still categorized as very highly ready, suggests some room for improvement in ensuring that all teachers feel fully prepared for the transition.

This high level of readiness aligns with the Philippine Professional Standards for Teachers, which emphasize the importance of continuous professional development to enhance teaching competencies and curriculum implementation (Department of Education, 2017). Lopez (2022) stressed that effective curriculum implementation heavily relies on teacher training and ongoing professional development.

Additionally, a study by the Australian Council for Educational Research (2019) found that peer learning processes for teachers, such as preparing, reviewing, and presenting lessons, support the implementation of national curricula. This is consistent with a study on Filipino Teacher Professional Development in the New Normal, which revealed that teachers were exposed to webinars and training on online teaching and learning, technological capacity, and mental health during the pandemic.

Table 14. *The extent of teacher readiness for implementing the MATATAG Curriculum in terms of preparedness to meet curriculum demands.*

Indicator	Mean	SD	Interpretation
"I am ready to address challenges that may arise during the implementation of the new curriculum."	4.48	0.592	Very Highly Ready
"I am ready to handle the advanced competencies required in Grades 1, 4, and 7 under the new curriculum."	4.46	0.590	Very Highly Ready
"I feel prepared to assess student performance using the new curriculum's assessment tools."	4.38	0.673	Very Highly Ready
"I am confident in delivering lessons that promote 21st-century skills as emphasized in the new curriculum."	4.33	0.663	Very Highly Ready
"I feel prepared to meet the learning objectives of the new curriculum in my subject area."	4.31	0.686	Very Highly Ready
Overall	4.39	0.298	Very Highly Ready

**Legend:** 5 (4.20–5.00) – Very High Level, Highly Prepared; 4 (3.40–4.19) – High Level, prepared; 3 (2.60–3.39) – Average Level, Moderately Prepared; 2 (1.80–2.59) – Low Level, Slightly Prepared; 1 (1.00–1.79) – Very Low Level, Not Prepared.

Table 14 shows the extent of teacher readiness for the implementation of the MATATAG Curriculum in terms of preparedness to meet curriculum demands. This readiness is very high (Overall Mean = 4.39, SD = 0.298), suggesting that teachers feel well-equipped to handle the requirements and challenges of the new curriculum.

The highest-rated indicator is "I am ready to address challenges that may arise during the implementation of the new curriculum" (Mean = 4.48, SD = 0.592), indicating strong confidence among teachers in overcoming potential difficulties. It is followed by "I am ready to handle the advanced competencies required in Grades 1, 4, and 7 under the new curriculum" (Mean = 4.46, SD = 0.590), highlighting their preparedness to effectively teach the new set of competencies.

Other indicators, such as "I feel prepared to assess student performance using the new curriculum's assessment tools." (Mean = 4.38, SD = 0.673) and "I am confident in delivering lessons that promote 21st-century skills as emphasized in the new curriculum." (Mean = 4.33, SD = 0.663), further emphasize teachers' confidence in adapting their instructional approaches to align with curriculum goals. The lowest-rated indicator is "I feel prepared to meet the learning objectives of the new curriculum in my subject area." (Mean = 4.31, SD = 0.686), though still categorized as very highly ready, suggesting that some teachers may need additional support in fully aligning their instruction with the expected learning outcomes.

Recent studies have explored teacher readiness for implementing new curricula, offering insights that support the findings in Table 15 regarding preparedness to meet curriculum demands. A Calubcob National High School study assessed teachers' preparedness for the MATATAG Curriculum, focusing on their knowledge, skills, and resources to effectively deliver the curriculum and promote 21st-century skills among students. Similarly, research on the K–12 curriculum reform in the Philippines highlighted the importance of



teacher readiness in successfully adopting new educational frameworks.

However, Ornstein and Hunkins (2018) point out that despite high levels of perceived preparedness, teachers may still encounter difficulties with unfamiliar assessment tools and new competency requirements, reinforcing the need for ongoing support and resource accessibility. Bandura's (1997) theory of self-efficacy further supports the idea that teachers with high confidence in their abilities are more likely to embrace curriculum changes and effectively implement new pedagogical approaches.

Table 15. *Test of significant difference in teachers' readiness to implement the MATATAG Curriculum when grouped according to socio-demographic profile.*

Variable	Sum of Squares		Mean Square		F/t	p-value
	Between	Within	Between	Within		
Age	.076	10.173	.019	.104	.182	.947
Sex					-1.221	.225
Years of Teaching Experience	.419	9.829	.052	.105	.501	.853

Table 15 reveals the significant difference in tests on teachers' readiness to implement the MATATAG Curriculum when grouped according to their socio-demographic profile, revealing no statistically significant differences among the variables.

For age ( $F = 0.182$ ,  $p\text{-value} = 0.947$ ), the  $p$ -value is much greater than the standard significance level (0.05), indicating that teachers' readiness does not significantly differ based on age. Similarly, for sex ( $t = -1.221$ ,  $p\text{-value} = 0.225$ ), there is no significant difference in preparedness between male and female teachers. Lastly, for years of teaching experience ( $F = 0.501$ ,  $p\text{-value} = 0.853$ ), the result also shows no significant variation in teachers' readiness based on their length of experience. Therefore, the null hypothesis is not rejected.

Research on curriculum implementation highlights that teachers' readiness is influenced more by institutional support, professional development, and resource availability than socio-demographic factors such as age, sex, or years of teaching experience. Darling-Hammond (2012) emphasizes that teaching experience alone does not determine adaptability; instead, continuous engagement with educational innovations plays a more crucial role. UNESCO (2020) further supports this by indicating that male and female teachers show equal adaptability to curriculum reforms when given adequate training and resources. In the Philippine context, Bautista and Ortega (2019) found no significant differences in teachers' readiness for the K-12 curriculum based on age, sex, or years of experience, reinforcing the idea that training and administrative support are more impactful.

Similarly, Torres and Del Rosario (2021) discovered that teachers who received comprehensive training demonstrated higher confidence in implementing new curricula, regardless of their demographic background. A study by Villanueva et al. (2022) also revealed that teacher readiness in Southeast Asia depended more on access to instructional materials and collaboration among educators rather than personal characteristics. Dela Cruz and Ramos (2021) analyzed teachers' preparedness for curriculum reforms in a Philippine-based study. They found that professional development programs were crucial to their confidence and effectiveness in implementing new frameworks.

Table 16. *Test the significant relationship between teachers' 21st-century skills in information, media, and technology, Learning and innovation skills, communication skills, and life and career skills, and their readiness to implement the MATATAG Curriculum.*

Variable	R	p-value	Interpretation
Information	-.055	.578	Not Significant
Media	-.123	.214	Not Significant
Technology Skills	-.014	.887	Not Significant
Learning And Innovation Skills	.161	.104	Not Significant
Communication Skills	-.094	.346	Not Significant
Life And Career Skills	-.092	.354	Not Significant
Overall	-.047	.637	Not Significant

Table 16 shows the test of the significant relationship between teachers' 21st-century skills—specifically in information, media, and technology skills; learning and innovation skills; communication skills; and life and career skills—and their readiness to implement the MATATAG Curriculum reveals no statistically significant relationships across all variables.

For information skills ( $r = -0.055$ ,  $p\text{-value} = 0.578$ ), media skills ( $r = -0.123$ ,  $p\text{-value} = 0.214$ ), and technology skills ( $r = -0.014$ ,  $p\text{-value} = 0.887$ ), the results indicate that there is no meaningful correlation between these digital competencies and teachers' readiness. Similarly, learning and innovation skills ( $r = 0.161$ ,  $p\text{-value} = 0.104$ ) do not correlate significantly with preparedness. The findings also show no significant correlation between communication skills ( $r = -0.094$ ,  $p\text{-value} = 0.346$ ) and life and career skills ( $r = -0.092$ ,  $p\text{-value} = 0.354$ ).

The overall correlation ( $r = -0.047$ ,  $p\text{-value} = 0.637$ ) confirms that teachers' 21st-century skills are not significantly linked to their readiness to implement the MATATAG Curriculum. Therefore, the null hypothesis is not rejected.

Voogt and Roblin (2012) define these skills as information, media, technology literacy, learning and innovation, communication, and



life and career skills. Ornstein and Hunkins (2017) argue that curriculum implementation is influenced more by professional development, institutional support, and external factors rather than by individual competencies alone. This perspective aligns with the study of Bautista, Bernardo, and Ocampo (2019) on the Philippine K-12 curriculum, which concluded that teachers' readiness was more strongly linked to access to institutional support and pedagogical training than to their 21st-century skills.

Panti and Mella (2021) found that although teachers possessed strong digital and communication skills, their readiness to implement the K-12 curriculum depended more on continuous training, availability of instructional resources, and administrative support. Moreover, Ramos and Delos Santos (2022) examined teachers' preparedness for a revised basic education curriculum. They concluded that institutional capacity-building programs played a more crucial role than individual skills in ensuring effective curriculum implementation. Rahayu et al. (2021) also noted that while 21st-century skills can enhance teaching strategies, they do not directly impact a teacher's readiness to implement a curriculum. Instead, preparedness is closely tied to professional development and familiarity with curriculum guidelines.

## Conclusions

Based on the findings of this study, it can be concluded that:

The demographic profile of teachers indicates a workforce composed mainly of early and mid-career educators. The dominance of female teachers reflects the broader trend of teaching as a female-dominated profession. Additionally, in terms of experience, most have extensive teaching backgrounds, while a smaller proportion are early-career teachers. This distribution suggests that while teachers bring varying experience levels, most are already in the later stages of their careers, which may influence their perspectives on curriculum implementation and professional development needs.

Teachers exhibit high 21st-century skills, particularly in information, communication, and learning innovation. They demonstrate strong competencies in evaluating sources, engaging in multimedia presentations, and initiating conversations. However, technology skills are average, with notable weaknesses in manipulating scientific tools, assembling robotics, and using audio equalizers. While their media literacy and life and career skills are high, certain aspects, such as digital content creation, require improvement. These findings suggest that while teachers are well-equipped with essential 21st-century skills, targeted digital and technical competencies training would be beneficial.

Teachers' information skills are powerful, signifying high preparedness in this domain. They excel in distinguishing fact from fiction, evaluating sources, and cross-referencing data, demonstrating a strong foundation in critical thinking and information literacy. However, their lowest-rated skill—discovering patterns in classical and contemporary music—suggests a relative gap in interdisciplinary analytical abilities. These results indicate the need for continued emphasis on information literacy while exploring ways to enhance interdisciplinary analytical skills in the curriculum.

Teachers demonstrate a very high level of readiness for the MATATAG Curriculum. However, particular areas require further support, including assessment methods, differentiated instruction, access to digital resources, and practical training applications. Addressing these areas through targeted interventions such as professional development, resource allocation, and enhanced training programs will ensure a more effective curriculum implementation.

Further statistical analysis reveals no significant differences in teachers' readiness based on their demographic characteristics, as indicated by non-significant results for age, sex, and teaching experience. This finding suggests that readiness for curriculum implementation is not influenced by these demographic factors, reinforcing the idea that training and support should be provided to all teachers, regardless of their background.

Moreover, results indicate no significant correlation between teachers' 21st-century skills and readiness to implement the MATATAG Curriculum. The statistical analysis shows that none of the measured skills—including information, media, technology, learning and innovation, communication, and life and career skills—have a meaningful association with readiness. It suggests that while these competencies are crucial for modern education, they do not necessarily determine a teacher's preparedness for curriculum implementation, emphasizing the need for additional contextual and instructional support.

Based on the findings and conclusions of the study, the following thesis recommendations can be made:

Teachers' continuous professional development is highly encouraged, particularly in assessment methods, differentiated instruction, and technology integration. Strengthening digital literacy and technical skills, such as content creation, robotics, and multimedia tools, will enhance classroom engagement. Teachers should also actively participate in professional learning communities, mentoring programs, and peer coaching to exchange best practices and innovative teaching strategies. Additionally, seeking hands-on training and real-world applications of the curriculum will further boost their confidence and preparedness in delivering lessons effectively.

Learners are encouraged to take an active role in their education, which is essential. Students are encouraged to maximize the use of digital resources and technology to develop self-directed learning skills. Engaging in learning activities that foster creativity, critical thinking, and problem-solving will help them adapt to the evolving educational landscape. Providing constructive feedback to teachers about their learning experiences can also contribute to refining instructional approaches. Furthermore, students should cultivate

adaptability and resilience in embracing different assessment and learning strategies introduced in the MATATAG Curriculum.

School Administrators may ensure that a supportive learning environment is crucial. Providing ongoing professional development opportunities for teachers on innovative teaching approaches, technology use, and differentiated instruction will enhance their instructional capabilities. Administrators should also allocate sufficient resources, including digital tools, internet access, and curriculum-aligned instructional materials, to support effective teaching and learning. Strengthening mentorship programs, coaching sessions, and curriculum implementation workshops will further empower teachers. Fostering a collaborative school culture that encourages open communication between teachers, students, parents, and stakeholders will create a more effective and responsive educational system.

Parents and stakeholders may actively participate in education. Engaging in school programs, parent-teacher conferences, and curriculum discussions will help them stay informed about their children's learning journey. Providing a supportive home environment that nurtures 21st-century skills, such as critical thinking, problem-solving, and digital literacy, will further reinforce what students learn in school. Parents and stakeholders can also work closely with teachers and administrators to address students' educational needs and advocate for better policies, funding, and programs that support quality learning experiences for all students.

Further research is encouraged for future researchers to explore the long-term impact of teachers' professional development on curriculum implementation and student outcomes. Investigating strategies to enhance teachers' digital and technological competencies can provide solutions for improving technology integration in education. Future research may also focus on interdisciplinary approaches to enhance student engagement and learning effectiveness. Additionally, assessing the impact of various instructional methodologies on the adaptability and effectiveness of the MATATAG Curriculum in diverse learning settings will contribute to its continuous improvement.

Through the collective efforts of teachers, students, school administrators, parents, stakeholders, and researchers, the MATATAG Curriculum can be implemented successfully, ensuring a more effective and future-ready education system. By fostering collaboration, innovation, and continuous learning, we can create meaningful and sustainable education improvements for all learners.

## References

- Avalos, B. (2018). Teacher professional development in Teaching and Teacher Education over ten years. *Teaching and Teacher Education*, 63, 48-60.
- Banerjee, N., Stearns, E., Moller, S., & Mickelson, R. A. (2017). Gender differences in teachers' perceptions of student engagement in STEM subjects. *International Journal of Science Education*, 39(1), 1-24. <https://doi.org/10.1080/09500693.2016.1273477>
- Banks, J. A., & Banks, C. A. M. (Eds.). (2019). *Multicultural education: Issues and perspectives* (10th ed.). John Wiley & Sons.
- Battelle for Kids. (n.d.). P21 framework definitions. [https://static.battelleforkids.org/documents/p21/p21\\_framework\\_brief.pdf](https://static.battelleforkids.org/documents/p21/p21_framework_brief.pdf) Marietta College+3Battelle for Kids+3Battelle for Kids+3
- Bautista, M. C., & Ortega, R. A. (2019). Assessing teachers' readiness for K-12 curriculum implementation in the Philippines: A study on demographic factors and professional training. *Philippine Journal of Education and Development*, 46(2), 112-129.
- Bernardo, A. B. I. (2019). Critical thinking in Philippine education: Challenges and opportunities for curriculum reform. *Philippine Journal of Education*, 94(2), 45-60.
- Bernardo, A. B. I., & Mendoza, J. V. (2019). Challenges and Opportunities in the Implementation of the K-12 Curriculum in the Philippines. *Philippine Journal of Education*, 94(2), 15-30.
- Bernardo, A. B. I., & Mendoza, R. F. (2022). Teacher readiness and institutional support in curriculum implementation: Insights from the Philippine education sector. *Journal of Educational Research and Policy Studies*, 15(2), 45-62.
- Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., Miller-Ricci, M., & Rumble, M. (2012). Defining 21st-century skills. In P. Griffin, B. McGaw, & E. Care (Eds.), *Assessment and teaching of 21st century skills* (pp. 17-66). Springer. [https://doi.org/10.1007/978-94-007-2324-5\\_2](https://doi.org/10.1007/978-94-007-2324-5_2)
- Blazar, D., & Kraft, M. A. (2017). Teacher and teaching effects on students' attitudes and behaviors. *Educational Evaluation and Policy Analysis*, 39(1), 146-170. <https://doi.org/10.3102/0162373716670260>
- Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals*. David McKay Company.
- Buckingham, D. (2015). Defining digital literacy: What do young people need to know about digital media? *Nordic Journal of Digital Literacy*, 10(1), 21-35. <https://doi.org/10.18261/ISSN1891-943X-2015-01-03>
- Cruz, M. T., & Llego, M. A. (2021). The impact of pedagogical training on teacher effectiveness in the Philippines: A study on inquiry-based learning. *Philippine Journal of Teacher Education*, 27(1), 113-129.

- Darling-Hammond, L. (2012). *The right to learn: A blueprint for creating schools that work*. Jossey-Bass.
- Darling-Hammond, L. (2015). *The flat world and education: How America's commitment to equity will determine our future*. Teachers College Press.
- Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? *European Journal of Teacher Education*, 40(3), 291-309. <https://doi.org/10.1080/02619768.2017.1315399>
- Darling-Hammond, L. (2017). Teacher Education Around the World: What Can We Learn from International Practice? *European Journal of Teacher Education*, 40(3), 291-309.
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2), 97-140. <https://doi.org/10.1080/10888691.2018.1537791>
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- David, C. C., & Dizon, N. C. (2019). Assessing teacher preparedness for curriculum reforms: Evidence from the Philippine K to 12 implementations. *Asia Pacific Journal of Education*, 39(4), 567-583.
- David, C. C., Alonzo, D. R., & Garcia, M. T. (2021). Student-centered teaching approaches in Philippine K-12 education: Implications for teacher training and curriculum development. *Philippine Education Review*, 15(1), 32-50.
- Dela Cruz, P. J., & Ramos, L. A. (2021). Teacher preparedness in implementing curriculum reforms: A case study of Philippine educators. *Journal of Educational Policy and Practice*, 18(1), 55-72.
- DeLuca, C., LaPointe-McEwan, D., & Luhanga, U. (2019). Teacher assessment literacy: A review of international literature on definitions, assessment knowledge, and teacher learning. *Assessment in Education: Principles, Policy & Practice*, 26(2), 91-107.
- Department of Education (DepEd). (2022). *Ensuring Access to Quality Teaching and Learning Materials for Philippine Schools*. DepEd Official Gazette. Retrieved from [www.deped.gov.ph](http://www.deped.gov.ph)
- Department of Education (DepEd). (2023). *MATATAG Curriculum: Strengthening foundational skills for Filipino learners*. Retrieved from DepEd Official Website
- Dewey, J. (1938). *Experience and education*. Macmillan.
- Drudy, S. (2008). Gender balance/gender bias: The teaching profession and the impact of feminization. *Gender and Education*, 20(4), 309-323. <https://doi.org/10.1080/09540250802190156>
- Empowering Teachers for Mental Health Resilience in the Birmingham HAF Programme - Believe Perform. <https://believeperform.com/case-studies/empowering-teachers-for-mental-health-resilience-in-the-birmingham-haf-programme/>
- Foulger, T. S., Graziano, K. J., Schmidt-Crawford, D. A., & Slykhus, D. A. (2013). Teacher educator technology competencies. *Journal of Digital Learning in Teacher Education*, 30(1), 1-10. <https://doi.org/10.1080/21532974.2013.10784716>
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945.
- Gonzales, M. T., & Alipio, M. M. (2021). Teachers' communication skills and student engagement in online learning. *International Journal of Learning, Teaching and Educational Research*, 20(1), 92-109. <https://doi.org/10.26803/ijlter.20.1.6>
- Hargie, O. (2017). *Skilled interpersonal communication: Research, theory, and practice* (6th ed.). Routledge.
- Hobbs, R. (2010). *Digital and media literacy: A plan of action*. The Aspen Institute. <https://doi.org/10.1162/inov.2010.5.2.46>
- Ingersoll, R., & Merrill, L. (2017). A quarter century of elementary and secondary teaching force changes: From 1987 to 2012. National Center for Education Statistics.
- Ingersoll, R., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research*, 81(2), 201-233. <https://doi.org/10.3102/0034654311403323>
- Jenkins, H., Purushotma, R., Weigel, M., Clinton, K., & Robison, A. J. (2006). *Confronting the challenges of participatory culture: Media education for the 21st century*. The MIT Press.
- Jensen, B., Roberts-Hull, K., Magee, J., & Ginnivan, L. (2016). Not so elementary: Primary school teacher quality in top-performing systems. National Center on Education and the Economy.
- Kimmons, R., Rosenberg, J. M., & Allman, B. (2018). Trends in technology use in education: Analyzing the TIMSS 2011 database. *Interactive Learning Environments*, 26(3), 286-302. <https://doi.org/10.1080/10494820.2017.1337037>

- Kuhlthau, C. C., Maniotes, L. K., & Caspari, A. K. (2015). Guided inquiry: Learning in the 21st century. Libraries Unlimited.
- Martin, C. S., & Mulvihill, T. M. (2017). Teacher readiness: A phenomenological study of an alternative certification teacher preparation program. *Journal of Education*, 197(1), 30-38. <https://doi.org/10.1177/0022057419857080>
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017-1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017-1054.
- National Education Association (NEA). (2012). Preparing 21st-century students for a global society: An educator's guide to the "Four Cs." Retrieved from <https://www.nea.org>
- Nuqui, A. V., & Cruz, R. V. (2021). The Role of Digital and Technological Resources in Enhancing Teacher Preparedness for Curriculum Reform. *International Journal of Educational Development*, 56, 110-124.
- Ocampo, D. & Cabansag, M. G. (2020). Differentiated instruction in Philippine public schools: Challenges and best practices. *Journal of Philippine Educational Research*, 18(3), 77-95.
- Opfer, V. D., & Pedder, D. (2016). Conceptualizing teacher professional learning. *Review of Educational Research*, 86(3), 472-513.
- Organization for Economic Cooperation and Development (OECD). (2019). Education at a Glance 2019: OECD Indicators. OECD Publishing.
- Partnership for 21st Century Learning (P21). (2015). Framework for 21st-century learning definitions. Retrieved from <http://www.battelleforkids.org/networks/p21>
- Partnership for 21st Century Skills (P21). (2009). Framework for 21st-century learning. Retrieved from <http://www.battelleforkids.org/networks/p21>
- Piaget, J. (1972). The psychology of the child. Basic Books.
- Quijano, A., & Rapatan, L. (2018). Teacher readiness for implementing the K to 12 Curriculum of Senior High School in the Division of Misamis Occidental, Philippines. *International Journal of Education and Research*, 6(1), 15-26.
- Redding, C., & Smith, T. M. (2016). Easy in, easy out: Are certified teachers turning over at increased rates, alternatively? *American Educational Research Journal*, 53(4), 1086-1125. <https://doi.org/10.3102/0002831216653206>
- Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417-458. <https://doi.org/10.1111/j.1468-0262.2005.00584.x>
- Rogers, E. M. (1962). Diffusion of Innovations. Free Press.
- Rots, I., Aelterman, A., & Devos, G. (2014). Teacher education graduates' choice (not) to enter the teaching profession: Does teacher education matter? *European Journal of Teacher Education*, 37(3), 279-294. <https://doi.org/10.1080/02619768.2013.845164>
- Saavedra, A. R., & Opfer, V. D. (2012). Learning 21st-century skills requires 21st-century teaching. *Phi Delta Kappan*, 94(2), 8-13. <https://doi.org/10.1177/003172171209400203>
- Salazar, R. & Manansala, J. (2022). The role of teacher training programs in successfully implementing curriculum reforms in the Philippines. *International Journal of Education and Pedagogy*, 27(4), 98-115.
- Schleicher, A. (2012). Preparing teachers and developing school leaders for the 21st century: Lessons from around the world. OECD Publishing. <https://doi.org/10.1787/9789264174559-en>
- Scott, C. L. (2015). The Futures of Learning 2: What kind of learning for the 21st century? UNESCO Education Research and Foresight (ERF) Working Papers Series, No. 14. <https://unesdoc.unesco.org/ark:/48223/pf0000242996>
- Sevilla, L. M., & Alonzo, R. P. (2023). Curriculum alignment and transition: Bridging the gap in Philippine education reforms. *International Journal of Curriculum Development*, 18(1), 88-102.
- Shakeshaft, C. (2016). Women in educational administration. Corwin Press.
- Skelton, C. (2012). Men teachers and the "feminized" primary school: A literature review. *Educational Review*, 64(1), 1-19. <https://doi.org/10.1080/00131911.2011.616634>
- Stronge, J. H., Ward, T. J., & Grant, L. W. (2011). What makes good teachers good? A cross-case analysis of the connection between teacher effectiveness and student achievement. *Journal of Teacher Education*, 62(4), 339-355. <https://doi.org/10.1177/0022487111404241>

Teachers College, Columbia University. (n.d.). Critical media literacy training program for educators. [https://www.tc.columbia.edu/tcademy/programs/all-offerings/critical-media-literacy-training-program-for-educators/Teachers College](https://www.tc.columbia.edu/tcademy/programs/all-offerings/critical-media-literacy-training-program-for-educators/Teachers%20College)

Torres, M. A., & Del Rosario, J. P. (2021). Professional development and curriculum adaptation: A study on teachers' perspectives in the Philippines. *Southeast Asian Journal of Educational Research*, 9(3), 88-105.

Trilling, B., & Fadel, C. (2009). *21st-century skills: Learning for life in our times*. John Wiley & Sons.

Ubias, L. D. (2024). School readiness, gaps, and prospects in implementing the MATATAG curriculum in Gonzaga West District: Basis for an intervention plan. *ISRG Journal of Arts, Humanities, and Social Sciences*, 2(5), [Article]. <https://doi.org/10.5281/zenodo.13752934>

UNESCO. (2016). *Teachers' Readiness and Access to Educational Resources: A Global Perspective*. United Nations Educational, Scientific, and Cultural Organization. Retrieved from [www.unesco.org](http://www.unesco.org)

UNESCO. (2020). *Education in a post-COVID world: Nine ideas for public action*. United Nations Educational, Scientific, and Cultural Organization.

UNESCO. (2021). *The world's teachers: A statistical profile*. United Nations Educational, Scientific, and Cultural Organization. <https://uis.unesco.org>

Villanueva, R. T., Santos, E. F., & Martinez, P. C. (2022). Curriculum implementation challenges and teacher adaptability in Southeast Asia: A comparative study. *Asian Journal of Educational Studies*, 15(4), 134-150.

Voogt, J., & Roblin, N. P. (2012). A comparative analysis of international frameworks for 21st-century competencies: Implications for national curriculum policies. *Journal of Curriculum Studies*, 44(3), 299–321.

Voogt, J., Erstad, O., Dede, C., & Mishra, P. (2013). Challenges to learning and schooling in the digital networked world of the 21st century. *Journal of Computer Assisted Learning*, 29(5), 403-413. <https://doi.org/10.1111/jcal.12029>

Wegerif, R. (2010). *Mind-expanding: Teaching for thinking and creativity in primary education*. McGraw-Hill Education.

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