

21st Century Classrooms and Work Performance of Public Elementary School Teachers

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Abstract

This study examined the extent of the effects of 21st-century classrooms on the work performance of public elementary school teachers in the Morong District, Division of Rizal, during the School Year 2025–2026. The study employed a descriptive survey research design complemented by documentary analysis. The respondents consisted of 286 public elementary school teachers from twelve schools in the district, selected through total population sampling. Data were gathered using a validated researcher-made questionnaire that assessed the perceived effects of 21st-century classrooms in terms of instructional delivery, classroom management, digital skills, and assessment of learning, as well as the challenges encountered by teachers. Teachers' latest Individual Performance Commitment and Review (IPCR) ratings served as the basis for determining their level of work performance. Descriptive and inferential statistical tools were utilized to analyze the data. Findings revealed that the respondents were predominantly young adult, female, single teachers with Master's degree units, mostly occupying Teacher II and Teacher III positions, having 10–14 years of teaching experience, and frequently attending district-level in-service trainings. Teachers perceived that 21st-century classrooms had a high effect on instructional delivery, classroom management, digital skills, and assessment of learning. However, no significant differences were found in these perceptions when grouped according to demographic characteristics. Teachers obtained a very satisfactory level of work performance based on their IPCR ratings. Furthermore, no significant relationship existed between the perceived effects of 21st-century classrooms and teachers' work performance, although respondents reported occasionally encountering challenges in implementing 21st-century classroom practices. The study concluded that demographic variables did not significantly influence teachers' perceptions of 21st-century classrooms, and these perceptions were not associated with their work performance. It is recommended that school administrators strengthen professional development initiatives focusing on innovative instructional strategies, student-centered classroom management, digital competence, formative assessment, and inclusive teaching practices. Teachers are likewise encouraged to continuously adopt learner-centered pedagogies and enhance their digital and instructional competencies. The proposed action plan is recommended for implementation, while future studies may explore additional variables affecting teacher performance in 21st-century learning environments.

Keywords: 21st-Century Classrooms, Work Performance, Public Elementary School Teachers, Instructional Delivery, Classroom Management, Digital Skills, Assessment Of Learning, IPCR, Descriptive Survey

Introduction

The educational landscape has undergone significant transformation due to rapid technological advancements, globalization, and the increasing demand for learners equipped with 21st-century competencies. Schools are expected to provide learning environments that promote critical thinking, creativity, collaboration, communication, and digital literacy. Consequently, the concept of the 21st-century classroom has become a central focus in educational reform, emphasizing learner-centered instruction, technology integration, flexible learning spaces, and authentic assessment. Teachers are now expected to adopt innovative pedagogical approaches that enhance student engagement while improving their own instructional effectiveness and professional performance.

In the Philippines, the implementation of the K to 12 Basic Education Program has reinforced the integration of 21st-century skills across all learning areas. Public elementary school teachers play a vital role in translating curriculum goals into meaningful classroom experiences by utilizing digital technologies, differentiated instruction, collaborative learning, and performance-based assessments. As educational demands continue to evolve, teachers are expected not only to possess strong content knowledge but also to demonstrate competence in digital pedagogy, classroom innovation, and continuous professional development. These expectations have made teacher work performance an important indicator of educational quality.

Teacher performance is commonly measured through the Individual Performance Commitment and Review (IPCR), which evaluates teachers' effectiveness in instructional delivery, classroom management, learner outcomes, and professional

responsibilities. While numerous educational reforms encourage the adoption of 21st-century classroom practices, questions remain regarding the extent to which these practices actually influence teachers' work performance, particularly in public elementary schools where disparities in technological resources and professional support continue to exist.

Recent literature has consistently highlighted the importance of integrating technology and innovative teaching strategies into classroom instruction. United Nations Educational, Scientific and Cultural Organization (2023) emphasized that digital transformation in education requires teachers to develop competencies in technology integration, innovative pedagogy, and inclusive instructional practices to improve learning outcomes. Likewise, Organisation for Economic Co-operation and Development (2023) reported that teachers who participate in continuous professional learning demonstrate greater confidence in integrating digital technologies and facilitating student-centered learning environments.

Similarly, Bond, M. et al. (2024) found that technology-enhanced learning environments significantly improve instructional delivery, learner engagement, and collaborative learning when teachers receive adequate institutional support. In another study, Trust, T. (2024) explained that teachers' digital competence and willingness to adopt emerging technologies positively influence classroom innovation and instructional effectiveness.

Furthermore, International Society for Technology in Education (2024) stressed that effective technology integration depends on teachers' ability to facilitate active learning, personalize instruction, and create digitally enriched learning experiences. Likewise, World Bank (2023) noted that strengthening teachers' digital capacity is one of the most important investments in improving educational quality and preparing learners for future workforce demands.

Recent empirical evidence also supports the relationship between innovative classroom environments and teacher effectiveness. According to Darling-Hammond, L. et al. (2024), sustained professional development focused on instructional innovation significantly enhances teachers' classroom practices, confidence, and professional performance. Similarly, Ertmer, P. A. and Ottenbreit-Leftwich, A. T. (2023) emphasized that teachers' beliefs, digital competence, and school support remain among the strongest predictors of successful technology integration in classroom instruction.

Moreover, Department of Education (2025) continues to promote the enhancement of digital literacy, learner-centered instruction, and innovative teaching practices through various professional development initiatives aligned with the MATATAG Agenda. These initiatives recognize that improving teachers' competencies in 21st-century classroom practices contributes to better instructional quality and more responsive educational environments.

Despite these developments, many public elementary schools continue to experience challenges related to inadequate technological resources, unstable internet connectivity, insufficient digital infrastructure, limited access to instructional technologies, and varying levels of teacher preparedness. Such challenges may affect the successful implementation of 21st-century classroom practices and may influence teachers' work performance. Therefore, there remains a need to examine whether teachers' perceptions of the effects of 21st-century classrooms are reflected in their actual work performance.

Anchored on these contemporary studies, the present research sought to determine the extent of the effects of 21st-century classrooms on the work performance of public elementary school teachers in Morong District, Division of Rizal, during the School Year 2025–2026. Specifically, it examined the effects of 21st-century classrooms in terms of instructional delivery, classroom management, digital skills, and assessment of learning, identified the challenges encountered by teachers, assessed their work performance based on IPCR ratings, and determined whether significant relationships exist between these variables. The findings are expected to serve as valuable inputs for school administrators, teachers, and policymakers in strengthening instructional practices and designing sustainable professional development programs for effective 21st-century education.

Material and methods

2.1 Research Design

The study employed a descriptive survey research design complemented by documentary analysis to determine the extent of the effects of 21st-century classrooms on the work performance of public elementary school teachers.

2.2 Locale of the Study

The study was conducted in the public elementary schools of Morong District, Division of Rizal, namely Bombongan Elementary School, Calero-Lanang Elementary School, Caniogan Elementary School, Lagundi Elementary School, Maybancal Elementary School, Pulong Kumanoy Elementary School, San Guillermo Elementary School, Roman Tantiongco Memorial School, Talaga Elementary School, Timoteo A. Reyes Memorial Elementary School, Tomas Claudio Memorial Elementary School, and Yapak Elementary School during the School Year 2025–2026.

2.3 Respondents of the Study

The respondents of the study consisted of 286 public elementary school teachers employed in the identified schools of Morong District, Division of Rizal.

2.4 Sample and Sampling Procedure

The study utilized total population sampling, wherein all 286 teachers from the participating public elementary schools were included as respondents.

2.5 Research Instrument

Data were gathered using a researcher-made questionnaire designed to determine the perceived effects of 21st-century classrooms in terms of instructional delivery, classroom management, digital skills, assessment of learning, and the challenges encountered by teachers, while documentary analysis of the respondents' latest Individual Performance Commitment and Review (IPCR) ratings was used to assess their work performance.

2.6 Data Gathering Procedure

Data were gathered using a researcher-made questionnaire designed to determine the perceived effects of 21st-century classrooms in terms of instructional delivery, classroom management, digital skills, assessment of learning, and the challenges encountered by teachers, while documentary analysis of the respondents' latest Individual Performance Commitment and Review (IPCR) ratings was used to assess their work performance.

2.7 Data Analysis Techniques

The data were analyzed using appropriate descriptive statistics (frequency, percentage, weighted mean, and ranking) and inferential statistics (t-test, one-way analysis of variance [ANOVA], and Pearson Product-Moment Correlation) to determine significant differences and relationships among the variables at the 0.05 level of significance.

2.8 Ethical Considerations

The researcher strictly observed ethical principles throughout the conduct of the study. Prior approval was obtained from the appropriate educational authorities before data collection commenced. Participation was voluntary, and informed consent was secured from all respondents after explaining the objectives, procedures, benefits, and confidentiality of the study. The identities of the respondents and the academic records of the pupils were kept anonymous through coding, and all information gathered was treated with strict confidentiality and used solely for academic and research purposes in compliance with the provisions of the Data Privacy Act of 2012 (Republic Act No. 10173) and accepted ethical standards in educational research.

Results and Discussion

3.1 Profile of the Respondents in terms of the Selected Variables

The profile of the respondents shows that the majority of the 286 public elementary school teachers are young adults aged 21–30 years (67.1%), female (87.8%), and single (75.2%). Most have Master's Degree units (56.3%), occupy Teacher II (47.9%) and Teacher III (45.5%) positions, and have 10–14 years of teaching experience (49.0%), indicating a relatively experienced teaching workforce with ongoing professional advancement. In terms of professional development, the largest proportion of respondents have attended District-level in-service trainings (39.2%), followed by Regional (22.4%) and Division-level (22.0%) trainings. Overall, the respondents are characterized as predominantly young, female educators who are academically pursuing graduate studies, possess considerable teaching experience, and actively participate in professional development activities within the district.

Table 1
*Frequency and Percentage Distribution of the Respondents
in Terms of the Selected Variables*

Age	f	%	R
21-30 years old	192	67.1	1
31-40 years old	16	5.6	4
41-50 years old	48	16.8	2
51 years old and above	30	10.5	3
Total	286	100.0	
Sex	f	%	R
Male	35	12.2	2
Female	251	87.8	1
Total	286	100.0	
Civil Status	f	%	R
Single	215	75.2	1

Married	69	24.1	2
Separated/ annulled	2	0.7	3
Total	286	100.0	
Educational Attainment		%	R
Doctorate Degree	11	3.8	5
MA with Doctorate Units	25	8.7	4
Master's Degree	40	14.0	3
With MA Units	161	56.3	1
Bachelor's Degree	49	17.1	2
Total	286	100.0	
Position Title	f	%	R
Master Teacher I	2	0.7	4
Teacher III	130	45.5	2
Teacher II	137	47.9	1
Teacher I	17	5.9	3
Total	286	100.0	
Length of Service	f	%	R
25 years and above	21	7.3	4
20-24 years	12	4.2	6
15-19 years	65	22.7	2
10-14 years	140	49.0	1
5-9 years	33	11.5	3
Below 5 years	15	5.2	5
Total	286	100.0	
In-Service Trainings Attended	f	%	R
International	20	7.0	4
National	23	8.0	3
Regional	64	22.4	2
Division	63	22.0	3
District	112	39.2	1
School	4	1.4	5
Total	286	100.0	

3.2 Extent of Effects of the 21st Century Classrooms on the Performance of Public Elementary School Teachers as Perceived by Themselves with Respect to the Different Aspects

The findings reveal that the overall extent of the effects of 21st-century classrooms on the performance of public elementary school teachers is High Effect, with a composite weighted mean of 3.70. Among the four aspects, instructional delivery ranked first with a weighted mean of 3.97, followed by assessment of learning with 3.72, digital skills with 3.57, and classroom management with 3.52, all verbally interpreted as High Effect. These results indicate that teachers perceive 21st-century classroom practices as having a substantial positive influence on their instructional performance, particularly in delivering engaging and technology-enhanced lessons and implementing effective assessment strategies. Although classroom management received the lowest rating among the four aspects, it was still assessed as having a high effect, suggesting that managing flexible and technology-rich learning environments remains an area that can be further strengthened. Overall, the findings highlight the significant contribution of 21st-century classroom practices in enhancing teachers' professional competencies and emphasize the importance of sustained investments in educational technologies, instructional resources, and continuous professional development..

Table 2

Extent of Effects of the 21st Century Classrooms on the Performance of Public Elementary School Teachers as Perceived by Themselves with Respect to the Different Aspects

Aspects	W $\bar{X}$	Verbal Interpretation	Rank
Instructional Delivery	3.97	High Effect	1
Classroom Management	3.52	High Effect	4
Digital Skills	3.57	High Effect	3
Assessment of Learning	3.72	High Effect	2
Composite W$\bar{X}$	3.70	High Effect	

3.3 Significant Difference on the Extent of Effects of the 21st Century Classrooms on the Performance of Public Elementary School Teachers as Perceived By Themselves with Respect to the Different Aspects in Terms of Their Profile

The results of the F-test revealed no significant differences in the perceived extent of the effects of 21st-century classrooms on the performance of public elementary school teachers across all aspects of instructional delivery, classroom management, digital skills, and assessment of learning when respondents were grouped according to age, sex, civil status, educational attainment, position title, length of service, and in-service trainings attended. Since all obtained probability values were greater than the 0.05 level of significance, the null hypothesis was accepted for all comparisons. These findings indicate that teachers, regardless of their demographic and professional characteristics, share similar perceptions regarding the positive effects of 21st-century classrooms on their teaching performance. The results further suggest that the benefits of technology-enhanced and learner-centered classroom practices are experienced consistently across the teaching workforce, reflecting equitable access to instructional innovations and professional development opportunities that support effective teaching practices.

Table 3

Significant Difference on the Extent of Effects of the 21st Century Classrooms on the Performance of Public Elementary School Teachers as Perceived By Themselves with Respect to the Different Aspects in Terms of Their Profile

Aspects/Profile	F-value	p-value	Ho	Verbal Interpretation
Age				
Instructional Delivery	0.714	0.544	Accepted	Not Significant
Classroom Management	0.344	0.793	Accepted	Not Significant
Digital Skills	0.837	0.475	Accepted	Not Significant
Assessment of Learning	0.145	0.933	Accepted	Not Significant
Sex				
Instructional Delivery	0.994	0.320	Accepted	Not Significant
Classroom Management	1.099	0.295	Accepted	Not Significant
Digital Skills	1.132	0.288	Accepted	Not Significant
Assessment of Learning	0.146	0.702	Accepted	Not Significant
Civil Status				
Instructional Delivery	1.335	0.320	Accepted	Not Significant
Classroom Management	0.824	0.440	Accepted	Not Significant
Digital Skills	2.724	0.067	Accepted	Not Significant
Assessment of Learning	0.947	0.389	Accepted	Not Significant
Educational Attainment				
Instructional Delivery	0.257	0.905	Accepted	Not Significant
Classroom Management	0.444	0.777	Accepted	Not Significant
Digital Skills	0.212	0.932	Accepted	Not Significant
Assessment of Learning	0.407	0.804	Accepted	Not Significant
Position Title				
Instructional Delivery	0.280	0.840	Accepted	Not Significant
Classroom Management	0.063	0.979	Accepted	Not Significant
Digital Skills	0.169	0.917	Accepted	Not Significant
Assessment of Learning	1.252	0.291	Accepted	Not Significant
Length of Service				
Instructional Delivery	1.520	0.184	Accepted	Not Significant
Classroom Management	0.453	0.811	Accepted	Not Significant
Digital Skills	0.640	0.669	Accepted	Not Significant
Assessment of Learning	0.744	0.591	Accepted	Not Significant
In-Service Trainings Attended				
Instructional Delivery	0.851	0.515	Accepted	Not Significant
Classroom Management	1.055	0.386	Accepted	Not Significant
Digital Skills	1.511	0.186	Accepted	Not Significant
Assessment of Learning	1.122	0.349	Accepted	Not Significant

3.4 Level of Work Performance of Teachers as Revealed by the Latest Rating In Their Individual Performance Commitment and Review (IPCR)

The findings reveal that the overall level of work performance of public elementary school teachers is Very Satisfactory, with a mean IPCR rating of 4.35. Among the 286 respondents, 222 teachers or 78 percent obtained a Very Satisfactory rating, while 64 teachers or 22 percent achieved an Outstanding rating. No teacher received a Satisfactory, Unsatisfactory, or Poor rating. The highest recorded IPCR rating was 4.66, while the lowest was 3.85, with a standard deviation of 0.23, indicating minimal variation in teachers' performance. These results demonstrate that teachers consistently perform at a high level in carrying out their professional responsibilities and achieving the standards set by the Department of Education. The uniformly high performance ratings further suggest that teachers possess the competencies, commitment, and professionalism necessary to effectively deliver quality instruction and contribute to the achievement of school goals.

Table 4

Level of Work Performance of Teachers as Revealed by the Latest Rating In Their Individual Performance Commitment and Review (IPCR)

Rating	Verbal Interpretation	f	%
4.50 – 5.00	Outstanding	64	22
3.50 – 4.49	Very Satisfactory	222	78
2.50 – 3.49	Satisfactory	-	-
1.50 – 2.49	Unsatisfactory	-	-
1.00 – 1.49	Poor	-	-
Total		286	100
Highest Rating		4.66	
Lowest Rating		3.85	
Mean		4.35 – Very Satisfactory	
Standard Deviation		0.23	

3.5 Significant Relationship Between the Perceived Extent of Effects of 21st Century Classrooms and The Level of Teachers' Work Performance

The results of the correlation analysis revealed no significant relationship between the perceived extent of the effects of 21st-century classrooms and the level of teachers' work performance across all aspects, namely instructional delivery, classroom management, digital skills, and assessment of learning. All computed probability values were greater than the 0.05 level of significance, leading to the acceptance of the null hypothesis. Likewise, the obtained correlation coefficients were negligible, indicating the absence of a meaningful linear relationship between teachers' perceptions of 21st-century classroom practices and their IPCR ratings. These findings suggest that although teachers generally perceive 21st-century classrooms as having a high effect on their teaching practices, such perceptions do not significantly influence their formal work performance evaluations. This implies that teachers' performance may be shaped by other professional, organizational, or contextual factors beyond their perceptions of 21st-century classroom implementation.

Table 5

Significant Relationship Between the Perceived Extent of Effects of 21st Century Classrooms and The Level of Teachers' Work Performance

Aspects	r-values	p-values	Ho	Verbal Interpretation
Instructional Delivery	-0.051	0.389	Accepted	Not Significant
Classroom Management	0.074	0.211	Accepted	Not Significant
Digital Skills	0.009	0.886	Accepted	Not Significant
Assessment of Learning	-0.051	0.394	Accepted	Not Significant

3.6 Extent of the Challenges Encountered by Teachers in the 21st Century Classrooms in Public Elementary Schools

The findings indicate that teachers sometimes encounter challenges in implementing 21st-century classroom practices, as reflected by the overall weighted mean of 2.73. The most frequently encountered challenge is meeting the needs of diverse learners, followed by shifting from a lecturer-centered approach to a facilitator role, balancing standardized assessment

with innovative learning approaches, and limited facilities, equipment, and learning resources. In contrast, adapting to new educational technologies without adequate training or support was the least encountered challenge, suggesting that teachers have generally developed confidence in using digital tools. Overall, the results imply that while teachers have successfully adapted to many demands of 21st-century education, they continue to experience challenges in addressing learner diversity and implementing inclusive, student-centered instruction. These findings underscore the need for sustained professional development programs that strengthen differentiated instruction, inclusive teaching practices, classroom facilitation skills, and resource support to further enhance teaching effectiveness in 21st-century classrooms.

Table 6

Extent of the Challenges Encountered by Teachers in the 21st Century Classrooms in Public Elementary Schools

Challenges Encountered	W $\bar{X}$	Verbal Interpretation	Rank
1. High academic pressure and social media influence requiring support for social-emotional learning among pupils	2.34	Seldom	8
2. Adapting to new educational technologies and incorporate them into curricula without adequate training or support .	1.95	Seldom	10
3. Difficulty in shifting from a lecturer-centered model to a facilitator role	3.29	Sometimes	2
4. Difficulty in meeting the needs of diverse learners.	3.34	Sometimes	1
5. High workloads involving administrative tasks, grading, and adapting to new technologies .	2.73	Sometimes	6
6. Difficulty in maintaining a positive, disciplined environment in the face of behavior issues among pupils	2.95	Sometimes	5
7. Balancing traditional, standardized testing requirements with the need for innovative, flexible learning approaches.	3.10	Sometimes	3
8. Limited facilities, equipment and learning resources.	3.04	Sometimes	4
9. Addressing reduced attention spans and high emotional stimulation.	2.49	Seldom	7
10. Competing with digital distractions to keep pupils engaged	2.04	Seldom	9
Overall W$\bar{X}$	2.73	Sometimes	

Conclusions & Recommendations

The study concluded that public elementary school teachers generally perceive 21st-century classrooms as having a high effect on their instructional delivery, classroom management, digital skills, and assessment of learning. Regardless of their age, sex, civil status, educational attainment, position title, length of service, and in-service trainings attended, teachers shared similar perceptions of the effects of 21st-century classroom practices. Moreover, teachers demonstrated a very satisfactory level of work performance based on their IPCR ratings. However, no significant relationship was found between the perceived effects of 21st-century classrooms and teachers' work performance, indicating that formal performance ratings may be influenced by factors beyond teachers' perceptions of 21st-century classroom implementation. Teachers also reported that they sometimes encountered challenges, particularly in addressing the diverse needs of learners and transitioning to more learner-centered instructional approaches.

Based on these findings, it is recommended that school administrators continue strengthening professional development initiatives focused on differentiated instruction, inclusive education, learner-centered pedagogy, innovative assessment strategies, and effective classroom management to better address the challenges encountered by teachers. Schools should also sustain investments in instructional technologies, learning resources, and mentoring programs that support teachers in implementing 21st-century classroom practices. Teachers are encouraged to continuously enhance their instructional and digital competencies through active participation in capacity-building activities and collaborative learning opportunities. Finally, future researchers may conduct similar studies using additional variables, broader geographical coverage, or mixed-method research designs to gain a more comprehensive understanding of the factors influencing teachers' work performance in 21st-century learning environments.

Compliance with ethical standards

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