



21st Century Skills of Teachers and their Teaching Performance

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Abstract - This study examined the influence of secondary school teachers' 21st Century Skills on their teaching performance in Garchitorena District, Division of Camarines Sur, during the 2023–2024 school year. Specifically, it assessed teachers' levels of commitment, compassion, creativity, competence, and character, and evaluated their teaching performance across content knowledge and pedagogy, learning environment, diversity of learners, curriculum planning, and assessment. Employing a descriptive-correlational research design, data were collected from 128 respondents through a researcher-developed questionnaire. Statistical analyses included weighted mean, Pearson's correlation coefficient, and coefficient of determination. Findings revealed that teachers possessed a high level of 21st Century Skills ($M = 3.84$) and demonstrated high teaching performance ($M = 3.85$). Significant positive correlations were identified between specific 21st Century Skills dimensions and corresponding teaching performance domains, with correlation coefficients ranging from 0.579 to 0.665 ($p < 0.001$). However, the influence of 21st Century Skills on teaching performance was generally weak to very weak. Based on these results, a targeted ICT development training program was proposed to enhance teachers' digital competencies, adaptability, and innovative practices. The study concludes that strengthening teachers' 21st Century Skills is essential for effectively addressing diverse learner needs and preparing students for future challenges.

Keywords - 21st Century Skills, Teachers, Teaching Performance

INTRODUCTION

The 21st century skills of teachers encompass a broad range of competencies essential for effective teaching in today's dynamic educational landscape. These skills include digital literacy, critical thinking, creativity, collaboration, and communication. Teachers must adeptly integrate technology into their teaching practices to enhance student engagement and learning outcomes. However, issues such as inadequate professional development, resistance to change, and varying levels of access to technology can hinder the effective acquisition and application of these skills. Addressing these challenges requires ongoing support, training, and resources to ensure teachers

are well-equipped to meet the demands of modern education.

Teaching performance refers to the effectiveness with which teachers deliver instruction and facilitate student learning. Key indicators of teaching performance include student achievement, classroom management, instructional strategies, and the ability to adapt to diverse learning needs. Challenges in teaching performance often stem from factors such as large class sizes, insufficient resources, and the pressure of standardized testing. Additionally, the need for continuous professional development and support is crucial to help teachers refine their practices and

stay current with educational trends. By addressing these issues, schools can create an environment that supports high-quality teaching and fosters student success.

Teachers equipped with 21st-century skills, such as critical thinking, digital literacy, and adaptability, enhance their teaching performance by creating engaging and interactive learning environments. Effective communication and collaboration skills allow educators to foster inclusive classrooms, improving student participation and achievement. Mastery of technology integration enables teachers to personalize instruction, catering to diverse learning needs and optimizing student outcomes. Ultimately, the synergy between modern teaching competencies and performance results in dynamic, student-centered education that prepares learners for future challenges.

According to Alhothali (2021), “the integration of 21st century skills into education systems is increasingly recognized as vital for preparing students to thrive in a rapidly changing world.” Countries like Finland, Singapore, and South Korea have made significant strides in embedding these skills into their curricula, emphasizing critical thinking, creativity, collaboration, and digital literacy. However, challenges persist, such as disparities in access to technology, varying levels of teacher preparedness, and resistance to pedagogical change. For instance, while Finland’s education system is renowned for its innovative approaches and high teacher autonomy, it still faces issues ensuring consistent professional development and adapting to diverse student needs.

Similarly, from the Ministry of Education (MOE, 2023), Singapore’s rigorous focus on technology integration and student-centered learning “highlights the importance of continuous support and training for teachers to maintain high teaching performance.” This approach ensures that teachers are well-equipped to leverage digital tools effectively, thereby enhancing the learning experience for students. Addressing these challenges on a global scale requires collaborative efforts to share best practices, invest in teacher training, and ensure equitable access to resources. Ultimately, fostering an environment where both teachers and students can excel is crucial for the advancement of education worldwide.

The study on the 21st century skills of teachers and their teaching performance aligns closely with Sustainable Development Goal 4 (SDG 4): Quality Education, which states that it aims “... to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” This goal emphasizes the importance of equipping teachers with the necessary skills to foster effective learning environments and adapt to the evolving educational landscape by focusing on enhancing teachers’ digital literacy, critical thinking, creativity, collaboration, and communication skills. It supports the broader objective of SDG 4 to improve educational outcomes and ensure that all students have access to high-quality education. Addressing the challenges related to teacher training and resource allocation is crucial for achieving this goal and creating a sustainable future for education worldwide.

In the Philippines, the integration of 21st-century skills into teaching faces significant challenges, including inadequate teacher training, outdated curricula, and limited resources. According to Bustos (2023), teachers often “lack a clear understanding of how to effectively teach these skills,” and there is a need for more comprehensive pre-service and in-service training programs. Additionally, the curriculum does not consistently incorporate 21st-century skills, leading to a disconnect between educational goals and classroom practices. The Department of Education’s efforts to address these issues include policy guidelines and curriculum reviews, but logistical and conceptual challenges remain.

To address these issues, the Department of Education issued DepEd Order No. 21, series of 2019, titled “*Policy Guidelines on the K to 12 Basic Education Program*,” which “emphasizes the integration of 21st-century skills into the curriculum and provides guidelines for teaching and assessing these skills.” This order highlights the need for continuous professional development for teachers, the use of modern teaching tools, and the incorporation of critical thinking, collaboration, and digital literacy into classroom practices.

DepEd ensures that teachers are well-prepared through various training programs focused on 21st-century skills, including critical thinking, collaboration, adaptability, and innovation in teaching pedagogy. These initiatives help educators stay updated with modern strategies, equipping

them to foster problem-solving, creativity, and effective communication in the classroom. Applying theoretical knowledge from training and continuously developing these skills is essential for engaging Generation Z students and preparing them for future challenges. Public school teachers are encouraged to pursue ongoing professional development to enhance their ability to deliver student-centered, future-ready education.

DepEd Order (DO) No. 001, s. 2020, titled *“Guidelines for National Educators Academy of the Philippines (NEAP) Recognition of Professional Development Programs and Courses for Teachers and School Leaders for SY 2020-2023,”* includes provisions in item VI, Nos. 16-18, which state that *“Professional Development Priorities shall allow flexibility for specific local needs, priorities, and emerging developments in teachers’ and school leaders’ professional development.”*

Garchitorena, a coastal municipality in the Fourth Congressional District of Camarines Sur, has eight secondary schools, including three integrated schools. Despite having 130 teaching personnel at the secondary level, only 8% of these teachers pursue and continue professional development education. While some teachers have developed 21st-century skills, the full integration of these competencies into traditional teaching methods remains limited. Given the importance of critical thinking, collaboration, adaptability, and innovation in enhancing educational outcomes, it is crucial to assess teachers’ readiness to apply these skills effectively. This study explored the relationship between professional development and the cultivation of 21st-century skills, offering insights into how teachers can be better prepared to meet modern education demands. Strengthening these skills improves teaching effectiveness and enriches student learning experiences.

OBJECTIVES OF THE STUDY

This study aimed to determine the influence of secondary school teachers’ 21st-century skills on their teaching performance in Garchitorena District, Division of Camarines Sur, during the school year 2023-2024. Specifically, it sought to assess the level of teachers’ 21st-century skills across key dimensions, including commitment, compassion, creativity, competence, and character. In addition, the study evaluated the level of teachers’ teaching performance by examining areas such as content

knowledge and pedagogy, learning environment, diversity of learners, curriculum and planning, as well as assessment and reporting. Furthermore, the study investigated whether a significant relationship exists between the teachers’ 21st-century skills and their teaching performance. It also aimed to determine the extent to which these skills influence teaching performance. Lastly, the study proposed development training programs focused on enhancing teachers’ 21st-century skills to improve their overall teaching effectiveness.

METHODS

This study employed a descriptive-correlational method to examine secondary school teachers’ 21st-century skills and their teaching performance in Garchitorena District, Division of Camarines Sur, for the school year 2023-2024. The descriptive approach described teachers’ 21st-century skills—commitment, compassion, creativity, competence, and character—and assessed teaching performance across content knowledge and pedagogy, learning environment, diversity of learners, curriculum and planning, and assessment and reporting. It also presented proposed development training to enhance teaching performance. The correlational method determined the relationship between teachers’ 21st-century skills and teaching performance and measured the extent to which these skills influence performance.

The study involved 128 respondents—8 school heads and 120 secondary teachers—using total enumeration, with all invited to participate. Data collection used two main tools: a researcher-made survey questionnaire and unstructured interviews. The survey, validated by experts and pre-tested on non-participant teachers, included two parts: Part I assessed 21st-century skills across five aspects with five indicators each; Part II evaluated teaching performance similarly. Responses were measured on a 4-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree). Unstructured interviews provided qualitative insights to complement quantitative data.

The research process included problem conceptualization, approval of the proposal, securing permits, tool preparation, instrument validation and dry run, administration of questionnaires during the District Teachers Assembly, data retrieval through surveys and

interviews, data analysis using appropriate statistical methods, report writing with revisions, final submission for approval, and preparation of a condensed manuscript for journal publication.

Statistical analysis employed weighted mean to measure levels of skills and performance, Pearson's Product-Moment Correlation to test relationships between variables, and Coefficient of Determination to assess the extent of influence of 21st-century skills on teaching performance.

RESULTS AND DISCUSSION

Table 1 shows that teachers in Garchitorena District rated their 21st-century skills highly, with an overall mean of 3.84 (Strongly Agree). Compassion (3.90) and character (3.89) topped the list, followed by competence (3.84), commitment (3.81), and creativity (3.77). This highlights teachers' strong social-emotional skills and professionalism, which are crucial for effective teaching (Darling-Hammond et al., 2020). Creativity, though still strong, scored lowest, indicating a need for focused development to encourage innovative teaching practices (Sawyer, 2014). These findings suggest a solid skills foundation but also point to opportunities for growth, especially in fostering creativity to enhance student engagement.

Table 1. Summary of the Level of the 21st-Century Skills of Secondary School Teachers

| 21 st Century Skills | AWM | Int | R |
|---------------------------------|------|----------------|---|
| Compassion | 3.90 | SA | 1 |
| Character | 3.89 | SA | 2 |
| Competence | 3.84 | SA | 3 |
| Commitment | 3.81 | SA | 4 |
| Creativity | 3.77 | SA | 5 |
| Overall Average Weighted Mean | 3.84 | Strongly Agree | |

Teachers in Garchitorena District demonstrated high performance across all assessed aspects of teaching. The overall mean of 3.81 indicates a "Highly Performed" level. Assessment and reporting ranked highest (3.85), followed closely by curriculum and planning (3.84), and learning environment (3.83). Content knowledge and pedagogy scored slightly lower (3.79), with diversity of learners lowest among the aspects (3.76), though still within the high-performance range. This suggests teachers are proficient in managing assessment and curricular responsibilities while fostering conducive learning environments. The relatively lower score in diversity of learners points to an area needing enhancement, particularly in adapting teaching strategies to diverse student needs

Table 2. Summary of the Level of Teachers' Teaching Performance

| Aspects | AWM | Int | R |
|--------------------------------|------|------------------|---|
| Assessment and Reporting | 3.85 | HP | 1 |
| Curriculum and Planning | 3.84 | HP | 2 |
| Learning Environment | 3.83 | HP | 3 |
| Content Knowledge and Pedagogy | 3.79 | HP | 4 |
| Diversity of Learners | 3.76 | HP | 5 |
| Overall Average Weighted Mean | 3.85 | Highly Performed | |

As shown in Table 3, findings reveal a statistically significant positive correlation between teachers' 21st-century skills and all five aspects of their teaching performance. Compassion showed the strongest associations, particularly with learning environment, diversity of learners, and curriculum and planning ($r = 0.664-0.665$, $p < 0.001$), highlighting the vital role of empathy and relational engagement in effective teaching.

Creativity and competence also exhibited strong correlations, especially with content knowledge and pedagogy, curriculum, and assessment ($r = 0.496-0.646$, $p < 0.001$), suggesting that innovation and instructional expertise are essential in meeting diverse learner needs. Commitment and character, while slightly lower in correlation values, still maintained significant positive relationships across all dimensions ($p <$

0.05), underscoring the foundational impact of professional ethics and dedication.

Table 3. Relationship Between the Level of Teachers' 21st-Century Skills and Level of their Teaching Performance

| Level of Teachers' 21 st -Century Skills | Level of Teaching Performance | r | P-value | Int |
|---|--------------------------------|-------|---------|-------------|
| Commitment | Content Knowledge and Pedagogy | 0.453 | 0.0003 | Significant |
| | Learning Environment | 0.410 | 0.0013 | Significant |
| | Diversity of Learners | 0.579 | 0.0000 | Significant |
| | Curriculum and Planning | 0.492 | 0.0000 | Significant |
| | Assessment and Reporting | 0.424 | 0.0008 | Significant |
| Compassion | Content Knowledge and Pedagogy | 0.451 | 0.0003 | Significant |
| | Learning Environment | 0.665 | 0.0000 | Significant |
| | Diversity of Learners | 0.664 | 0.0000 | Significant |
| | Curriculum and Planning | 0.664 | 0.0000 | Significant |
| | Assessment and Reporting | 0.508 | 0.0000 | Significant |
| Creativity | Content Knowledge and Pedagogy | 0.625 | 0.0000 | Significant |
| | Learning Environment | 0.531 | 0.0000 | Significant |
| | Diversity of Learners | 0.559 | 0.0000 | Significant |
| | Curriculum and Planning | 0.534 | 0.0000 | Significant |
| | Assessment and Reporting | 0.496 | 0.0000 | Significant |
| Competence | Content Knowledge and Pedagogy | 0.519 | 0.0000 | Significant |
| | Learning Environment | 0.619 | 0.0000 | Significant |
| | Diversity of Learners | 0.566 | 0.0000 | Significant |
| | Curriculum and Planning | 0.646 | 0.0000 | Significant |
| | Assessment and Reporting | 0.587 | 0.0000 | Significant |
| Character | Content Knowledge and Pedagogy | 0.505 | 0.0000 | Significant |
| | Learning Environment | 0.640 | 0.0000 | Significant |
| | Diversity of Learners | 0.616 | 0.0000 | Significant |
| | Curriculum and Planning | 0.563 | 0.0000 | Significant |
| | Assessment and Reporting | 0.562 | 0.0000 | Significant |

Legend r -value >0 to 1.00 . <0 to -1.00 p value 0.05

The examination of the extent to which specific 21st-century skills influence various dimensions of teaching performance used the coefficient of determination (r^2) to assess the strength of influence.

Findings reveal that while all 21st-century skills exhibit statistically significant correlations with teaching performance, their actual influence

ranges from *very weak* to *weak* based on r^2 values. Compassion showed the strongest influence, particularly on the learning environment, diversity of learners, and curriculum and planning ($r^2 = 0.441$ – 0.442), indicating that empathetic teachers foster inclusive, student-centered settings. Similarly, competence and character demonstrated *weak* influence across most performance indicators, suggesting their relevance in lesson design, learner engagement, and assessment ($r^2 = 0.317$ – 0.417).

Conversely, commitment and creativity showed predominantly *very weak* levels of influence, especially in content knowledge and assessment ($r^2 = 0.168$ – 0.285). This implies that while teachers may be dedicated and innovative, these traits alone may not directly translate into measurable performance outcomes without structural or contextual support.

The data suggests that no single skill overwhelmingly determines teaching performance; rather, their effects are distributed and modest. This supports the holistic view of teaching effectiveness, where cognitive, emotional, and behavioral competencies interact dynamically. The findings also point to the need for professional development programs that emphasize emotional intelligence and instructional competence to enhance performance outcomes.

Based on the results of the study, which revealed strong positive correlations between teachers' 21st-century skills and their teaching performance across multiple domains, a targeted ICT-based training program is proposed. The findings indicate that skills such as creativity, competence, compassion, character, and commitment significantly influence teaching effectiveness in areas like curriculum planning, assessment, learner diversity, and pedagogy.

To address these key dimensions and enhance both skill development and instructional outcomes, the following professional development training plan in ICT is recommended. The training is designed to foster innovation, ethical technology use, empathy, and adaptive teaching practices—all critical components of 21st-century teaching and learning.

CONCLUSIONS AND RECOMMENDATIONS

The findings of this study reveal that the secondary school teachers in the Garchitorena District possess an excellent level of 21st-century

skills. Among the five core domains assessed—compassion, character, competence, commitment, and creativity—compassion and character emerged with the highest weighted mean scores, followed closely by competence and commitment. Although creativity recorded the lowest score among the five, it still fell within the “excellent” range. These results suggest that teachers are not only equipped with the cognitive and technical competencies needed in the modern classroom but also embody the affective and ethical dimensions essential to holistic education.

In terms of teaching performance, the teachers demonstrated a high level of proficiency across all five measured domains: content knowledge and pedagogy, learning environment, diversity of learners, curriculum and planning, and assessment and reporting. The highest average weighted mean was noted in assessment and reporting, followed by curriculum and planning. This pattern reflects teachers’ strong capabilities in evaluating student learning and designing appropriate instructional plans, thus reinforcing their preparedness to meet educational standards and address learner diversity.

A significant relationship was established between teachers’ 21st-century skills and their teaching performance. Correlation coefficients between specific skill domains and performance indicators ranged from moderate to strong, all with statistically significant p-values. These results confirm that higher levels of 21st-century skills are associated with improved teaching outcomes. Notably, compassion and competence had strong correlations with domains such as the learning environment and curriculum planning, underscoring the integral role of socio-emotional and cognitive skills in instructional success.

However, while the correlations were statistically significant, the extent of influence, as measured by the coefficient of determination (r^2), was generally categorized as weak to very weak. This indicates that while 21st-century skills contribute to teaching performance, other mediating variables likely influence the outcomes. It highlights the need for more nuanced and contextualized professional development interventions that address both intrinsic teacher qualities and systemic factors within the educational environment.

Based on the results, a comprehensive ICT-based development training was proposed to further enhance teachers’ 21st-century skills and teaching performance. The training plan emphasizes

continuous learning, digital proficiency, adaptive teaching methods, and inclusivity. It integrates workshops, performance assessments, mentoring, and peer feedback mechanisms aimed at creating a dynamic and learner-centered teaching environment. The proposed intervention is designed to build teachers’ capacity to meet the evolving demands of 21st-century education.

In light of the findings and conclusions, the study recommends the implementation of targeted professional development programs that specifically address the domains of creativity and commitment. Workshops on innovative pedagogical strategies, digital content creation, and student engagement should be prioritized to strengthen these areas. Furthermore, compassion, character, and competence—though already at high levels—should be sustained and enhanced through ongoing mentorship, ethical leadership training, and peer learning activities.

To further improve teaching performance, the integration of formative assessment techniques and timely feedback mechanisms is essential. Regular training on curriculum planning and instructional design, aligned with contemporary trends and technologies, should be conducted. Strengthening content knowledge through academic collaboration and encouraging peer mentoring can reinforce teachers’ subject mastery and pedagogical depth.

Given the established relationship between 21st-century skills and teaching performance, school administrators and policymakers should prioritize initiatives that holistically develop teachers’ cognitive, ethical, and affective competencies. Mentorship and coaching programs should be institutionalized to support new and veteran teachers alike. Moreover, inclusive teaching strategies and adaptive learning technologies must be promoted to accommodate diverse learner needs.

Finally, the proposed ICT development training program should be adopted and contextualized within the local educational landscape. It must be monitored and evaluated through measurable outcomes such as student engagement, teacher performance metrics, and curriculum impact. Regular feedback and revisions should be integrated into the training cycle to ensure its sustainability and relevance. These initiatives will help foster a culture of continuous improvement, innovation, and excellence in the teaching profession.

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