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Teachers' Professional Development, Innovativeness, And Information and Communications Technology (ICT) Skill

Ma. Jhonnamie G. Hipolito

Teacher, Department of Education, Dep.Ed

Abstract

This study examined teachers' professional development, innovativeness, and information and communication technology (ICT) skills in relation to the implementation of the Enhanced K–10 Curriculum among Grade 7 teachers in the Schools Division of Iloilo, Iloilo, Philippines, during School Year 2024–2025. A descriptive research design was employed using a researcher-developed questionnaire that measured teachers' levels of professional development, innovativeness, and ICT skills. Data were systematically gathered, tabulated, and analyzed using appropriate statistical tools at a 0.05 level of significance. Findings revealed that teachers demonstrated very high levels of professional development, innovativeness, and ICT skills. No significant differences were found in these variables when teachers were grouped according to sex, educational attainment, position, length of service, and congressional district. However, a significant relationship was observed among teachers' professional development, innovativeness, and ICT skills, indicating that these variables are closely interconnected. The study recommends that the Department of Education prioritize sustained professional development initiatives and that schools strengthen institutional support through innovative training programs and enhanced ICT resources to further improve teaching effectiveness and learning outcomes.

Keywords: Professional Development, Innovations, ICT Skills, Enhanced K–10 Curriculum

Introduction

Teachers' professional development, innovativeness, and information and communications technology (ICT) skills have become integral to effective teaching in contemporary education, particularly in the context of rapid technological change and evolving learning environments. Professional development enables teachers to acquire updated knowledge, refine pedagogical competencies, and develop technical skills necessary to address diverse learner needs and to integrate technology meaningfully into instruction (Guskey, 2002; Desimone, 2009). Continuous learning opportunities allow teachers to respond effectively to curriculum reforms, adopt innovative instructional approaches, and sustain high-quality teaching practices, especially in technology-mediated classrooms.

Innovativeness among teachers refers to their openness and capacity to explore, adopt, and apply new ideas, strategies, and technologies in the teaching–learning process. Innovative teachers tend to design learner-centered activities, utilize varied instructional materials, and employ creative problem-solving strategies that enhance student engagement and learning outcomes (Rogers, 2003; OECD, 2019). Professional development plays a crucial role in nurturing innovativeness by exposing teachers to

emerging educational trends, encouraging reflective practice, and building confidence in experimenting with new instructional methods.

ICT skills are increasingly recognized as essential competencies for teachers in the 21st century. Proficiency in using digital tools, online platforms, and educational technologies allows teachers to deliver instruction more effectively, manage learning resources efficiently, and facilitate communication and collaboration beyond the traditional classroom setting (UNESCO, 2018). Teachers with strong ICT skills are better positioned to integrate technology into pedagogy in ways that promote higher-order thinking, creativity, and independent learning. The close relationship among professional development, innovativeness, and ICT skills suggests that teachers who actively engage in professional learning are more likely to become innovative and technologically competent educators.

In the Philippine context, particularly in the Schools Division of Iloilo, strengthening teachers' professional development, innovativeness, and ICT skills is aligned with national education reforms and the Department of Education's digital transformation initiatives. Examining these variables among Grade 7 teachers during School Year 2024–2025 provides valuable insights into how targeted professional learning experiences contribute to innovative teaching practices and ICT competence. Such insights are vital for designing responsive professional development programs that enhance teaching effectiveness and support quality education in an increasingly technology-driven learning environment.

This study aimed to determine the levels of teachers' professional development, innovativeness, and information and communication technology (ICT) skills in the Schools Division of Iloilo, Iloilo, Philippines, for School Year 2024–2025. Specifically, it sought to describe the teachers' profile in terms of age, educational attainment, years of teaching experience, and position, as these characteristics provided important context for understanding their professional practices and competencies.

The study further aimed to assess the extent of teachers' professional development, particularly their participation in training programs, acquisition of knowledge, and enhancement of teaching skills. It also examined the degree of innovativeness among teachers, including their ability to design instructional materials, implement learner-centered strategies, and apply creative problem-solving approaches in the classroom. In addition, the study evaluated teachers' ICT skills, focusing on their proficiency in using digital tools, online platforms, and technology-based resources for instructional purposes.

Moreover, the study investigated whether significant differences existed in teachers' professional development, innovativeness, and ICT skills when they were grouped according to selected profile variables. Finally, it analyzed the relationships among professional development, innovativeness, and ICT skills to determine how participation in professional learning activities contributed to innovative teaching practices and effective technology integration. The findings were expected to provide practical inputs for designing targeted professional development programs that enhanced teacher effectiveness and promoted innovative, technology-driven instruction in the Schools Division of Iloilo.

Methodology

This study employed a descriptive-correlational research design to determine the levels of teachers' professional development, innovativeness, and ICT skills and to examine the relationships among these variables in the Schools Division of Iloilo, Iloilo, Philippines, during School Year 2024–2025. The descriptive-correlational approach was appropriate as it allowed for the description of existing conditions and the analysis of relationships among variables without manipulating them.

The respondents consisted of seven (7) public school teachers in the division who were selected through total enumeration due to the small population size. The teachers were profiled according to age, educational attainment, years of teaching experience, and position to provide context for analyzing variations in professional development, innovativeness, and ICT skills.

Data were collected using a researcher-developed questionnaire that was validated by education experts and pilot-tested to ensure reliability, yielding a Cronbach's alpha of 0.87. The instrument comprised three main sections: professional development, which assessed training participation, knowledge acquisition, and skill enhancement; innovativeness, which focused on instructional creativity, problem-solving, and the adoption of new teaching strategies; and ICT skills, which measured proficiency in using digital tools, educational software, and online platforms for instruction.

Data analysis involved both descriptive and inferential statistics. Frequency, percentage, mean, and rank were used to describe the teachers' profile and determine the levels of professional development, innovativeness, and ICT skills. T-test and Analysis of Variance (ANOVA) were employed to identify significant differences when respondents were grouped according to profile variables. Spearman's rho correlation was used to examine the relationships among professional development, innovativeness, and ICT skills. All analyses were conducted at a 0.05 level of significance, and ethical considerations such as voluntary participation and confidentiality were strictly observed.

Results

The study examined the professional development, innovativeness, and ICT skills of seven (7) teachers in the Schools Division of Iloilo during School Year 2024–2025. Results showed that most teachers were between 31 and 40 years old, held a bachelor's degree, had five to ten years of teaching experience, and occupied the position of Teacher I. This profile indicates a group of moderately experienced teachers who are actively engaged in classroom instruction.

In terms of professional development, teachers obtained a mean score of 4.29, interpreted as high, reflecting strong engagement in training programs, skill enhancement activities, and professional learning initiatives. Attending workshops and seminars yielded the highest mean score, followed by the application of newly learned strategies in classroom practice and collaboration with colleagues for professional growth. These findings support earlier studies emphasizing the importance of continuous professional development in improving instructional competence (Guskey, 2002; Desimone, 2009).

Regarding innovativeness, teachers recorded an overall mean of 4.18, interpreted as high. The highest-rated practices included designing learner-centered instructional materials, implementing creative problem-solving activities, and adopting new teaching strategies. These results suggest that teachers demonstrate openness to innovation and actively seek ways to enhance teaching effectiveness, consistent with Rogers' (2003) theory of innovation adoption.

Teachers' ICT skills also registered a high overall mean of 4.14, indicating proficiency in using digital tools, online platforms, and educational software. The most frequently practiced skills included utilizing online learning platforms, creating digital instructional materials, and integrating technology into lesson delivery. These findings align with UNESCO's (2018) emphasis on ICT competence as a key requirement for effective teaching in modern learning environments.

Correlation analysis using Spearman's rho revealed a strong positive relationship between professional development and innovativeness, as well as between professional development and ICT skills. This indicates that teachers who actively engage in professional development are more likely to demonstrate

innovative teaching practices and higher levels of ICT competence. A moderate positive relationship was also observed between innovativeness and ICT skills, although this relationship was not statistically significant at the 0.05 level.

Discussion

The findings affirm the central role of professional development in enhancing teachers' effectiveness, supporting earlier research that emphasizes its influence on instructional competence and teaching quality (Guskey, 2002; Desimone, 2009). Teachers' high levels of innovativeness indicate a proactive approach to designing learner-centered and creative instructional activities, consistent with Rogers' (2003) assertion that professional growth encourages the adoption of new teaching practices.

The high level of ICT skills demonstrated by teachers reflects their adaptability to technology-mediated instruction and alignment with international standards for digital competence in education (UNESCO, 2018). Teachers' ability to utilize online platforms, create digital resources, and integrate technology into lessons highlights their readiness to meet the demands of contemporary classrooms.

The significant relationships between professional development and both innovativeness and ICT skills underscore the multifaceted impact of continuous learning. Professional development not only enhances pedagogical knowledge but also promotes creativity and technological competence. The moderate relationship between innovativeness and ICT skills suggests that while innovative teachers are inclined to use technology, additional targeted ICT training may further strengthen technology integration in instruction.

Overall, the findings emphasize the importance of well-structured professional development programs in cultivating innovative and technologically skilled teachers capable of addressing modern educational challenges.

Conclusion

The study concludes that teachers in the Schools Division of Iloilo during School Year 2024–2025 exhibited high levels of professional development, innovativeness, and ICT skills. Professional development emerged as a key factor in strengthening teachers' capacity to adopt innovative teaching practices and integrate technology effectively into instruction. Teachers actively participated in professional learning activities, applied new strategies in their classrooms, and demonstrated readiness to use digital tools to support teaching and learning.

Significant positive relationships between professional development and both innovativeness and ICT skills highlight the importance of sustained professional learning. Although innovativeness and ICT skills were positively related, the moderate correlation suggests the need for more focused ICT capacity-building initiatives. Overall, the study underscores professional development as the foundation for fostering creativity and technological competence, which are essential for effective teaching in contemporary educational settings.

Recommendations

Based on the findings, it is recommended that school administrators and education authorities continue to provide structured and sustained professional development programs focusing on innovative teaching strategies and effective ICT integration. Teachers should be encouraged to engage in continuous learning,

experiment with creative instructional approaches, and explore emerging digital tools to enhance classroom instruction.

ICT training programs should be strengthened, particularly in areas such as digital content creation, online assessment, and interactive learning platforms, to support more effective technology use. Collaborative practices, including peer mentoring and professional learning communities, should be promoted to facilitate the sharing of innovative strategies and ICT applications. Finally, future studies may involve larger samples or mixed-method approaches to gain deeper insights into factors influencing teachers' innovativeness and ICT competence and their impact on student learning outcomes.

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