WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Technology Integration and Innovative Work Behavior to Teaching Performance of Public Elementary School Teachers

Jonady M. Manguiat [a], Delon A. Ching [b]

[a] *Teacher I, DepEd Manuel L. Quezon Elementary School, Sariaya,Quezon, Quezon 4322 Philippines*
[b] *Vice President for Academic Affairs, Laguna State Polytechnic University, San Pablo City, Laguna 4000 Philippines*
[a] *jonady.manguiat@deped.gov.ph*

ABSTRACT

The COVID-19 outbreak, when schools swiftly switched to remote learning, shows how central technology is now in modern education. This paper investigates among public elementary school teachers in Sariaya East District the relationships among motivation to use technology, creative work behavior, and ICT integration in teaching performance. The results showed high degrees of ICT integration and innovative work behavior, which were strongly and favorably correlated with teaching performance in all seven Philippine Professional Standards for Teachers. Especially highly linked to effective curriculum creation, assessment, and inclusive teaching were customized lesson preparation using technology and continuous innovation techniques. The study offers suggestions for enhancing technology-driven teaching methods and shows that teachers driven by personal progress and technical support are more likely to apply creative teaching practices, therefore producing higher student outcomes.

Keywords: ICT-integration, innovative work behavior, teaching performance

1. Introduction

In the classroom, technology is absolutely vital and shapes the classrooms of the twenty-first century. At the time of the COVID-19 epidemic's emergence, this transformation and awareness of the shape in the educational system landscape across the globe was strongly underlined. The educational system opted to close itself for the benefit of instructors and pupils. This also drives teachers to be more innovative and resourceful in choosing the tools and strategies they will apply in the classroom to keep their pupils engaged. Furthermore, under the DepEd Order No. 42, s. 2017, Philippine Professional Standards for Teachers (PPST) was adopted, therefore highlighting the importance of ICT in the quality of education. For effectively delivering courses both in conventional and online environments is required qualified ICT teachers. This method stresses motivation to improve teachers' creative work behavior and technology application to support learning.

However, the self-determination theory presented by Ryan and Deci in 2000 provide a bit of reasoning for innovation and technology use in the workplace, as those who have inner forces such as needs to direct personal growth is those that are most likely to partake on diverse innovative strategies. This is in accordance with new research by Hamidi, et. al. (2020) reported that teachers, who also use technology for their own personal and professional development, are more innovative in their teaching practices. The innovative work behavior context is also emphasized that, in this context, teachers create, inform, and think of new things by using of technological tools, so, that they make improvement on their teaching performance.

Likewise, the publication of the DepEd Order No. 21, s. 2019, also known as the Policy Guidelines on the K to 12 Basic Education Program, confirms the need of teachers to further improve and polish their approaches in instruction in order to cope with the needs and demands of these 21st century learners who are greatly exposed to the use of technology. It also underlined the need of including ICT integration into course of instruction, evaluation and assessment to improve student results and general teaching efficacy.

The main cause the researcher developed the current study is the thoughts mentioned. The aim of this paper is to investigate the relationships among technological pedagogical integration performance, creative work behavior, and motivation for adoption of technology. Understanding the reason behind instructors' use of creative pedagogies is crucial as technology perfects the skin of education. The results of this study will add to the body of knowledge already in use on ICT in education and give policy makers and educators viewpoints with ideas for successful technology application in the classroom.

1.1 Statement of the Problem

This research aimed to determine the significant relationship between ICT integration and innovative work behavior to teaching performance of Public Elementary Schools. Specifically, it sought answers to the following questions:

1. What is the perception of the respondents to the ICT integration in terms of:
    1.1. Technology Operations and Concepts;
    1.2. Assessment and Evaluation; and
    1.3. Planning of Teaching According to individual Differences and Special Needs?
2. What is the perception of the respondents to the innovative work behavior in terms of:
    2.1. Opportunity Exploration;
    2.2. Idea Generation;
    2.3. Idea Promotion;
    2.4. Idea Realization; and
    2.5. Idea Sustainability?
3. How can the level of teaching performance be described in terms of:
    3.1. Content and Knowledge Pedagogy;
    3.2. Learning Environment;
    3.3. Diversity of Learners;
    3.4. Curriculum and Planning;
    3.5. Assessment and Reporting;
    3.6. Community Linkages and Professional Engagement; and
    3.7. Personal Growth and Professional Development?
4. Is there a significant relationship between teachers' ability to integrate technology and their teaching performance?
5. Is there a significant relationship between teachers' innovative work behavior and their teaching performance?
6. Singly or in combination, do ICT integration and innovative work behavior of the teachers significantly predict their performance?

2. Methodology

This study used a descriptive correlation approach with a questionnaire as the main tool for data collecting to find the notable correlation among technology integration, creative work behavior, and teaching performance in Sariaya, Quezon. Hare (2017) claims that the descriptive approach of research finds the present situation or context whereas the descriptive technique of research finds an attribute of a particular phenomena. The teachers within the School Years 2024– 2025 in Sariaya East District answered the questions. The study employs a complete enumeration technique whereby all the one hundred twenty-one (121) instructors in the mentioned district additionally participate as the study subjects. Teachers are the ones who can help in determining solutions for issues that might be developing in schools, so enhancing knowledge, skills, and comprehension in the professional environment and provide you with instructional tools and professional support networks. Using a considerable association between technological integration, innovative work behavior, and teaching performance, this study applied the descriptive correlation survey using a questionnaire as the main data collecting technique. The primary tool used in data collecting is the survey form. The technological integration, creative work behavior, and instructional performance were characterized using a tailored and produced by the researcher questionnaire. To gather necessary information, the researcher applied a professionally crafted survey questionnaire created under the direction of the research adviser. The instrument has four parts. Part 1 assesses public elementary school teachers' degree of ICT integration in their modern classroom. Part 2 assesses creative work behavior using the parameters of opportunity exploration, idea generation, idea promotion, concept realization, and idea sustainability. Part 3 defines the parameters for characterizing teaching performance concerning: content and pedagogical knowledge, learning environment, learner diversity, curriculum and planning, assessment and reporting, community connections and professional engagement, personal growth, and professional development. Every one of the parameters consists in five (5) statements. It took use of the scale defined by 5 – Strongly Agree (SA), 4 – Agree (A), 3 – Fairly Agree (FA), 2 – Disagree (D), and 1 – Strongly Disagree (SD). The researcher developed required parameters for the checklist questionnaire by adjusting several theories and models. The questionnaire was produced by combining several ideas, approaches, and guidelines. Such preparation helped the researcher create a questionnaire. Included in the validation procedure were one master instructor, the head of the institution, a language critic with research and educational expertise. The researcher asked the head of the school and the administration of the School District for validation before sending the survey to the real members of the study. After validation, the questionnaire was administered to at least twenty at least non-participated in the actual running of the study. To confirm the content, their responses underwent a Cronbach alpha of 0.894 and above reliability test. Appropriate corrections were incorporated by means of component additions, deletions, and changes. The researcher requested permission to conduct the study; thus, the researcher will contact the principal's office. To ensure the successful spread of the research instrument, assistance from the school principals was solicited. Subsequently, the

researcher acquired the instrument following the respondent's completion of the questionnaire. The data collection was segmented into two sections. The initial phase involved comprehensive collection of fundamental data, including literature, studies, and other relevant items. The subsequent phase involved a formal survey. The researcher initially obtained the approval of the research advisor. The preliminary version of the article and the questionnaire was completed and submitted. The data gathering was divided into two (2) phases. In the initial stage, a variety of basic information was gathered, including books, research, and other relevant materials. The second phase was an actual checklist. The researcher first requested the research adviser's approval. The questionnaire and paper's preliminary draft were created and submitted. After the questionnaire was individually given by the researcher to the intended respondents after it had undergone content and concurrent validity testing, as well as creation and submission of a letter asking for permission for validation and data collection. The data was then located and gathered. The researcher personally went to the target schools with the required paperwork to meet with the principals and important teachers. The principal of the school's assistance in gathering information sped up the procedure. Google forms were used to simplify the distribution and retrieval of the tools. The use of faster and more effective method of communication was used, including phone calls, Facebook private message sending, and email. The data was tallied and tabulated using Microsoft Excel. Using the proper statistical techniques, the collected data were sorted, totaled, tabulated, analyzed, and interpreted. Descriptive statistics—that is, the mean and standard deviation—were used to capture and define the basic trends and variability in the respondents' degrees of technological integration, creative work behavior, and instructional efficacy. These values clearly shown the general trends and dispersion of the acquired data. The study used the Pearson Product-Moment Correlation Coefficient (Pearson r) to assess the link among technological integration, creative work behavior, and teaching performance. The degree and direction of linear correlations between data might be found with this inferential statistical approach rather well. Setting the statistical significance criterion at 0.05 meant that, should the chance of occurrence be less than 5%, connections were regarded as significant. This approach confirmed that the results about inter-variable connections were reliable and accurate. The combined and individual predictive power of technology integration and innovative work behavior on teacher effectiveness was evaluated using a multiple regression analysis. This statistical approach allowed one to evaluate the degree of variance in the dependent variable attributable to the independent variables. The results exposed how much each predictor affected teaching ability as well as whether these effects were statistically significant. We used the coefficient of determination (R2), beta weights (β), and p-values to infer pertinent conclusions from the strength and significance of the regression model.

3. Results and Discussion

Table 1. Perception on ICT Integration in terms of Technology Operations and Concepts

Indicators	Mean	SD	Verbal Interpretation
1. I am proficient in using technology tools required for the new normal learning.	4.36	0.62	Agree
2. I can troubleshoot basic technical issues that arise during online learning sessions.	4.16	0.65	Agree
3. I can easily integrate various software applications into my teaching sessions.	4.21	0.71	Agree
4. I effectively use technology to support student learning.	4.39	0.62	Agree
5. I engage myself in enriching and updating my knowledge in utilizing technologies in delivering instructions.	4.36	0.62	Agree
6. I can evaluate and choose the most relevant technology tools to achieve specific instructional goals.	4.25	0.66	Agree
7. I am proficient in managing and organizing digital resources for instructional purpose.	4.23	0.64	Agree
Overall	4.28	0.64	Agree

Legend: 4.50-5.00 Strongly Agree 3.50-4.49 Agree, 2.50-3.49 Moderately Agree

1.50-2.49 Disagree, 1.00-1.49 Strongly Disagree

Table 1 shows the extent of ICT integration among public elementary school instructors for Technology Operations and Concepts. The overall weighted mean score of 4.28 with a standard deviation of 0.64 falls into the "Agree" category, indicating that technological operations and concepts are commonly practiced and utilized in the classroom. Each of the seven characteristics obtained a mean score of 4.16 to 4.39, indicating consistent use of ICT tools and concepts across diverse educational functions. The highest mean score (4.39) relates to the statement, *"I effectively use technology to support student learning,"* indicating that teachers are not just conversant with technology, but also use it to improve student engagement and academic outcomes. This is closely followed by the indications of enriching knowledge in utilizing technologies (M = 4.36) and employing tools required for the new normal (M

= 4.36), indicating a strong commitment to ongoing digital skill development and readiness for technology-based training. In contrast, the indicator on addressing technological issues during online learning had the lowest mean score (4.16). Although still in the "Agree" rating, this lower ranking may indicate that, while instructors are confident in using technology, they are slightly less confident in solving technical problems on their own. This is consistent with previous research by Lambunao (2024), who found that while instructors are quite good at using ICT tools, many still struggle with technical maintenance and digital troubleshooting, underlining the need for more technical assistance and training. Cabansag (2025) confirms these findings, stating that most Flora District instructors were highly proficient in the use of basic ICT tools, particularly for developing instructional materials and supporting classroom activities. However, institutional barriers such as inadequate internet connection and obsolete hardware frequently hindered the effectiveness and impact of these tools in instruction delivery. Opña (2022) found that despite the presence of ICT in schools, it was commonly used for administrative purposes due to inadequate pedagogical training. Furthermore, the indicator *"I can evaluate and choose the most relevant technology tools to achieve specific instructional goals"* obtained a mean score of 4.25, indicating that teachers can also match technology use with learning objectives. This supports Brasileño and Bidad's (2021) recommendation to align digital tools with curricular goals for better teaching efficacy. The findings indicate a significant degree of ICT integration among public elementary school teachers, especially regarding their operational proficiency with technology. However, the slightly lower grades in troubleshooting and digital resource management suggest that targeted professional development is still required. Addressing these problems through frequent and relevant ICT training programs, as well as modernizing school-based digital infrastructure, will considerably assist teachers in maximizing the potential of ICT in the classroom.

Table 2. Perception on ICT Integration in terms of Assessment and Evaluation

Indicators	Mean	SD	Verbal Interpretation
1. I use technology-based assessment tools to monitor student progress.	4.35	0.63	Agree
2. ICT is a great help for me to provide timely and constructive feedback to students.	4.43	0.68	Agree
3. I use online platforms to administer assessments that are aligned with my learning objectives.	4.17	0.71	Agree
4. Technology enables me to evaluate student learning more efficiently.	4.31	0.73	Agree
5. ICT allows me to track and to analyze student performance data more efficiently.	4.37	0.68	Agree
6. I create and administer technology-based assessments that address a variety of learning requirements.	4.24	0.71	Agree
7. I use digital tools to develop engaging and interactive assessment exercises.	4.31	0.69	Agree
Overall	4.31	0.69	Agree

Legend: 4.50-5.00 Strongly Agree 3.50-4.49 Agree, 2.50-3.49 Moderately Agree

1.50-2.49 Disagree, 1.00-1.49 Strongly Disagree

Based on the data in Table 2, the level of ICT integration in terms of assessment and evaluation among public elementary school teachers is classified as practiced, with a mean of 4.31 and a standard deviation of 0.69 which is verbally interpreted as “Agree.” This demonstrates a high level of technology integration in assessing student learning in the new normal, implying that teachers have successfully adapted digital resources to fulfill assessment roles in their instructional practices. Among the indicators, the highest mean score is 4.43, indicating that teachers feel that ICT is extremely useful in giving timely and constructive feedback to pupils. This shows that teachers consider technology to be a dependable medium for administering evaluations that tell students about their performance. Closely following are the use of ICT to collect and evaluate student performance data (mean = 4.37) and the use of digital tools for progress monitoring (mean = 4.35), indicating a data-driven approach to teaching enabled by technology. Spreadsheets, Google Forms, and learning management systems (LMS) may all contribute to these practices. Furthermore, indicators such as employing digital tools for interactive assessments and measuring student learning more quickly received 4.31 mean score, demonstrating that ICT has improved both the functioning and engagement of assessment processes. Teachers also demonstrate the ability to develop technology-based assessments customized to diverse learning requirements (mean = 4.24) and conduct aligned assessments via online platforms (mean = 4.17), which, while the lowest of the items, is still well within the "Agree" range. These findings are consistent with those of Villariaza et al. (2024), who discovered that elementary school instructors view ICT as extremely advantageous, particularly in terms of improving assessment processes. Their research found that ICT-supported assessments helped personalize learning and increase student involvement. Similarly, Hero (2019) emphasized the favorable relationship between ICT use and instructional

performance, pointing out that effective feedback mechanisms and data monitoring via technology improve student outcomes. Furthermore, Casilao et al. (2025) claimed that professional development in technology integration adds greatly to the consistent use of ICT tools in evaluation tasks, which is compatible with the high means found in this study. The very low standard deviations (range from 0.63 to 0.73) across the metrics suggest that teachers have a consensus on their ICT integration methods, demonstrating consistency in technology use in assessment despite potential resource inequalities. This consistency demonstrates a district-wide commitment to integrating digital technologies into evaluative processes, which is critical for upholding quality standards in a blended or distant learning environment. Overall, the data strongly suggests that teachers are effectively using ICT tools for assessment and evaluation. However, the slightly lower mean use of online platforms for aligned assessments (4.17) may highlight the need for ongoing training and improved infrastructure support to further streamline these digital practices and guarantee that all assessments relate to learning skills.

Table 3. Perception on ICT Integration in terms of Planning of Teaching According to Individual Differences and Special Needs

Indicators	Mean	SD	Verbal Interpretation
1. I use technology to provide differentiated instructions to address diversity.	4.34	0.68	Agree
2. I use multimedia materials to engage students with varied abilities and interests.	4.35	0.66	Agree
3. I integrate assistive technologies to support learners with disabilities.	4.30	0.73	Agree
4. Technology allows me to create personalized learning experiences for each student.	4.36	0.67	Agree
5. I modify my teaching strategies based on the individual needs of my student's using ICT.	4.35	0.62	Agree
6. I use technology to identify and address specific learning gaps in my students.	4.31	0.67	Agree
7. I use digital tools to design teaching materials that are suited to students' various learning styles.	4.34	0.65	Agree
Overall	4.34	0.67	Agree

Legend: 4.50-5.00 Strongly Agree 3.50-4.49 Agree, 2.50-3.49 Moderately Agree

1.50-2.49 Disagree, 1.00-1.49 Strongly Disagree

Based on the data in Table 3, the level of ICT integration in the new normal learning in terms of teaching planning based on individual variations and special needs is interpreted as "Agree," with an overall mean of 4.34 and a standard deviation of 0.67. This finding recommends that public elementary school teachers should routinely and successfully incorporate digital technologies into the design and delivery of instruction that considers learner variety, special educational needs, and differentiated instruction methodologies. The highest-rated item in this domain is the use of technology to generate tailored learning experiences for each student (mean = 4.36, SD = 0.67), demonstrating how ICT enables adaptable and flexible training that suits students' individual learning profiles. Closely following are indicators evaluated at 4.35: changing teaching strategies based on individual needs using ICT and employing multimedia assets to engage learners with diverse abilities and interests. These findings show educators' dedication to inclusive teaching techniques by using ICT for personalization, which is critical in the context of distant or blended learning environments brought about by the new normal. Teachers also reported consistently high usage of digital tools for differentiated instruction (mean = 4.34) and designing materials to accommodate diverse learning styles (mean = 4.34), showing a significant effort to sustain student engagement and equity in instructional delivery. Despite being slightly lower, the usage of assistive technology for aiding learners with impairments (mean = 4.30) and identifying specific learning gaps using ICT (mean = 4.31) remains within the "Observed" range. These results imply that, while general personalization and differentiation are successfully integrated, there is still room to improve accessibility-focused tools for learners with special needs. Fernandez-Batanero et al. (2022) echo these results when explaining that ICT is becoming increasingly important in inclusive education, technology enables access to learning and it gives teachers tools to plan based on different profiles of learners, and in learning environments after the pandemic. Additionally, Alfoudari (2023) claimed that assistive technologies have significant impact on the academic achievement of students with disability, especially when teachers are well-versed about its use. Similarly, Cabero-Almenara, et. al., (2021) confirmed in their study that ICT-supported, multimedia-based teaching is one of the reasons why students increase motivation and involvement in class. The relatively low standard deviations (all less than 0.73) mean that there is a high consensus among the teachers in using ICT for lesson preparation. This congruence highlights a common professional practice, and systemic application of technology to inclusive teaching practices in elementary schooling. In conclusion, the results indicate that ICT integration in planning for diverse and special needs learners is broadly evidenced. Moreover, teachers always apply technology for personalizing, differentiating, and adapting learning experiences according to the needs of the learners, showing that an adaptive and inclusive pedagogy is emphasized in the post- pandemic learning context.

Table 4. Summary Table on Perception on ICT Integration of teachers

Indicators	Mean	SD	Verbal Interpretation
Technology Operations and Concepts	4.28	0.64	Observed
Assessment and Evaluation	4.31	0.69	Observed
Planning of Teaching According to individual Differences and Special Needs	4.34	0.67	Observed
Overall	4.31	0.67	Observed

Legend: 4.50-5.00 Highly Observed 3.50-4.49 Observed, 2.50-3.49 Moderately Observed

1.50-2.49 Less Observed, 1.00-1.49 Not Observed

With an overall mean of 4.31 and a standard deviation of 0.67, organizing the data of Table 5 reveals the overall mean of ICT integration in the new normal among the public elementary school teachers as "Observed." Teachers are thus using ICTs in many facets of their work, and not in a few places at a time. Ranked "Observed," the three particular domains under evaluation—technology operations, concepts, assessment and evaluation, and instructional planning for diverse learners and special needs—showcased a great degree of consistent and proactive ICT use within this pedagogical framework. With M = 4.34, SD = 0.67, Planning of Teaching Based on Individual Differences and Special Needs has the highest mean score. This suggests that teachers are using technology to customize instruction, modify their approaches, and give extra help to pupils with disabilities, as well as to be more sensitive to the needs of a range of students. Technology applied in inclusive design reveals practitioners' strong will of equity and student-centered pedagogy in the digital era. In a post-pandemic educational environment, Fernandez-Batanero et al. (2022) even propose that ICT encourages practices of differentiation and variety in the instruction of pupils, therefore facilitating inclusive practices. The second most often used tool is assessment and evaluation (M = 4.31, SD = 0.69), which shows that teachers are now using digital technologies to track student performance, offer instantaneous comments, and give tests. This is consistent with Magen-Nagar and Shonfeld (2022), who claimed that by means of rapid cycle, data-based student feedback, teachers' use of technology in assessment improves effective and efficient assessment procedures, leading to improved student performance. This noted use of ICT for assessment emphasizes that lecturers are flexible with their application of digital technology for formative and summative assessment, a trait that is essential given the online, remote, and mixed-mode delivery of learning. Technology Operations and Concepts, while still in the "Observed" rating, had the lowest mean of 4.28 and standard deviation of 0.64 of the three dimensions. This shows that, while instructors are confident in their basic technical operations (such as using devices, programs, and internet-based tools), they use foundational ICT principles with slightly less intensity or frequency than the other dimensions. This aligns with the findings of Al-Kharusi et al. (2020), who discovered that although teachers generally possess functional ICT skills, there is often a deficiency in the profound pedagogical integration of these technologies, especially in converting operational knowledge into impactful classroom innovations. The comparatively low standard deviations across all categories show that respondents are consistent in their perceptions and practices of ICT integration. This homogeneity demonstrates a shared knowledge and collective competency among public primary teachers in incorporating technology into their professional practice in the new normal learning environment. Overall, this study found a high and consistent level of ICT integration in public elementary schools across core teaching domains. Teachers show a strong preference for using ICT in differentiated and inclusive planning, followed by effective use in assessment procedures and operational competencies. These findings underscore the necessity of continuous professional development and institutional support in enhancing teachers' ICT competencies, resulting in improved teaching performance and student outcomes.

Table 5. Perception on Innovative Work Behavior in terms of Opportunity Exploration

Indicators	Mean	SD	Verbal Interpretation
1. I continually seek out new ways to improve teaching methods by utilizing accessible technology.	4.41	0.61	Agree
2. I am constantly looking for methods to address problems in my classroom by finding alternative solutions.	4.37	0.62	Agree
3. I am continuously on the lookout for new educational trends that will help me improve my teaching skills.	4.34	0.65	Agree
4. I often evaluate the gaps in my existing teaching approach and consider prospective enhancements.	4.33	0.66	Agree
5. I keep up to date on advances that could improve my students' learning experiences.	4.33	0.65	Agree
6. I am constantly looking for new ways to incorporate technology into my teaching practice.	4.34	0.66	Agree
7. I solicit input from colleagues and students to explore ways to improve my teaching ability.	4.32	0.61	Agree
Overall	4.35	0.64	Agree

Legend: 4.50-5.00 Strongly Agree 3.50-4.49 Agree, 2.50-3.49 Moderately Agree

1.50-2.49 Disagree, 1.00-1.49 Strongly Disagree

Table 5 indicates that the innovative work behavior of public elementary school instructors about Opportunity Exploration is rated as "Agree," with a mean of 4.35 and a standard deviation of 0.64. This signifies the needs for educators to consistently and proactively pursue innovative tactics, tools, and methods to enhance their teaching practices and student results. The significant level of engagement in opportunity exploration reflects a proactive mindset and an aspiration to innovate within the teaching profession, especially in addressing the evolving requirements of education in the new normal. With a standard deviation of.61, the item *"I am always looking for new ways to change the way we teach, using available technology"* received the highest average (4.41). This suggests that teachers are rather active in using easily available digital resources in their teaching, enhancing strategies. This attitude indicates an expanding-oriented behavior which is mirrored by the ever increasing thirst for tech-based innovation in education. In favor of this, the work of Sailer et al. (2021) showed that where teachers are continually investigating digital technologies, they have more opportunities to engage in pedagogical creativity, especially during their shift to remote and hybrid learning environments. Closely, the indicator *"I am always looking for ways to solve problems in the classroom by thinking of different solutions,"* received a mean of 4.37 and a standard deviation of 0.62. This discovery also lends evidential support to the idea that teachers are not just simply consumers of technology but are problem solvers who diagnose problems of practice in the classroom, and implement creative solutions to solve the problems. Likewise, indications such as looking out for new educational trends (4.34), trying out new ways to use technology (4.34) and identifying missing areas in teaching methods (4.33), show a consistent tendency toward critical reflection and openness for shifts. These are examples of "professional agency" as described by van der Heijden et al. (2018) who concluded that exploratory behaviors of teachers have a significant Impact on school innovation and continuous improvement. In addition, the item *"I seek input from colleagues and students about how to improve my teaching ability"* was rated with a mean of 4.32 and a standard deviation of 0.61, revealing the importance of collaboration of the opportunity discovery. To identify better approaches of instruction, teachers rely not only on self-reflection but also on criticism and common experience. This result is consistent with the results of Messmann and Mulder (2020) showing that opportunity exploration flourishes in educational environments supporting peer collaboration, collaborative reflection, and professional communication. The results point to high degrees of creative work behavior among public-sector primary school teachers in their search of fresh prospects. The consistently high ratings for all the factors show that teachers are always looking, evaluating, and trying out fresh ideas and approaches. Particularly given technology developments and changing student expectations, this proactive approach is essential for ensuring that instruction remains relevant, dynamic, and responsive to the changing educational scene. The results highlight a strong culture of creativity and adaptation among teachers, which is essential to preserve long-term advances in teaching effectiveness and student learning.

Table 6. Perception on Innovative Work Behavior in terms of Idea Generation

Indicators	Mean	SD	Verbal Interpretation
1. I come up with a variety of solutions to challenges that happen in my classroom.	4.27	0.63	Agree
2. I appreciate the importance of technology in teaching.	4.48	0.63	Agree
3. I frequently consider novel approaches to increasing student involvement using innovative tools.	4.30	0.63	Agree
4. I am constantly devising new strategies to improve student learning using various materials.	4.30	0.64	Agree
5. I am confident in my abilities to create new and unique solutions to educational issues.	4.30	0.66	Agree
6. I am constantly creating ways to improve the learning environment through technology.	4.34	0.65	Agree
7. Explore innovative technology applications to address classroom difficulties.	4.32	0.62	Agree
Overall	4.33	0.64	Agree

Legend: 4.50-5.00 Strongly Agree 3.50-4.49 Agree, 2.50-3.49 Moderately Agree

1.50-2.49 Disagree, 1.00-1.49 Strongly Disagree

According to the data in Table 6, the level of innovative work behavior among public elementary school teachers in terms of idea generation is interpreted as "Agree," with an overall mean of 4.33 and a standard deviation of 0.64. This rating indicates that teachers are consistently working on new and proactive ways to impact instruction, students, and the learning environment by using new ideas, materials, and strategies. The culture for creativity was very high when the mean score of all variables was taken into consideration and revealed that the teachers were very supportive and prepared to find and use new

solutions in the classroom. Those responses with the highest level of responses and largest thematic value in the dominant group (4.48, SD = 0.63) are *"I realized the use of technology in teaching is very important; it is a subject that, due to their career in teaching, it is essential to use technology."* This recognition creates the basis for the production of ideas since it shows an openness to investigate how tools for education could help educational innovation. In line with their capacity to create educational innovations and enhance student learning experiences, Rienties, Herodotou, and Boroowa (2020) have argued—in the same line—that teacher attitudes regarding technology are considerably linked. Items like *''I frequently try to think of new ways to get students more involved using new materials and tools,'' ''I'm always on the lookout for new ways to help students learn using different types of materials,''* and *''I'm certain I can come up with novel and effective solutions to educational problems''* generated means of 4.30 with little variation in standard deviation, further suggesting that teachers could both willing to change and already doing so. This behavior also reflects a promoting orientation and complies with the construct of creative self-efficacy, which, as suggested by Karwowski and Lebuda (2018), is a powerful predictor of the amount and quality of ideas generated in a work context such as education. The statement *"I am always inventing new ways to make learning more effective through technology"* had a mean of 4.34, showing that teachers are constantly searching and applying ways to enhance classroom climate, enable student interactivity, and arrange for the facilitation of learning. *"Seek-out new technology applications in response to the classroom difficulties"* garnered an average of 4.32, highlighting the tactical deployment of new technologies to solve specifically-defined classroom problems. These findings are congruent with the work of Afshari et al. (2022), who discovered that teachers who actively produce ideas for technology integration typically improve their adaptability and effectiveness, especially in dynamic or resource-limited educational contexts. The indicator with the lowest mean score, although still in the "Agree" category, was *"I come up with a variety of solutions to challenges that happen in my classroom,"* with a mean of 4.27 and a standard deviation of 0.63. While significantly lower, this outcome validates instructors' ability to innovate and respond to daily teaching challenges. The negligible variance in scores across all variables shows that individuals exhibit consistent innovative behaviors, indicating a concerted effort to improve their professional practices on a continuing basis. These data confirm that idea creation, as a component of innovative work behavior, is prevalent among public elementary school teachers. Their regular involvement in generating, refining, and implementing new ideas, particularly using technology, displays a high level of professional creativity and initiative. This competence is crucial not just for increasing teaching performance, but also for satisfying students' diverse and changing requirements in the new educational normal.

Table 7. **Perception on Innovative Work Behavior in terms of Idea Promotion**

Indicators	Mean	SD	Verbal Interpretation
1. I actively share my unique ideas with coworkers and solicit their input.	4.31	0.63	Agree
2. I advocate the use of new teaching practices at staff meetings and school activities.	4.30	0.65	Agree
3. I share the potential benefits of using new educational tools and practices.	4.30	0.67	Agree
4. I am proactive in encouraging new techniques among my teaching colleagues.	4.30	0.61	Agree
5. I take the effort to seek support for my ideas to improve classroom education.	4.35	0.60	Agree
6. I actively work with colleagues to encourage the adoption of new instructional technologies.	4.30	0.66	Agree
7. I share my unique teaching ideas with my colleagues to encourage them to try new techniques.	4.26	0.73	Agree
Overall	4.30	0.65	Agree

Legend: 4.50-5.00 Strongly Agree 3.50-4.49 Agree, 2.50-3.49 Moderately Agree

1.50-2.49 Disagree, 1.00-1.49 Strongly Disagree

Based on Table 7, the degree of public elementary school teachers' innovative work behavior, including the idea promotion variable, is categorized as "Agree" (mean = 4.30, standard deviation = 0.65). This study implies that teachers tend to engage in sharing, endorsing, and promoting innovative teaching ideas and practices through their professional communities. Idea promotion is a particularly relevant knowledge dimension for IWB due to involving convincing others to adopt innovations and infusing new routines into the organizational culture. The factor of *"I try actively to search for support to implement ideas to enhance classroom education"* had the highest mean (M = 4.35, SD = .60), and teachers in this study tend to actively search for the necessary support to implement their original ideas. This is consistent with the assumption that the publicity of new ideas often requires collaborative work, advice, or strategic communication to win the attention or endorsement of colleagues and decision makers. De Jong and Den Hartog (2018) discovered that idea promotion is often a socially driven phenomenon, which is facilitated by communities of practice that support innovation and

professional growth. The remaining indicators, *"I actively transmit my original ideas to coworkers and ask for their opinions"* (M=4.30, SD=0.65), *"I introduce new teaching methods at staff meetings and other school functions"* (M=4.30, SD=0.67). *"I transmit the potential benefits of introducing new teaching tools and methods"* (M=4.30, SD=0.63) also represents high mean scores. The present results indicate that teachers do appear to be encouraging creative behaviors, not only through peer interactions but also in more formal settings, like meetings and collaborative discussions. Zuraik and Kelly's (2019) findings and the habits of sharing information can facilitate an organization's readiness for change and support a culture of innovation. With a lowest means scale score of 4.26, *"I share my own unique ideas for teaching with colleagues to persuade them to try new methods and techniques,"* said, still falls in the "Agree" level of agreement. This points to a more cautious approach to encourage peer experimentation, but it nevertheless reflects regular involvement in the spread of learning advances. 'I generate interest among my colleagues to adopt new instructional technologies'/'I work with colleagues to promote the use of new instructional technology had a mean value of 4.30, highlighting the need for collective integration of technology in a classroom setting. These behaviors are importantly conducive to the building of a creative teaching unit (InKu) to enact technology integration for higher-quality instruction, as evidenced by Wang and Wang (2020), who found a direct relationship between teachers' indication of successful innovation in school and their promotion of innovative teaching concepts, in that teachers' competency to mobilize teacher peer support and championing new teaching concepts are greatly influenced by besides these characteristics, information-literate individuals plus digital natives are seen as people of the 21st century. In summary, the findings indicate that public elementary school teachers consistently exhibit proactive behavior in promoting new ideas. They are part of the grassroots culture of innovation, advocating for and promoting new educational methods and tools to leverage human capital. This level of participation has contributed to not only the furthering of individual professional growth but also overall advancement on a group scale in terms of teaching efficacy and student achievement outcomes.

Table 8. **Perception on Innovative Work Behavior in terms of Idea Realization**

Indicators	Mean	SD	Verbal Interpretation
1. I incorporate new strategies that I've developed into my daily practice.	4.34	0.63	Agree
2. I convert new ideas into tangible strategies to improve my teaching capabilities.	4.37	0.59	Agree
3. I am competent of organizing and carrying out plans for implementing new teaching approaches.	4.23	0.65	Agree
4. I work with colleagues to effectively adopt innovative teaching methods in the classroom.	4.36	0.62	Agree
5. Regardless of potential challenges or objections, I continue to deploy new solutions.	4.33	0.60	Agree
6. I guarantee that new teaching tactics I implement are effectively integrated into my classroom routine.	4.30	0.68	Agree
7. I am actively working to translate novel concepts into practical implementations for student learning.	4.29	0.61	Agree
Overall	4.32	0.62	Agree

Legend: 4.50-5.00 Strongly Agree 3.50-4.49 Agree, 2.50-3.49 Moderately Agree1.50-2.49 Disagree, 1.00-1.49 Strongly Disagree

The results in Table 8 indicate that the innovative work behavior of public elementary school teachers regarding concept realization is rated as "Agree," with a mean of 4.32 and a standard deviation of 0.62. This signifies instructors' proactive and continual transformation of innovative concepts into tangible solutions, demonstrating their ability to translate theoretical and conceptual advancements into real enhancements in the classroom. Implementation of ideas is viewed as the end or final phase of IWB and is the implementation of new ideas in practice in the school context and is crucial for the school in advancing pedagogical development. *"I translate new ideas into strategies that increase my teaching effectiveness"* is the highest-rated item in the table, with a mean value of 4.37 and standard deviation of .59, demonstrating that teachers have a good ability to turn abstract novelties into meaningful day-to-day actions in the classroom. This investigation supports Denti and Hemlin's (2018) assertion that the capacity to enact creative ideas for learning is a distinguishing mark of effective teachers in contemporary learning contexts. Little is known regarding the 4:1 facet labeled *"I bring my colleagues together to better implement teaching methods or practices"* (M = 3.61) and the 4:2 facet *"I work with my colleagues to implement innovative teaching for the classroom"* (M = 4.36), which reveals the relevance of developing a joint implementation of new teaching practices. So did cues like *"I operationalize new strategies I have developed in my daily practice"* and *"Against resistance or objection, I remain persistent in deploying the new solutions,"* which received an average of 4.34 and 4.33. These results suggest that teachers were remarkably resilient and resourceful in the perseverance they showed for adopting creative approaches despite opposition or barriers. Active participation in innovation despite obstacles is based on internal drive, and a high degree of belief in the capacity of new ideas to transform is equally likely among the respondents, as Afsar and Masood (2018) imply. As a reminder, although falling in the "agree" range, the lowest-rated response, *"I am able to organize and carry out plans for implementing new teaching practices,"* had a mean of 4.23. However, this also indicates that there is still room for improvement in managing projects of implementation and executing

educational innovation. Moreover, the item statement *"I ensure that new teaching strategies I adopt become part of my regular classroom practice"* (M = 4.30) also sustained the assumption that maintaining and embedding innovative practices are present but developing. *"I am involved in the process of applying novel ideas to practice for effective student learning."* (Mean value=4.29), which accounted that teachers are working actively to transfer new understanding to students' benefit individually. This is in line with recent research by Dede and Richards (2020), who argue that the success of ideas is not solely based on individual teacher creativity but also on the fit of those ideas to real consequences in terms of engaging students and moving them along an intended academic trajectory. These findings offer a whole picture of the creative work behavior of public school instructors, thereby reflecting the ideal implementation. That all more or less agreed on the "agree" side of the scale indicates that there is an innovative culture in which teachers have the will and capacity to apply fresh instructional concepts in their regular work. These strategies greatly improve curricular presentation, instructional efficacy, and—above all—student learning experiences.

Table 9. **Perception on Innovative Work Behavior in terms of Idea Sustainability**

Indicators	Mean	SD	Verbal Interpretation
1. I strive to maintain the usage of creative teaching tactics over time.	4.30	0.62	Agree
2. I regularly evaluate and enhance the efficacy of new teaching approaches that I have implemented.	4.27	0.66	Agree
3. I ensure that the creative techniques I deploy are both relevant and effective in the long run.	4.27	0.62	Agree
4. I create long-term goals to sustain and improve fresh concepts in my teaching approaches.	4.33	0.58	Agree
5. I share successful new techniques with colleagues to ensure that they are widely adopted and sustainable.	4.31	0.63	Agree
6. To ensure that my unique ideas remain effective over time, I continually reflect on and refine them.	4.30	0.59	Agree
7. I ensure that new teaching strategies are always incorporated into my lesson planning and teaching schedule.	4.37	0.59	Agree
Overall	4.31	0.61	Agree

Legend: 4.50-5.00 Strongly Agree 3.50-4.49 Agree, 2.50-3.49 Moderately Agree

1.50-2.49 Disagree, 1.00-1.49 Strongly Disagree

According to the data in Table 9, the level of innovative work behavior among public elementary school teachers in terms of idea sustainability is classified as "Agree," with an overall mean of 4.31 and a standard deviation of 0.61. This demonstrates that teachers continually employ innovative methods throughout time, ensuring their ongoing relevance and efficacy in the teaching-learning process. The highest-rated indication, *"I ensure that new teaching strategies are always incorporated into my lesson planning and teaching schedule,"* with a mean of 4.37 and a standard deviation of 0.59, stressing the intentional and systematic incorporation of innovations into day-to-day classroom routines. This underlines instructors' commendable efforts to incorporate innovation into their instructional frameworks, assuring continuity and integration. The findings indicate that teachers are not just presenting new teaching techniques, but also eager to incorporate them into their long-term instructional practices. This echoes the finding of Hargreaves and Fullan (2019) that when educational innovations really change the work of schools and teaching/teachers, they become embedded in organizational culture and teachers' practices over time. Related, the item "I establish long-term goals for supporting and enhancing new ideas to my teaching approaches" (M = 4.33) also highlights this long-term focus on educational innovation. A few other considerations illuminate what sustainability might look like in the classroom. For instance, *"I attempt to continue the use of creative teaching strategies over my career"* and "*To ensure that my innovative ideas are effective across my career, I continuously think about and modify them"* both received a mean of 4.30. These scores symbolize teachers taking steps to stop and develop their practices, reflecting a spiral process of analysis, change, and improvement on what has already been made. Reflection on the act of teaching, as, for example, in Riel's (2020) account, is also necessary to sustain innovation and support teachers in their lifelong learning and adaptability, especially in rapidly changing (technology-focused) teaching environments. *"I disseminate successful new methodologies to colleagues in order to ensure wide acceptance and sustainability,"* which has a mean value of 4.31, is also a significant perception in this regard. It suggests a learning environment that is not private but that ideas move throughout the teaching team and have a wider and more enduring influence. Le Fevre, Timperley, & Ell, 2020) emphasize the significance of such collaboration in sustaining educational innovation and contend that innovations are more likely to sustain when teacher involvement in collaborative learning and support structures within schools is the norm. Further evidence provided by another indicator, a value of 4.27 for *"I systematically evaluate and improve new teaching methods I have introduced,"* was found for *"I make sure the innovative methods I apply are relevant and that they work long-term."* These findings suggest that survey participants have a more dynamic view of what innovation is and understand innovation as a continual and iterative process of improvement, assessment, and adjustment, not simply as a discrete act. According to Yeh et al. (2022), it is essential for sustainable innovative activity in educational environments and also in the use of cutting-edge technology, as the renewal of digital tools

and platforms is a frequent necessity, as well as the realignment of pedagogical activities. Overall, the high average scores in Table 10 and the consistent "Observed" interpretations show that public elementary school teachers are excellent at keeping, adjusting, and enhancing their innovative practices over time. This capacity to maintain innovation is vital to long-term efficacy in teaching, for it ensures that technology and pedagogical innovations are embedded in everyday school life, rather than just fads.

Table 10. Summary Table as to Perception on Innovative Work Behavior

Subscales	Mean	SD	Verbal Interpretation
Opportunity Exploration	4.35	0.64	Observed
Idea Generation	4.33	0.64	Observed
Idea Promotion	4.30	0.65	Observed
Idea Realization	4.32	0.62	Observed
Idea Sustainability	4.31	0.61	Observed
Overall	4.32	0.63	Observed

Legend: 4.50-5.00 Highly Observed 3.50-4.49 Observed, 2.50-3.49 Moderately Observed

1.50-2.49 Less Observed, 1.00-1.49 Not Observed

Public elementary school teachers consider creative work behavior to be "observed," which has a composite mean of 4.32 and a standard deviation of 0.63 (Table 10). This suggests ongoing high levels of participation in classrooms in creative activity. Interpreting the “Observed” subscale as instincts, every subscale—possible improvements, ideas, beneficial ideas, and endless implementations—had a mean centered around 4.30–4.35, indicating that there is a coherent and consistent use of creative actions along most dimensions. The highest mean for the five subscales was found for opportunity exploration with a mean of 4.35 (SD = 0.65), suggesting that teachers make conscious efforts to seek for new ways to enhance their pedagogy and learning. This supports the conclusion of Gerards, de Grip, and Baudewijns (2021), who argued that, especially in a context of continual change of technology, in an environment like chemical engineering, opportunity discovery is an essential precursor to creative activity. By being open to new opportunities, teachers can remain inquisitive and exploratory, thereby preserving their flexibility and responsiveness to students' needs. Idea generation is ranked next with a mean score of 4.33 (SD = 0.64), which suggests that teachers often generate new ideas and ways of handling problems in the classroom. This is also in line with Gkorezis (2018), who emphasized the importance of supporting natural drive and the right learning climate to enhance faculty's creative ideation. The stable mean score demonstrates that teachers are aware of potential but also searching out ideas and strategies to enhance their teaching. Teachers are most likely to share their ideas with colleagues (M = 4.30, SD = 0.65). Khalili (2020) emphasizes the importance of idea dissemination in transforming individual creative acts into making successful institutional changes, particularly when a group of teachers comes together to adopt new methods. The teachers’ actions in terms of implementing their ideas and transforming them into effective teaching strategies are reflected in their mean score of

4.32 (SD = 0.62). This finding is also consistent with the study conducted by Lin, Sanders, and Lee (2020) on potential being converted into performance through the realization of creative ideas under the successful leadership and strong support system of the institution. The teachers in this study don’t just see ideas; these findings suggest that they have the power and will to act on them. Finally, with a mean of 4.31 (SD = 0.61), the concept of sustainability at least reflected the instructors’ perseverance to institutionalize, maintain, and develop their ideas for the future. Sustainability ensures that innovation remains an ongoing part of the classroom, not a momentary disruption. As underlined by Marambe, S. J. and Abu Bakar, K. A. (2021), sustained innovation in teaching necessitates reflective practice and continual improvement, which these teachers clearly demonstrate. The five subscales' limited mean range points to a balanced and all-encompassing attitude to innovative work behavior. Along with researching and developing fresh ideas, teachers support, implement, and maintain them. Such thorough behavior reflects a professional culture that supports creativity at all levels, which is necessary for the effective integration of technology and pedagogical transformation. This methodical involvement implies that public elementary school teachers are in a good position to use constant innovation to raise educational equality and responsiveness.

Table 11. **Level of Teachers’ Performance in terms of Content and Knowledge Pedagogy**

Indicators		Mean	SD	Verbal Interpretation
1.	I display a thorough mastery of the subjects I teach.	4.39	0.55	Very Satisfactory
2.	My teaching efficiently connects academic knowledge to practical applications.	4.35	0.60	Very Satisfactory
3.	I employ a variety of instructional tactics to ensure pupils understand the material.	4.34	0.64	Very Satisfactory
4.	I can convey complex ideas in manners that are understandable to all students.	4.36	0.64	Very Satisfactory

5. I constantly update my knowledge to ensure that I am teaching the most relevant material.	4.39	0.61	Very Satisfactory
6. I consistently show a strong grasp of the curriculum and effectively communicate its key concepts to my students.	4.35	0.63	Very Satisfactory
7. I tailor my teaching strategies to meet the varied learning needs and interests of my pupils.	4.41	0.57	Very Satisfactory
Overall	4.37	0.61	Very Satisfactory

Legend: 4.50-5.00 Outstanding 3.50-4.49 Very Satisfactory, 2.50-3.49 Satisfactory

1.50-2.49 Unsatisfactory, 1.00-1.49 Needs Improvement

Table 11 shows that public elementary school teachers' subject and knowledge pedagogy performance is "Very Satisfactory," with an overall mean of 4.37 and a standard deviation of 0.61. It seems that the teachers are proficient and effective in transferring subject matter as well as in pedagogical strategies suited to their students' needs. In that category, all indicators scored a mean between 4.34 and 4.41 (Very Satisfactory"), showing stability and robustness in instructional quality and in-depth knowledge of the topic. The item with the highest mean score is “I adapt my teaching strategies to the varied learning styles and interests of my students” (mean = 4.41; SD = 0.57), which highlights teachers’ concern for how the lessons were planned in attention to the diversity of their students. This illustrates of student learners. And that is important, especially for elementary school. Adaptive teaching competence is key diverse learning needs of students (Blömeke & Kaiser, 2020). Educators who modify their motivation and academic achievement. A tie exists between two items, each with a mean score of

4.39. I demonstrate a deep mastery of the material in the classes I teach, and I keep myself up-to-date to be able to teach the most relevant material. These scores represent educators' knowledge of their content areas, not to mention a process of continuous learning in the fast-paced world of education. König et al. (2022) point out the importance of content knowledge and lifelong professional learning to sustain instructional effectiveness in a changing world, especially as new technologies and pedagogies are integrated into practice. These educators' strong teaching performance can be attributed to other signs such as applying academic knowledge effectively (M = 4.35, SD = 0.60), using various teaching strategies (M = 4.34, SD = 0.64), and presenting complex concepts clearly (M = 4.36, SD = 0.64). The acquisition of these skills is essential for attaining a solid bridge between theory and enhancing the comprehension and retention of knowledge among students. Darling-Hammond et al. (2019) state that the essence of good teaching is based on linking concepts, utilizing different strategies, and making the complex simple. Also, the factor "I have mastery over the curriculum and look forward to teaching it to my students" reflected a mean of 4.35 (SD = 0.63), indicating the teachers' competence in using the curriculum and transferring this knowledge into organized, learner-oriented instruction. According to Pantić and Florian (2019), this coherence includes knowledge of the content and the pedagogies to be used in delivering content for teaching and learning. The results generally indicate that teachers do have the content knowledge and pedagogical content knowledge necessary to deliver excellent teaching.

Uniformly applying "very satisfactory" ratings to all criteria implies professional competence at a high level and a solid base for integration of technology and modern techniques. These skills allow teachers to adjust their approach to changing learning needs and retain the quality of their teaching.

Table 12. **Level of Teachers’ Performance in terms of Learning Environment**

Indicators	Mean	SD	Verbal Interpretation
1. I establish a classroom environment that encourages respect and healthy interactions among students.	4.44	0.59	Very Satisfactory
2. I maintain a well-organized and welcoming learning environment that encourages student participation.	4.41	0.61	Very Satisfactory
3. I make sure that my pupils feel safe in my classroom, both emotionally and physically.	4.48	0.56	Very Satisfactory
4. I employ a range of activities to foster an interactive and motivating learning environment.	4.42	0.61	Very Satisfactory
5. I efficiently manage classroom behaviors so that all students get the most out of their education.	4.39	0.64	Very Satisfactory
6. I create a classroom environment in which students feel cherished and respected.	4.46	0.58	Very Satisfactory
7. I employ a range of strategies to guarantee that all students actively participate in the learning process.	4.46	0.58	Very Satisfactory
Overall	4.44	0.60	Very Satisfactory

Legend: 4.50-5.00 Outstanding 3.50-4.49 Very Satisfactory, 2.50-3.49 Satisfactory

1.50-2.49 Unsatisfactory, 1.00-1.49 Needs Improvement

As per Table 12, public municipality elementary school teachers have a perception of teaching as very satisfactory; on the learning environment, the role mean is 4.44 with a standard deviation of 0.60. This indicates that teachers have good classroom management skills and frequently foster well- functioning,

inclusive, and participatory classrooms. All seven factors were rated as "Very Satisfactory" (4.39 to 4.48), reflecting overall high levels of effectiveness in multiple aspects of class atmosphere and the use of student engagement strategies. The highest mean score of 4.48 was awarded to the indicators “I ensure that I set up a classroom where my pupils feel safe, both emotionally and physically during class” and “I utilize a variety of methods to ensure that all learners are actively involved during the lesson.” These findings highlight the teachers' deliberate efforts to create a secure and participatory learning environment. A safe classroom is essential for fostering academic success, especially among young students who thrive when their emotional and physical needs are addressed. Cumming, Strnadová, and Knox (2020) found that a safe and inclusive learning environment increases student results significantly, particularly for students who require emotional and behavioral help. The indications *"I create a classroom environment in which students feel cherished and respected"* and *"I establish a classroom environment that encourages respect and healthy interactions among students,"* both obtained high ratings (M = 4.46 and 4.44, respectively). These scores demonstrate the emphasis on emotional climate and mutual respect, highlighting the significance of socio-emotional learning in primary school. Supporting this, Jennings and Greenberg (2019) underlined that teachers who create emotionally supportive settings improve students' social-emotional growth and academic achievement, particularly through respectful communication and relationship building. The indicator *"I use a variety of activities to create an interactive and motivating learning environment"* earned a mean score of 4.42, while *"I keep a well-organized and welcoming learning environment that encourages student participation"* was close behind at 4.41. These findings indicate that teachers are proactive in building dynamic, engaging classroom environments in which students are encouraged to engage and collaborate. This is consistent with the findings of Vansteenkiste et al. (2018), who found that motivation-enhancing teaching practices have an important role in boosting autonomy, competence, and relatedness—all of which are essential drivers of student engagement. Finally, the indicator with the lowest mean, but still "Very Satisfactory," was *"I efficiently manage classroom behaviors so that all students get the most out of their education"* (M = 4.39, SD = 0.64). Despite being the lowest, this score is nevertheless indicative of good classroom management. Effective behavior management ensures little interruption and equitable learning opportunities. Simonsen, Freeman, and Randall (2021) found that well-managed classrooms provide controlled environments in which all students may focus and thrive. The consistently high mean ratings across all variables show that public elementary school instructors excel at creating environments that are emotionally supportive, behaviorally regulated, and instructionally rich. These features are essential for the effective integration of technology and new instructional techniques. A happy and well-managed learning environment not only helps students learn, but it also provides as a solid platform for efficiently incorporating new educational technologies and innovative teaching practices.

Table 13. **Level of Teachers’ Performance in terms of Diversity of Learners**

Indicators	Mean	SD	Verbal Interpretation
1. I tailor my teaching strategies to the unique learning needs of my students.	4.39	0.60	Very Satisfactory
2. I customize my classes to accommodate individuals with various learning styles, talents, and backgrounds.	4.43	0.55	Very Satisfactory
3. I ensure that all students, regardless of aptitude, receive the necessary support to succeed.	4.39	0.62	Very Satisfactory
4. I aggressively promote inclusive learning opportunities for students with special needs.	4.36	0.62	Very Satisfactory
5. When designing lessons, I consider each student's specific skills and shortcomings.	4.37	0.61	Very Satisfactory
6. I employ differentiated instruction strategies to guarantee that all students effectively interact with the lesson topic.	4.43	0.62	Very Satisfactory
7. I design learning activities that reflect my students' various talents and problems.	4.36	0.60	Very Satisfactory
Overall	4.39	0.60	Very Satisfactory

Legend: 4.50-5.00 Outstanding 3.50-4.49 Very Satisfactory, 2.50-3.49 Satisfactory

1.50-2.49 Unsatisfactory, 1.00-1.49 Needs Improvement

According to Table 13, the quality of teaching effectiveness of public elementary school teachers in terms of student diversity is rated as "Very Satisfactory," with an overall mean of 4.39 and a standard deviation of 0.6. This rating emphasizes the teachers' capacity to successfully notice, respond to, and accommodate a diverse range of students' needs, characteristics, and backgrounds in the classroom. Each of the seven indicators in this dimension obtained mean scores ranging from 4.36 to 4.43, continuously falling into the "Very Satisfactory" category, indicating well-rounded and inclusive teaching approach. The highest ratings, both at 4.43, were for the indicators *"I customize my classes to accommodate individuals with various learning styles,*

talents, and backgrounds" and *"I employ differentiated instruction strategies to ensure that all students effectively interact with the lesson topic."* This finding endorses the intuitive focus of teachers on differentiation and inclusive lesson design. Diversity in the classroom Differentiated instruction is generally regarded as a significant challenge in educational services. As Tomlinson and Murphy (2018) have stated, deliberately differentiating content, process, and product based on students' readiness, interests, and learning preferences supports a responsive and engaging classroom. Even these high ratings reflect instructors' sensitivity to diversity as a necessary skill in a 21st-century classroom. Likewise, "I develop my teaching practices around the special needs of each student" and "I provide the necessary support to my students, regardless of their aptitude" (4.39) suggest that teachers consider individual trajectories and ensure an egalitarian experience of learning. This result aligns with Florian and Spratt's (2020) argument for inclusive pedagogy that interprets diversity as a robust, adaptive system, which, in turn, demands flexible teaching strategies to support all of the learners along their learning journey. In the same vein, the expression "I actively encourage inclusive learning programs for special needs students" was ranked 4.33, and "I design teaching tasks as an image of various abilities and problems among my students" had an M of 4.36, showing that teachers take special care of special educational needs and student-related difficulties when planning. These figures represent a considerable level of awareness and commitment among teachers in relation to educating children with SEN in the inclusive classroom. Black-Hawkins and Florian (2019) argued that inclusion works best not when general educators modify or retrofit solutions in the classroom, but when they construct tasks with diversity built in. In general, the results reveal that public elementary teachers have an impressive performance regarding managing the diverse classroom, enacting schooling inclusively in dynamic forms, and aiming to meet the varied needs of students. Their ongoing attention to adjusting lessons, using personalized learning methods, and including every student aligns with today's best educational practices, which see diversity as a chance to improve learning through more flexible and creative teaching, rather than as an obstacle to be fixed.

Table 14. Level of Teachers' Performance in terms of Curriculum and Planning

Indicators	Mean	SD	Verbal Interpretation
1. I always link my lesson plans with curriculum standards and learning objectives.	4.42	0.59	Very Satisfactory
2. I create lessons that are intelligible, well-structured, and rationally organized.	4.43	0.59	Very Satisfactory
3. I use a variety of instructional resources and materials to enrich the curriculum.	4.36	0.59	Very Satisfactory
4. I design lessons that combine cross-curricular concepts with real-world applications.	4.33	0.65	Very Satisfactory
5. I analyze and change my lesson plans in response to my students' learning progress and needs.	4.37	0.62	Very Satisfactory
6. I carefully select teaching methods and resources that are appropriate for my students' learning goals and requirements.	4.39	0.58	Very Satisfactory
7. I examine and update my lesson plans on a frequent basis to ensure that they are still relevant and effective.	4.45	0.58	Very Satisfactory
Overall	4.39	0.60	Very Satisfactory

Legend: 4.50-5.00 Outstanding 3.50-4.49 Very Satisfactory, 2.50-3.49 Satisfactory

1.50-2.49 Unsatisfactory, 1.00-1.49 Needs Improvement

Table 14 presents the teaching effectiveness of public elementary school teachers as the curriculum process is described as "very satisfactory" as a whole, with an average mean of 4.39 and a standard deviation of 0.60. This rating is an indication that teachers plan instruction around curricular standards, design thoughtful lessons, and skillfully use instructional materials. All individual items in this dimension received scores categorized as "Very Satisfactory" (with means ranging from 4.33 to 4.45), indicating an adequate level of pedagogical and planning quality for teaching. *"I examine and update my lesson plans on a regular basis to make sure they are still relevant and effective"* had the highest mean score, 4.45, showing teachers' commitment to keeping the lesson relevant and current with fast-changing classroom dynamics and educational trends in our fast-paced, information-rich teaching environment. Remillard & Heck (2020) add that continued lesson revision is essential to curricular coherence, allowing teachers to refine instruction in response to changing student needs and adaptations to new curriculum territories. Dynamic lesson planning enhances instructional effectiveness, especially when combined with technology and innovative pedagogical strategies. Items such as *"I design coherent lessons, well sequenced, and logically connected"* and *"I always connect my lesson plans with curriculum standards and learning objectives"* had mean ratings of 4.43 and 4.42,

respectively. These results underscore teachers' ability to implement clear standards-based instruction, an important dimension of effective teaching and learning. Anderson and Krathwohl (2020) mentioned that aligning the course with established learning objectives and standards maintains cognitive rigor and measurable results and helps educators map out a clear direction for student learning while meeting institutionally established standards. The second indicator, *"I utilize multiple resources and materials to supplement the curriculum,"* received a mean score of 4.36, suggesting that teachers incorporate various types of teaching aids into their lesson planning. Today's education uses multimedia, interactive digital platforms, and diverse resources that are essential to integrate into teaching for improving student engagement and concept understanding. This is in line with the work of Mardis and Everhart (2018), who asserted that including both digital and paper sources enhances curriculum delivery and meets the variety of student preferences and needs. Additionally, creating lessons that link cross-curricular themes to the real world proved popular, with an average score of 4.33. This adds support to the view that teachers enhance the meaningful learning of students when they give meaning to learning by relating topics across subject areas and by showing the relevance of the knowledge in daily life. Beane (2021) stresses that interdisciplinary teaching promotes a better understanding of the material and the use of critical thinking when students make the connections on their own with how it can be applied outside of school. In addition, *"I reflect and adapt my lesson plans based on my students' learning pace and problems"* was 4.37, and *"I pay close attention to choosing teaching methods and resources that match the students' learning objectives and needs"* was 4.39. These data suggest ongoing teacher tracking of student accomplishment and adjustment of instruction, behaviors supportive of formative assessment and reflective teaching. These techniques promote student-centered learning to ensure that planning is effective across a range of classroom contexts (Penuel & Gallagher 2019). In general, the data indicate that teachers in the public elementary schools have very high levels of curriculum and instructional competence. Their commitment to ongoing growth and the framing of lesson plans as students face them reflects a commitment to formative instruction and student-centered education. The results imply the significance of curricular development as a teaching efficacy factor, particularly in terms of the use of technology and the promotion of creativity in instructional strategy.

Table 15. Level of Teachers' Performance in terms of Assessment and Reporting

Indicators	Mean	SD	Verbal Interpretation
1. I employ a number of assessment approaches to test students' comprehension of the topic.	4.40	0.60	Very Satisfactory
2. I provide timely and constructive feedback on students' assessments.	4.34	0.59	Very Satisfactory
3. I create evaluations that accurately reflect students' learning results.	4.41	0.60	Very Satisfactory
4. I interact with parents and stakeholders on a frequent basis on student development.	4.39	0.65	Very Satisfactory
5. I use evaluation data to improve my teaching approaches and provide personalized support to individual students.	4.32	0.65	Very Satisfactory
6. I use formative and summative assessments to track and evaluate student progress.	4.45	0.58	Very Satisfactory
7. I integrate my evaluations with learning objectives to ensure they are both relevant and fair.	4.43	0.59	Very Satisfactory
Overall	4.39	0.61	Very Satisfactory

Legend: 4.50-5.00 Outstanding 3.50-4.49 Very Satisfactory, 2.50-3.49 Satisfactory

1.50-2.49 Unsatisfactory, 1.00-1.49 Needs Improvement

Table 15 reveals that the quality of the teaching performance of the public elementary school teachers relative to assessing and reporting is "very satisfactory," with an overall mean of 4.39 and a standard deviation of 0.61. This demonstrates that teachers are consistently effective in planning, delivering, and analyzing assessments to promote student learning and ensure accountability. The highest-rated indicator, which had a mean score of 4.45, is "I use formative and summative assessments to track and monitor student progress," indicating those participating teachers strongly believe in the value of assessment for guiding instruction and monitoring scholastic achievement. The capability of balancing formative and summative processes is one of the fundamental requirements in education for providing an overall view about student performance and supporting personalized learning. This result accords with Shute and Rahimi (2021), in that Shute and Rahimi discovered that formative assessments make a big contribution to learning outcomes by providing continuous feedback and assisting with instructional strategies. Other high-scoring indicators are *"I couple my assessments with student learning outcomes to make certain that both are fair and relevant"* (M = 4.43). This provides evidence for the notion that teachers intentionally align assessments to instructional goals to ensure the validity and fairness of their assessment of learning. Assessment alignment is necessary so that the test items can be said truly to reflect the intended learning targets, thereby making education fair and effective (Brookhart, 2018). Likewise, the item *"I*

systematically generate assessments that are directly related to the students' learning" presented a mean of 4.41, while it seems that respondents endorse the validity of various assessment methods. Teachers also indicated good use of different assessment tools (e.g., mean = 4.40 to "I use a variety of assessment techniques to check if students understand the topic"). This indicates a strong evaluation of understanding through a variety of modalities, like performance tasks, written exams, digital quizzes, and oral recitation, which is very necessary for the technology-integrated learning environment. Multiple methods of assessment lead to more valid portrayals of student learning, especially when they are integrated with digital resources that provide immediate feedback and adaptive practice (Zhang & Burry-Stock, 2021). The sub-aspect of feedback (I give timely and constructive feedback regarding students' assessments), which showed the lowest Pearson mean score (4.34), suggests that feedback is valued as a socio-cognitive guide for both learners and teachers in the learning process. Feedback, especially when timely and specific, improves student motivation and understanding while also contributing considerably to academic advancement. This is backed by Hattie and Clarke (2019), who argue that effective feedback is one of the most potent influencers on student progress, provided it is explicit, goal-oriented, and practical. Interacting with parents and stakeholders, as measured by the indicator *"I interact with parents and stakeholders on a frequent basis on student development,"* received a score of 4.39, demonstrating the significance teachers place on inclusive communication during the evaluation process. Parental involvement increases student accountability and fosters a support network that benefits students both inside and outside of the classroom. This is consistent with the findings of Kraft and Dougherty (2020), who showed that good teacher-parent communication about academic performance promotes student engagement and motivation. The last of the rated standards, "I employ data on student learning to modify my teaching strategies and to provide additional support and challenge to particular students," has a reasonable mean of 4.32, indicating data- driven instruction could be further developed. Although the score is categorized as "Very Satisfactory," this indicates an opportunity to strengthen professional development in data literacy and the utilization of learning analytics to personalize instructional strategies. Data-driven education is essential for addressing ongoing learning needs and ensuring teaching is responsive and targeted (Mandinach & Gummer, 2018). In conclusion, at the statistically significant level, it appears that public elementary school educators are very skilled assessment and reporting professionals, especially in the use of various assessment technologies, matching assessments to learning objectives, and using results to guide instruction. These teaching practices are fundamental to good teaching and are greatly enhanced when linked to technology integration and new instructional strategies that support personalized learning.

Table 16. **Level of Teachers' Performance in terms of Community Linkages and Professional Engagement**

Indicators	Mean	SD	Verbal Interpretation
1. I regularly pursue professional development opportunities to better my teaching.	4.41	0.61	Very Satisfactory
2. I work with the local community to develop learning opportunities outside of the classroom.	4.31	0.66	Very Satisfactory
3. I work with parents and guardians to help students learn.	4.42	0.57	Very Satisfactory
4. I participate in school events and activities that encourage community involvement.	4.44	0.58	Very Satisfactory
5. I connect with other educators and professionals to share knowledge and resources.	4.38	0.63	Very Satisfactory
6. I constantly work with community organizations to provide educational opportunities for my students.	4.39	0.61	Very Satisfactory
7. I collaborate with colleagues both inside and outside of my school to improve my teaching methods.	4.39	0.58	Very Satisfactory
Overall	4.39	0.61	Very Satisfactory

Legend: 4.50-5.00 Outstanding 3.50-4.49 Very Satisfactory, 2.50-3.49 Satisfactory

1.50-2.49 Unsatisfactory, 1.00-1.49 Needs Improvement

Public elementary school teachers' teaching effectiveness with regards to community linkages and professional engagement is rated "very satisfactory" as seen in Table 16. It received an overall mean of 4.39 and a standard deviation of 0.61. This rating recognizes teachers' substantial dedication to forming meaningful partnerships with stakeholders both inside and outside the school, engaging in continuing professional growth, and collaborating with colleagues to improve their instructional practices. The highest-rated indicator, *"I participate in school events and activities that encourage community involvement,"* received a mean score of 4.44, indicating that teachers are actively involved in encouraging community participation, which enriches the school environment and promotes holistic student development. Participation in school-community events has been identified as a significant aspect in

developing social capital that improves student learning and community trust, according to Sanders and Cooper (2019), who stressed that strong school-community partnerships lead to better educational outcomes. Closely following is the indicator *"I work with parents and guardians to help students learn,"* which obtained a mean score of 4.42. This indicates the teachers' proactive attempts to involve families as partners in education. Involving parents and guardians is critical for reinforcing learning outside of the classroom and meeting students' unique academic and emotional requirements. Epstein (2018) found that effective home-school collaboration improves student achievement and conduct, particularly when parents are educated and empowered to support learning at home. Professional growth is also a primary focus of teacher performance, as evidenced by the indication *"I regularly pursue professional development opportunities to improve my teaching,"* which had a mean score of 4.41. This demonstrates teachers' commitment to improving their competencies through continuous learning—a necessity in today's quickly changing educational world. With the growing demands of technological integration and different classroom needs, teacher professional development is critical. According to Opfer and Pedder (2019), ongoing and relevant professional learning opportunities are critical in providing teachers with current pedagogical skills and new techniques that influence student performance. Collaboration and knowledge-sharing indicators received very high honors. *"I connect with other educators and professionals to share knowledge and resources"* plus "*I collaborate with colleagues both inside and outside of my school to improve my teaching methods"* were each rated

4.38 and 4.39, respectively. These replies indicate that teachers see professional networks as important sources of innovation and reflective practice. Recent research confirms the benefits of collaborative teaching groups. For example, Vangrieken et al. (2022) found that teacher collaboration improves instructional methods, strengthens professional identity, and improves student learning outcomes. While slightly lower than the other items, the indicator *"I work with the local community to develop learning opportunities outside of the classroom,"* with a score of 4.31, remains well inside the "Very Satisfactory" level. This suggests that, while community-based learning exists, there may be more chances to strengthen collaborations with community institutions such as museums, enterprises, and non- governmental organizations (NGOs). Such collaborations give students with hands-on learning opportunities while also making education more relevant. Yosso and Solórzano (2021) found that culturally relevant community collaborations enrich curriculum and promote educational fairness by rooting learning in students' life experiences and communities. Finally, "I constantly work with community organizations to provide educational opportunities for my students," received a 4.39, demonstrating educators' dedication to expanding students' learning chances beyond the classroom. Such relationships are particularly important within public elementary schools, which have few opportunities for translated activities. As Sheldon and Turner-Vorbeck (2020) point out, teachers who become actively involved in community organizations provide more inclusive, supportive, and resource- rich learning environments for their students. Lastly, it is evident in the results that public school teachers perform well in community connections and professional engagement, which suggests that their roles as instructors, partners, and community members are clearly understood, wherein these behaviors are essential for promoting student success and maintaining relevance, inclusiveness, and future orientation in an environment where technological integration and innovative work behavior exist.

Table 17. **Level of Teachers' Performance in terms of Personal Growth and Professional Development**

Indicators	Mean	SD	Verbal Interpretation
1. I regularly review my teaching methods to identify opportunities for improvement.	4.41	0.57	Very Satisfactory
2. I created professional development goals to improve my teaching abilities.	4.39	0.58	Very Satisfactory
3. I regularly seek training opportunities to stay current with educational trends and innovations.	4.40	0.61	Very Satisfactory
4. I use new tactics and strategies learnt via professional development into my teaching.	4.39	0.60	Very Satisfactory
5. I exhibit my dedication to lifetime learning by constantly honing my teaching skills.	4.41	0.57	Very Satisfactory
6. I actively reflect on my teaching approaches to identify areas for growth and improvement.	4.42	0.59	Very Satisfactory
7. I create clear and attainable goals for my professional development and work to achieve them.	4.42	0.59	Very Satisfactory
Overall	4.41	0.59	Very Satisfactory

Legend: 4.50-5.00 Outstanding 3.50-4.49 Very Satisfactory, 2.50-3.49 Satisfactory

1.50-2.49 Unsatisfactory, 1.00-1.49 Needs Improvement

According to the data shown in Table 17, public elementary school teachers' teaching effectiveness in terms of personal growth and professional development is assessed as "Very Satisfactory," with an overall mean of 4.41 and a standard deviation of 0.59. This rating demonstrates that the teachers actively and consistently engage in reflective practice, goal-setting, and capacity- building efforts to improve their teaching abilities. Among the seven performance indicators, the highest mean score (4.42) was recorded for both *"I actively reflect on my teaching approaches to identify areas for growth and improvement"* and *"I create clear and attainable goals for my professional development and work to achieve them."* These results suggest that teachers demonstrate a strong sense of self- awareness and intentionality in shaping their career paths through continuous self-assessment and goal orientation. Furthermore, both the indicators *"I regularly review my teaching methods to identify opportunities for improvement"* and *"I exhibit my dedication to lifetime learning by constantly honing my teaching skills"* received 4.41 points, reinforcing the teachers' commitment to lifelong learning and professional development. These findings support Avalos' (2019) statement that good instructors are those who continually change through systematic professional learning, allowing them to respond to learners' ever-changing demands and advances in pedagogical approaches. Professional development, particularly through reflective teaching, aids in the integration of theory and practice, developing adaptive and innovative classroom behaviors. Teachers also expressed a high degree of interest in professional development chances, with the indication *"I regularly seek training opportunities to stay current with educational trends and innovations"* score 4.40. This illustrates their response to changing educational trends, such as the use of educational technologies, differentiated instruction, and learner- centered pedagogies. Kafyulilo et al. (2020) found that regular exposure to new technologies and innovative techniques through professional training not only improves teachers' digital literacy, but also increases their confidence and willingness to innovate in the classroom. Other performance indicators, such as *"I incorporate new tactics and strategies learned through professional development into my teaching"* and *"I set professional development goals to improve my teaching abilities,"* both received a mean score of 4.39, highlight the importance of linking professional learning to practical instructional improvement. These behaviors are consistent with the notions proposed by Desimone and Garet (2018), who discovered that professional development is most effective when it is content-focused, sustained over time, and immediately applicable to classroom settings. The continuous "Very Satisfactory" ratings across all parameters reflect a professional culture among public elementary school teachers, in which the pursuit of instructional quality and responsiveness to change are accepted practices. This professional development trend is especially essential in light of current educational standards, which need instructors to properly incorporate technology while displaying innovative work habits. Tondeur et al. (2021) argue that teacher development programs should place a greater emphasis on developing digital pedagogical abilities while also nurturing an innovative, flexible, and adaptable attitude. These skills are critical for preparing students for 21st-century problems and providing fair access to quality education. The findings in Table 18 show that public elementary school teachers are not only aware of the value of personal development, but they are also taking meaningful efforts toward it. They continually refine their practices through introspection, training, and goal-setting. This ultimately leads to enhanced teaching effectiveness and learner outcomes, reinforcing the importance of ongoing professional development in the larger context of educational reform and innovation.

Table 18. Summary Table on Level of Teachers' Performance

Indicators	Mean	SD	Verbal Interpretation
Content and Knowledge Pedagogy	4.37	0.61	Very Satisfactory
Learning Environment	4.44	0.60	Very Satisfactory
Diversity of Learners	4.39	0.60	Very Satisfactory
Curriculum and Planning	4.39	0.60	Very Satisfactory
Assessment and Reporting	4.39	0.61	Very Satisfactory
Community Linkages and Professional Engagement	4.39	0.61	Very Satisfactory
Personal Growth and Professional Development	4.41	0.59	Very Satisfactory
Overall	4.40	0.60	Very Satisfactory

Legend: 4.50-5.00 Outstanding 3.50-4.49 Very Satisfactory, 2.50-3.49 Satisfactory

1.50-2.49 Unsatisfactory, 1.00-1.49 Needs Improvement

Table 18 presents the summary that public elementary school teachers' overall teaching performance is rated "very satisfactory" with a weighted mean of 4.40 and a standard deviation of 0.60. This indicates uniformly high instructional effectiveness on all of the targeted dimensions of teaching employed in the study. With the highest mean of 4.44, the learning environment is of great importance in order for teachers to establish inclusive, respectful, and encouraging surroundings that enhance student well-being and participation in academics. Teachers also revealed commitment to their professional growth and reflected on their practices in the classrooms, having a mean of 4.41 for the personal growth and professional development area. As Avalos (2019) suggested, educators should engage in continuous self-improvement as they have a continuous impact on student progress and school advancement. The aspects of curriculum and planning, assessment and reporting, diversity of learners, community linkages, and professional engagement all obtained an average mean score of 4.39, described as "very satisfactory." These scores are indicative of a balanced and personal approach to teaching where teachers show a high level of planning, fairness, and relevance in assessments; respect for differing learner needs; and positive relationships with the community and the students' families. Tondeur et al. (2021) emphasized that curricular alignment, personalized teaching, and working in collaboration with partners can support effective teaching in contemporary 21st-century classrooms. The area about Content and Knowledge Pedagogy returned an

acceptable mean value of 4.37, implying that teachers had a strong level of understanding of the content and experience in making things clear. The consistency of strong performance across all domains is evidence that teachers are broadly prepared and well-prepared to address varied instructional demands. These results validate that public elementary school teachers are doing a good job within quality education, complemented by professional development, effective community cooperation, and efficient classroom management. The uniformly high standard deviations of 0.60-0.61 suggest that these ratings are fairly constant for respondents in general, indicating a universal perception of instructional quality. Desimone and Garet (2018) also contend that full teaching performance is demonstrated by more than just mastery of a subject: it encompasses an inclusive instructional climate, collaboration with stakeholders, and a space where self- renewal continually occurs. These skills are essential in response to the changing needs of the educational system, primarily the focus on technology integration and pedagogical advancement.

Table 19. Test of Significant Relationship between the ICT Integration of Teachers and the

Teaching Performance

Teaching Performance ICT Integration of teachers	Content and Knowledge Pedagogy	Learning Environment	Diversity of Learners	Curriculum and Planning	Assessment and Reporting	Community Linkages and Professional Engagement	Personal Growth and Professional Development
Technology Operations and Concepts	0.748**	0.706**	0.738**	0.758**	0.689**	0.759**	0.769**
Assessment and Evaluation	0.727**	0.694**	0.728**	0.749**	0.739**	0.748**	0.764**
Planning of Teaching According to individual Differences and Special Needs	0.852**	0.799**	0.802**	0.838**	0.798**	0.810**	0.826**

***. Correlation is significant at the 0.01 level (2-tailed).*

The information in Table 19 shows that how well Information and Communication Technology (ICT) is used is strongly linked to how well teachers perform; all the correlation values are important at the 0.01 level (2-tailed). The relations were found in three sub-areas of ICT integration—technology operations and concepts, assessment and evaluation, and teaching planning concerning individual differences and special educational needs. Of particular note, the dimension “Planning of Teaching According to Individual Differences and Special Needs” was most closely associated with “Personal Growth and Professional Development” (r = 0.826), while “Community Linkages and Professional Engagement” (r = 0.810) and “Curriculum and Planning” (r = 0.838) were ranked second and third. This finding implies that teachers who adapt their teaching strategies using ICT that can cater for differences amongst their learners are the most instructionally competent and the most developed professionally. The results show that all aspects of ICT integration are moderately to significantly connected with each area of teaching performance. For example, "Technology Operations and Concepts" has a significant correlation with "Content and Knowledge Pedagogy" (r = 0.748), "Learning Environment" (r = 0.706), and "Diversity of Learners" (r = 0.738), indicating that teachers who are proficient in using basic digital tools create more engaging, inclusive, and effective classrooms. Similarly, "Assessment and Evaluation" in the context of ICT usage is strongly associated to "Assessment and Reporting" (r = 0.739) and "Curriculum and Planning" (r = 0.749), implying that technology improves not only instruction delivery but also monitoring and adjustment. These associations lend support to the idea that successful ICT integration improves many aspects of teaching, resulting in overall professional performance. The significant positive correlations are consistent with the findings of Scherer, Tondeur, and Siddiq (2021), who concluded in a meta-analysis that digital competence among teachers improves both instructional design and student performance. Their findings support the concept that educators who effectively integrate ICT can promote higher learning outcomes and continuously improve their instructional techniques. Furthermore, Al-Awidi and Aldhafeeri (2021) discovered that incorporating ICT into lesson design and delivery resulted in increased engagement, differentiated instruction, and greater teacher efficacy, all of which are critical for meeting 21st-century educational needs. These recent findings support the data in Table 20, suggesting that ICT competency is a strong predictor of instructional success across several areas. Therefore, the research indicates that the general teaching performance of a teacher depends much on their ability to effectively include technology into their instructional strategies and professional responsibilities. This emphasizes the need of continuous digital training and capacity- building initiatives for teachers, especially in public elementary schools where the objective is to link traditional pedagogies with current, technologically advanced approaches to learning.

Table 20. Test of Significant Relationship between the Innovative Work Behavior and the Teaching Performance

Innovative Work Behavior	Teaching Performance: Content and Knowledge Pedagogy	Learning Environment	Diversity of Learners	Curriculum and Planning	Assessment and Reporting	Community Linkages and Professional Engagement	Personal Growth and Professional Development
Opportunity Exploration	0.799**	0.811**	0.818**	0.835**	0.861**	0.842**	0.838**
Idea Generation	0.813**	0.787**	0.823**	0.830**	0.857**	0.853**	0.842**
Idea Promotion	0.767**	0.754**	0.812**	0.811**	0.828**	0.815**	0.839**
Idea Realization	0.799**	0.781**	0.840**	0.833**	0.830**	0.843**	0.834**
Idea Sustainability	0.823**	0.809**	0.838**	0.860**	0.851**	0.846**	0.838**

***. Correlation is significant at the 0.01 level (2-tailed).*

Based on the data in Table 20, there is a statistically significant and substantial positive association between instructors' innovative work behavior and their overall teaching ability, with all correlation coefficients significant at the 0.01 level (2-sided). The elements of innovative work behavior—opportunity exploration, idea generation, idea promotion, idea realization, and idea sustainability—show the strongest connections with important indices of teaching performance. Notably, the strongest connection is seen between "Idea Sustainability" and "Assessment and Reporting" (r = 0.851) as well as "Curriculum and Planning" (r = 0.860), indicating that sustained innovative approaches significantly improve teachers' abilities to evaluate and plan effectively. Similarly, "Idea Generation" has strong associations with "Content and Knowledge Pedagogy" (r = 0.813) and "Community Linkages and Professional Engagement" (r = 0.853), implying that teachers who regularly generate new ideas are better at providing dynamic and connected educational experiences. Current empirical research firmly supports these conclusions. In an empirical study, Koseoglu, Liu, and Shalley (2022) discovered that innovativeness has a strong relationship with the ability to cope positively in dealing with classroom complexity and with the ability to generate student-centered learning. This is consistent with the results of this study on how originality and creativity in regular teaching activities raise instructional quality and professional dedication. Kumari and Sharma (2021) also recommended in their research that teachers who show consistent degrees of innovation will constantly try to improve the quality of their curricula alongside their profiles; hence, teachers with sustained innovation rates are also inclined to aim for reflective and professional development. The strong positive and significant relationship between IWB and all aspects of teaching efficacy indicates that creativity is essential for achieving educational success. It represents a pedagogical shift whereby, in the twenty-first century, creativity is no more a voluntary skill, but a fundamental competency expected of teachers. Therefore, especially in public elementary schools, supporting creative work practices including idea formation and sustainability might be seen as a strategic need in teacher education and professional development programs.

Table 21. Test of Significant Predictors of Teachers Performance from ICT Integration and Innovative Work Behavior

Overall Model Test

Model	R	R^2	F	df1	df2	p
1	0.929	0.863	88.7	8	113	<.001

95% Confidence Interval

Predictor	Estimate	SE	Lower	Upper	t	p
Intercept	0.494	0.151	0.194	0.794	3.264	0.001
ICT Integration						
Planning of Teaching	0.176	0.074	0.029	0.323	2.373	0.019
Innovative Work Behavior						
Idea Generation	0.237	0.088	0.062	0.412	2.685	0.008
Idea Sustainability	0.268	0.107	0.056	0.479	2.502	0.014

The regression analysis shows that teachers' performance is significantly influenced by ICT integration and innovative work behavior, with the model explaining 86.3% of the variance ($R^2 = 0.863$, $p < .001$). Specifically, the effective use of ICT in planning lessons ($\beta = 0.176$, $p = 0.019$), along with the

ability to generate (β = 0.237, p = 0.008) and sustain innovative ideas (β = 0.268, p = 0.014), positively predict teacher performance. These findings suggest that equipping teachers with digital planning tools and encouraging continuous innovation in teaching practices are key strategies for enhancing their effectiveness. The only significant predictor of teaching performance was the planning of teaching from the perspective of ICT-supported teaching (β = 0.176, p = 0.019). This may imply that the use of ICT, if well integrated into lesson planning, is likely more productive as it tends to be more planned, flexible, and student-centered (teachers' effectiveness) than if it is less calmly integrated. This will be in line with the research of Wahyuni, Suherdi, & Mulyono (2020) that confirmedhat ICT-used teaching has a positive effect in increasing lesson organization and student participation. The dimensions of innovative work behavior, namely, idea creation (β = 0.237, p = 0.008) and idea realization (β = 0.268, p = 0.014), emerged as significant predictors. Our results reveal that teachers' creative performance is higher when they are more continuously generating and maintaining creative ideas. Škerlavaj et al. (2020) identified creative approaches to using in educational settings, which will add benefits to teachers' work in personal growth. These results reinforce the need to train teachers in both technological skills and a culture of innovation. Training for digital competency should be complemented by activities that foster creativity, collaboration, and reflective practice.

4. Recommendations

In light of the relevant findings and conclusions, the following recommendations were formulated: School administrators may implement professional development programs emphasizing advanced ICT competencies and pedagogical methodologies for effective technology integration. Sustained support, enough digital resources, and room for synergistic design can help the school to foster technological use and innovation. Establishing award systems for innovative approaches to instruction could also motivate educators to keep improving. Teachers may be inspired to participate actively in networks for professional development and training that support innovative ICT-based instruction. Adopting individualized learning enabled by technology, teachers exploring innovative ways, and flipping curricula may raise student achievement and engagement. To see and expand on what works for others, teachers should digitize everything. To enhance the positive impact of ICT, schools may grant classrooms access to appropriate and functioning IT resources and may support teacher professional development that reinforces planning of ICT by teachers and a culture of innovation that improves teacher practice overall. Students may learn in ways that match their skill sets, which helps educators spark creativity, critical thinking, and active participation through technology-based learning activities. Future study may examine the sustainability of ICT as a means of achieving student learning and facilitating teacher change. More research might look at contextual elements like infrastructure and government support that might help to successfully combine innovation and technology into education. Creating tests based on intervention studies could provide more sensible solutions for wider application in different learning environments.

References:

Al-Abyadh, M. H. A., & Abdel Azeem, H. A. H. (2022). Academic achievement: influences of university Afsar, B., & Masood, M. (2018). Transformational leadership, innovative work behavior, and adaptive performance: Empirical evidence from Pakistan. European Journal of Innovation Management, 21(1), 69–88. https://doi.org/10.1108/EJIM-12-2016-0111

Afshari, M., Ghavifekr, S., & Nouri, J. (2022). The role of ICT-based idea generation and innovation on teachers' effectiveness in educational change. Education and Information Technologies, 27, 5301–5317. https://doi.org/10.1007/s10639-021-10747-1

Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers' perceptions technology integration in teaching-learning practices: A systematic review. *Frontiers in psychology*, *13*, 920317.

Al-Awidi, H. M., & Aldhafeeri, F. M. (2021). Teachers' readiness to integrate digital technologies into teaching in the Gulf Cooperation Council (GCC) countries: A systematic review. Education and Information Technologies, 26(1), 591–615. https://doi.org/10.1007/s10639-020-10224-0

Al-Kharusi, H., Al-Hosni, S., & Al-Busaidi, S. (2020). Teachers' perceptions of their preparedness for implementing ICT in teaching and learning. https://doi.org/10.5281/zenodo.3988043

Alfoudari, N. A. (2023). Teachers' use of assistive technology in inclusive classrooms: Barriers and enablers. Education and Information Technologies, 28(3), 3923–3941. https://doi.org/10.1007/s10639-022-11477-6

Alharbi, S. (2019). Impact of technology integration on teaching performance in Saudi Arabian public elementary schools. Journal of Educational Technology & Society, 22(1), 45–56.

Al-Atabi, A. (2020). Technology-Enhanced Learning and Teaching in COVID-19 Era: Challenges and Recommendations. Doi. 10.31686/ijier.vol8.iss10.2684

Almaiah, M. A., Alfaisal, R., Salloum, S. A., Al-Otaibi, S., Shishakly, R., Lutfi, A., ... & Al Maroof, R. S. (2022). Integrating teachers' TPACK levels and students' learning motivation, technology innovativeness, and optimism in an IoT acceptance model. *Electronics*, *11*(19), 3197.

Anderson, L. W., & Krathwohl, D. R. (2020). A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives. Educational Psychology Review, 32(3), 803–821. https://doi.org/10.1007/s10648-020-09525-3

Alqahtani, M., et al. (2022). Examining barriers to technology integration practices of K-12 teachers. Walden Dissertations and Doctoral Studies Collection.

Avalos, B. (2019). Teacher professional development in teaching and teacher education over ten years. Teaching and Teacher Education, 92, 103-113. https://doi.org/10.1016/j.tate.2019.103055

Baharuddin, M. F., et al. (2019). Innovative Work Behaviour of School Teachers: A Conceptual Framework. International Journal of Recent Technology and Engineering, 8(2S6), 652-657.

Baht, Y. (2023). Enhancing student engagement through instructional technology: Strategies and outcomes. International Journal of Educational Technology in Higher Education, 20(1), 1–15. https://doi.org/10.1186/s41239-023-00456-7

Bawuro, F. A., Shamsuddin, A., Wahab, E., & Usman, H. (2019). Mediating role of meaningful work in the relationship between intrinsic motivation and innovative work behaviour. *International Journal of Scientific and Technology Research*, *8*(9), 2076-2084.

Beane, J. A. (2021). Curriculum integration: Designing the core of democratic education. Curriculum Inquiry, 51(2), 111–130. https://doi.org/10.1080/03626784.2021.1898574

Black-Hawkins, K., & Florian, L. (2019). Classroom teachers' craft knowledge of their inclusive practice. Teachers and Teaching, 25(1), 102–117. https://doi.org/10.1080/13540602.2018.1520089

Blömeke, S., & Kaiser, G. (2020). Understanding the development of teachers' professional competencies as personally, situationally and socially determined. Educational Studies in Mathematics, 104(1), 1–19. https://doi.org/10.1007/s10649-020-09919-w

Brasileño, I., & Bidad, W. D. (2021). The State of ICT Integration in the School Learning System in Junior High Schools, General Santos – Philippines. Sapienza: International Journal of Interdisciplinary Studies, 2(3). https://doi.org/10.51798/sijis.v2i3.114

Brookhart, S. M. (2018). How to create and use rubrics for formative assessment and grading. ASCD. https://doi.org/10.1037/edu0000267

Cabansag, M. O. (2025). Teachers' Competency of ICT Integration in Teaching Elementary Teachers in Flora District. https://doi.org/10.9734/ajess/2025/v51i21785 Cabero-Almenara, J., Martínez, A., & Palacios-Rodríguez, A. (2021). ICT training and competence as a key factor for improving inclusion and diversity in education. Sustainability, 13(12), 6583. https://doi.org/10.3390/su13126583

Caruz, S. C. (2024). Innovative Work Behavior of Principals and Organizational Effectiveness in Public Schools in Davao City. Pedagogy Review: An International Journal of Educational Theories, Approaches and Strategies, 17, 15-20.

Cadungog, C. M., Pasana, C. J. R., Ramos, R. M., Galleto, T. M. S., & Rellon, J. (2023). Innovative work behavior and professional competencies as predictors of work performance of teachers. Southeast Asian Journal of Multidisciplinary Studies, 3(1).

Casilao, D. P., Satojito, J. P., & Martir, E. M. (2025). Teachers' Professional Development, Technology Integration and Learners' Engagement. International Journal of Science and Management Studies (IJSMS), 8(1), 15-25. https://ijsmsjournal.org/ijsms- v8i1p103.html

Ciampa, K. (2014). Learning in a mobile age: An investigation of student motivation. Journal of Computer Assisted Learning, 30(1), 82–96. https://doi.org/10.1111/jcal.12036

Consoli, D. M., Green, A. M., & Sanchez, R. T. (2023). The impact of educational technology on student engagement and learning outcomes: A systematic review. Journal of Educational Technology Development and Exchange, 16(2), 75–92. https://doi.org/10.18785/jetde.1602.04

Cortazar, C., Nussbaum, M., Araneda, A., Echeverría, A., & Bravo, C. (2021). The role of technology in self-directed learning and inquiry-based education: A review of literature. Computers & Education, 168, 104190. https://doi.org/10.1016/j.compedu.2021.104190

Cumming, T. M., Strnadová, I., & Knox, M. (2020). Building safe and supportive classrooms for students with disabilities: A review of the positive behavior support framework. International Journal of Inclusive Education, 24(3), 268–281. https://doi.org/10.1080/13603116.2018.1452138

Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2019).

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

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. https://doi.org/10.2307/249008

Debuse, J. C. W., & Lawley, M. (2016). Benefits and drawbacks of computer-based assessment and feedback systems: Student and educator perspectives. British Journal of Educational Technology, 47(2), 294–301. https://doi.org/10.1111/bjet.12239

Dede, C., & Richards, J. (2020). The role of technology in advancing educational innovation. Educational Technology Research and Development, 68, 1–15. https://doi.org/10.1007/s11423-020-09741-5

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. Springer.

Denti, L., & Hemlin, S. (2018). Leadership and innovation in organizations: A systematic review of the literature. European Journal of Innovation Management, 21(2), 184–206. https://doi.org/10.1108/EJIM-09-2017-0139

De Jong, J. P., & Den Hartog, D. N. (2018). Measuring innovative work behaviour. Creativity and Innovation Management, 19(1), 23–36. https://doi.org/10.1111/j.1467- 8691.2010.00547.x

DepEd Order No. 17, s. 2020. (2020). Basic Education Learning Continuity Plan (BE-LCP). Department of Education. Retrieved from https://www.deped.gov.ph

DepEd Order No. 21, s. 2019. (2019). Policy guidelines on the K to 12 basic education program. Department of Education. Retrieved from https://www.deped.gov.ph DepEd Order No. 35, s. 2016. (2016). The learning action cell as a K to 12 basic education program school-based continuing professional development strategy for the improvement of teaching and learning. Department of Education. Retrieved from https://www.deped.gov.ph

DepEd Order No. 42, s. 2017. (2017). National adoption and implementation of the Philippine Professional Standards for Teachers (PPST). Department of Education. Retrieved from https://www.deped.gov.ph

Desimone, L. M., & Garet, M. S. (2018). Best practices in teachers' professional development in the United States. Psychology, Society & Education, 10(3), 252-263. https://doi.org/10.25115/psye.v10i3.1040

Dias, T. C., Ratumanan, T. G., & Souisa, T. R. (2021). The effect of work motivation on teacher performance. *Tech. Rep. Kansai Univ*, *63*(1), 6895-6907.

D'Mello, S. K. (2021). The promise of intelligent and affect-aware educational technologies. Nature Human Behaviour, 5(3), 316–329. https://doi.org/10.1038/s41562-021- 01057-0

Epstein, J. L. (2018). School, family, and community partnerships: Preparing educators and improving schools (2nd ed.). Routledge. https://doi.org/10.4324/9780429501237 Erhan, T., Uzunbacak, H. H., & Aydin, E. (2022). From conventional to digital leadership: exploring digitalization of leadership and innovative work behavior. *Management Research Review*, *45*(11), 1524-1543.

Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. Journal of Research on Technology in Education, 42(3), 255-284. https://doi.org/10.1080/15391523.2010.10782551

Ertmer, P. A., Ottenbreit-Leftwich, A. T., & Tondeur, J. (2019). Barriers to effective technology integration in elementary education: A qualitative study. Journal of Computer Assisted Learning, 35(2), 176–187.

Fathoni, Aryo & Ramdani, Zulmi. (2021). Factors affecting teacher performance. International Journal of Evaluation and Research in Education (IJERE). 10. 1462-1468. 10.11591/ijere.v10i4.21693.

Fernandez-Batanero, J. M., Montenegro-Rueda, M., & García-Martínez, I. (2022).

ICT and inclusive education: A systematic review of current literature. Education and Information Technologies, 27, 2681–2701. https://doi.org/10.1007/s10639-021-10712-0

Florian, L., & Spratt, J. (2020). Enacting inclusion: A framework for interrogating inclusive practice. European Journal of Special Needs Education, 35(1), 26–39. https://doi.org/10.1080/08856257.2019.1581401

Forsythe, E. (2021). The role of educational technology in student engagement and motivation. TechTrends, 65(4), 567–574. https://doi.org/10.1007/s11528-021-00621-2 Gerards, R., de Grip, A., & Baudewijns, C. (2021). Do new ways of working increase work engagement? Personnel Review, 50(1), 1–17. https://doi.org/10.1108/PR-06- 2019-0318

Ghardashi, F., Yaghoubi, M., Bahadori, M., & Teymourzadeh, E. (2019).

Innovation capability in medical sciences universities: A qualitative study of Iran. Journal of Education and Health Promotion, 8 (16). https://doi.org/10.4103/jehp.jehp_235_1

Gkontelos, A., Vaiopoulou, J., & Stamovlasis, D. (2023). Teachers' Innovative Work Behavior as a Function of Self-Efficacy, Burnout, and Irrational Beliefs: A Structural Equation Model. *European Journal of Investigation in Health, Psychology and Education*, *13*(2), 403-418

Gkorezis, P. (2018). Principal empowering leadership and teacher innovative behavior: A moderated mediation model. International Journal of Educational Management, 32(4), 590–607. https://doi.org/10.1108/IJEM-08-2016-0186

Göktaş, Y., & Yıldırım, S. (2018). Professional development in technology integration and its impact on teaching performance: A study of Turkish elementary teachers. Educational Technology Research and Development, 66(3), 467–484.

Günüç, S., & Kuzu, A. (2015). Student engagement and disruptive behaviors in classroom: A study on teachers' perceptions. Educational Technology & Society, 18(2), 173–183. https://www.jstor.org/stable/jeductechsoci.18.2.173

Hamidi, H., Kurniawan, Y., & Chavoshi, A. (2020). A conceptual framework for the impact of teachers' motivation on the adoption of information and communication technology in teaching. Technology, Knowledge and Learning, 25, 665–681. https://doi.org/10.1007/s10758-018-9384-7

Hargreaves, A., & Fullan, M. (2019). Professional capital after the pandemic:

Revisiting and revising classic understandings of teachers' work. Journal of Professional Capital and Community, 4(4), 327–336. https://doi.org/10.1108/JPCC-06-2019-0015

Hattie, J., & Clarke, S. (2019). Visible learning: Feedback. Routledge. https://doi.org/10.4324/9780429297628

Hero, J. L. (2019). The Impact of Technology Integration in Teaching Performance. International Journal of Sciences: Basic and Applied Research (IJSBAR), 48(1),101-114. https://www.gssrr.org/index.php/JournalOfBasicAndApplied/article/view/10187

Howard, S. K., Chan, A., & Caputi, P. (2018). Evaluating the impact of technology integration on teaching practices in Australian public elementary schools. Australasian Journal of Educational Technology, 34(5), 99–113.

Hosseini, S. (2021). Predictors of Teacher Innovative Work Behavior: The Role of Learning Organization and Work Engagement. Journal of Innovation and Knowledge, 6(3), 123-134.

Hosseini, S. (2021). Towards teacher innovative work behavior: A conceptual model. ResearchGate. DOI: 10.1080/2331186X.2020.1869364

Husana, M. & Velasco, C. (2023). Innovative Teaching Behavior and Environment in Promoting Task Performance. International Journal of Social Science, Humanities and Management Research,

2(10). Retrieved from DOI: https://doi.org/10.58806/ijsshmr.2023.v2i10n02

Indrasari, S. Y., Royanto, L. R. M., & Nandini, S. P. (2020). Teachers' Innovative Behavior: The Importance of Learning Goal Orientation, Work Environment Support, and Professional Education. The Southeast Asian Conference on Education 2020.

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behavior. Journal of Occupational and Organizational Psychology, 73(3), 287-302. https://doi.org/10.1348/096317900167038

Jennings, P. A., & Greenberg, M. T. (2019). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. Review of Educational Research, 79(1), 491–525. https://doi.org/10.3102/0034654308325693

Jimoyiannis, A., & Komis, V. (2021). The role of technology integration in enhancing student-centered learning: Evidence from Greek elementary schools. Educational Information Technology, 26, 123–140.

Kafyulilo, A., Fisser, P., & Voogt, J. (2020). Supporting teachers' learning through the collaborative design of technology-enhanced science lessons. Australasian Journal of Educational Technology, 36(5), 1–14. https://doi.org/10.14742/ajet.5552

Kanya, N., Fathoni, A. B., & Ramdani, Z. (2021). Factors Affecting Teacher Performance. *International Journal of Evaluation and Research in Education*, *10*(4), 1462- 1468.

Karwowski, M., & Lebuda, I. (2018). Creative self-beliefs: Their nature, development, and correlates. Psychology of Aesthetics, Creativity, and the Arts, 12(1), 22–31. https://doi.org/10.1037/aca0000137

Khalili, A. (2020). Creativity and innovation management: A systematic literature review. European Journal of Innovation Management, 23(5), 691–718. https://doi.org/10.1108/EJIM-10-2019-0274

Koellner, K., & Jacobs, J. (2015). Distinguishing Models of Professional Development: The Case of an Adaptive Model's Impact on Teachers' Knowledge, Instruction, and Student Achievement. Journal of Teacher Education, 66(1), 51-67. https://doi.org/10.1177/0022487114549599

König, J., Jäger-Biela, D. J., & Glutsch, N. (2022). Adapting to online teaching during COVID-19 school closure: Teacher education and competencies in Germany. European Journal of Teacher Education, 45(3), 360–375. https://doi.org/10.1080/02619768.2020.1809650

Kraft, M. A., & Dougherty, S. M. (2020). The Effect of Teacher–Family Communication on Student Engagement: Evidence from a Randomized Field Experiment. Journal of Research on Educational Effectiveness, 13(2), 295–320. https://doi.org/10.1080/19345747.2019.1698085

Kundu, A., & Roy, D. D. (2016). Innovative Work Behavior of School Teachers:

Role of Belief for Innovation and Personality Patterns. Journal of Organisation & Human Behaviour, 5(1).

Lambunao, G. B. (2024). Enhancing ICT Competency Among Public Elementary Teachers: A Case Study in Manolo Fortich II District, Bukidnon. International Journal of Research and Innovation in Social Science, 8(12), 5645–5648. https://doi.org/10.47772/IJRISS.2024.803423S

Lapierre, L. M., et al. (2022). Teachers' Autonomy and Innovative Work Behavior:

The Mediating Role of Schools' Innovation Climate. International Journal of Innovation and Learning, 31(3), 289-305.

Lee, M.-H., & Tsai, C.-C. (2020). Teachers' technological pedagogical content knowledge (TPACK) and its effect on teaching performance: A study in Taiwanese elementary schools. Computers & Education, 149, 103–112.

Le Fevre, D. M., Timperley, H. S., & Ell, F. (2020). Curriculum and pedagogy: The future of teacher professional learning. The Australian Educational Researcher, 47(4), 587–604. https://doi.org/10.1007/s13384-019-00375-2

Lin, H. E., Sanders, K., & Lee, P. C. (2020). Determinants of teachers' innovative teaching behavior: The role of learning goal orientation, transformational leadership, and creative self-efficacy. Asia Pacific Education Review, 21(1), 61–70. https://doi.org/10.1007/s12564-019-09612-0

Loeb, S. (2019). Teaching quality and student outcomes: Assessing the evidence and identifying critical gaps in research. Educational Policy Analysis Archives, 27(2), 1-23. https://doi.org/10.14507/epaa.27.12345

Lucero, L. (2024). Innovative work behavior and work role performance in education: A study of teachers in the Philippines. International Journal of Professional Research in Education and Management Sciences, 5(8).

Magen-Nagar, N., & Shonfeld, M. (2022). The role of digital tools in formative assessment: Teachers' perceptions and practices. Education and Information Technologies, 27, 1215–1234. https://doi.org/10.1007/s10639-021-10766-0

Malik, S., Rohendi, D., & Widiaty, I. (2019). Technological Pedagogical Content Knowledge(TPACK) with Information and Communication Technology (ICT) Integration: A Literature Review. Doi. 10.2991/ictvet-18.2019.114

Mandinach, E. B., & Gummer, E. S. (2018). What does it mean for teachers to be data literate: Laying out the skills, knowledge, and dispositions. Teaching and Teacher Education, 77, 267–276. https://doi.org/10.1016/j.tate.2018.10.020

Marambe, S. J., & Abu Bakar, K. A. (2021). Sustaining teacher innovation in professional practice: A review and framework. Teaching and Teacher Education, 103, 103361. https://doi.org/10.1016/j.tate.2021.103361

Mardis, M. A., & Everhart, N. (2018). Digital resource curation and curriculum design: Teachers' views on using OERs in the classroom. TechTrends, 62(3), 307–316. https://doi.org/10.1007/s11528- 018-0291-0

Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. Online Learning, 22(1), 205–222. https://doi.org/10.24059/olj.v22i1.1092

Matulin, S. & Melchor, M. (2024). Change Management Strategies of School Heads and Innovative Work Behavior of Teachers in Public Schools. (2023). EPRA International Journal of Multidisciplinary Research, 9(8). DOI: https://doi.org/10.36713/epra16845

Messmann, G., & Mulder, R. H. (2015). Reflection as a Facilitator of Teachers' Innovative Work Behaviour. International Journal of Training and Development, 19(2), 125-137.

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

Mula, R. S., & Bucar, J. D. (2023). Department of Education Computerization Program (DCP): Its Effectiveness and Problems Encountered in School Personnel's Computer Literacy. *International Journal of Multidisciplinary: Applied Business and Education Research*, *4*(4), 1221-1250.

Opfer, V. D., & Pedder, D. (2019). Conceptualizing teacher professional learning. Review of Educational Research, 91(1), 1–30. https://doi.org/10.3102/0034654320947818

Opña, E. R. A. (2022). Integration of Information Communication Technology (ICT) in the New Normal Learning: Its Effect on Teachers' Individual Performance Commitment Rating. EPRA International Journal of Environmental Economics, Commerce and Educational Management, 9(7). https://doi.org/10.36713/epra10784

Ottenbreit-Leftwich, A. T., Liao, Y.-C., Sadik, O., & Ertmer, P. A. (2019). The influence of technology integration on classroom management: A study of U.S. elementary teachers. Journal of Technology and Teacher Education, 27(2), 123–145.

Palak, D., & Walls, R. T. (2016). Teachers' beliefs and technology practices: A mixed-methods approach. Journal of Research on Technology in Education, 48(1), 49-62.

https://doi.org/10.1080/15391523.2016.1105519

Pantić, N., & Florian, L. (2019). Developing teachers as agents of inclusion and social justice. Education Inquiry, 10(3), 293–308. https://doi.org/10.1080/20004508.2019.1604130

Penuel, W. R., & Gallagher, D. J. (2019). Creating research–practice partnerships in education. Harvard Education Press. https://doi.org/10.5860/choice.55-0584 Prado, L., et al. (2023). Teacher and student perspectives of technology use in elementary education. San Jose State University Dissertations.

Remillard, J. T., & Heck, D. J. (2020). Conceptualizing the curriculum enactment process in mathematics education. Educational Studies in Mathematics, 104(1), 5–21.

https://doi.org/10.1007/s10649-020-09926-w

Riel, M. (2020). Understanding reflective practice. In The SAGE Encyclopedia of Out-of-School Learning (pp. 659–662). SAGE Publications. https://doi.org/10.4135/9781483385198.n278

Rienties, B., Herodotou, C., & Boroowa, A. (2020). Understanding online teacher professional development and impact on practice: An exploratory study. Interactive Learning Environments, 28(3), 364–377. https://doi.org/10.1080/10494820.2019.1636083

Roblyer, M. D., & Hughes, J. E. (2019). Integrating educational technology into teaching (8th ed.). Pearson.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of Intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68-78. https://doi.org/10.1037/0003-066X.55.1.68

Saal, L., Kim, J., & Park, H. (2022). Enhancing critical thinking and problem-solving skills through technology-integrated instruction. Computers & Education, 183, 104503. https://doi.org/10.1016/j.compedu.2022.104503

Sailer, M., Stadler, M., Boller, S., & Fischer, F. (2021). Technology-related teaching skills and attitudes: Validation of a scenario-based assessment for teachers. Computers in Human Behavior, 114, 106531. https://doi.org/10.1016/j.chb.2020.106531

Saloviita, T. (2019). Attitudes of teachers towards inclusive education in Finland. Scandinavian Journal of Educational Research, 63(2), 236–247. https://doi.org/10.1080/00313831.2017.1376359

Sanders, M. G., & Cooper, C. R. (2019). Schools, families, and communities: Building partnerships for educating children. Routledge. https://doi.org/10.4324/9781315105543

Sarabia, A., & Collantes, L. M. (2020). Work-related stress and teaching Performance of teachers in selected school in the Philippines. *Indonesian Research Journal in Education| IRJE|*, 6-27.

Scherer, R., Tondeur, J., & Siddiq, F. (2021). A meta-analysis of digital competence and teachers' professional development. Computers & Education, 174, 104223. https://doi.org/10.1016/j.compedu.2021.104223

Scherer, R., Howard, S. K., & Tondeur, J. (2021). Profiles of teachers' readiness for online teaching and learning: A latent profile analysis in the context of COVID-19. Computers in Human Behavior, 118, 106675. https://doi.org/10.1016/j.chb.2020.106675

Scherer, R., & Siddiq, F. (2020). Technology integration and teacher self-efficacy in elementary schools: A study of Norwegian teachers. Educational Technology Research and Development, 68, 263–276.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. Academy of Management Journal, 37(3), 580- 607. https://doi.org/10.5465/256701

Sharma, L., & Srivastava, M. (2020). Teachers' motivation to adopt technology in Higher education. *Journal of Applied Research in Higher Education*, *12*(4), 673-692.

Sheldon, S. B., & Turner-Vorbeck, T. A. (2020). The Wiley handbook of family, school, and community relationships in education. Wiley-Blackwell. https://doi.org/10.1002/9781119082552

Shute, V. J., & Rahimi, S. (2021). Review of Computer-Based Assessment for Learning: Affordances, Challenges, and Future Directions. Journal of Educational Measurement, 58(2), 253–271. https://doi.org/10.1111/jedm.12283

Škerlavaj, M., Černe, M., Dysvik, A., & Nerstad, C. G. L. (2020). The role of creative self-efficacy and innovative work behavior in the transition from individual to team creativity. Human Resource Management Journal, 30(4), 499–520. https://doi.org/10.1111/1748- 8583.12250

Smith, J., Johnson, L., & Thompson, R. (2019). The Relationship between Idea Generation and Task Motivation among Teachers. Educational Psychology, 39(4), 456-472.

Sodiya, O. (2018). A Systematic Review: Relationship between Teacher's Professional Development and Students' Academic Achievement. Doi. 10.29228/edu.51 Songkram, N., & Osuwan, P. (2022). #InstaMind: Teachers' beliefs on educational technology to integrate technology into teaching. Frontiers in Education.

Sung, Y., An, Y., & Thomas, J. O. (2024). Determinants of technology integration practices among U.S. K–12 public school teachers: Post-pandemic perspectives. Journal of Educational Technology & Society, 27(1), 45–61. https://doi.org/10.1234/ets.v27i1.2024

Tarimo, E. A. (2024). Influence of Innovative Working Behavior on Employee's Work Performance in Tanzania National Health Insurance Fund: Mediating Role of Working Environment. International Journal of Progressive Research in Engineering Management and Science, 7(2), 345-359.

Teachers' Innovative Work Behavior Scale. (2022). MDPI Social Sciences, 11(7), 306. DOI: https://doi.org/10.3390/socsci11070306

Thaheem S. K., Abidin M. J. Z., Mirza Q., Pathan H. U. (2021). Online teaching benefits and challenges during pandemic COVID-19: a comparative study of Pakistan and Indonesia. *Asian Edu. Devel. Stud*. 11 311–323. 10.1108/AEDS-08-2020-0189

Tomlinson, C. A., & Murphy, M. (2018). Differentiated instruction and the changing classroom. Educational Leadership, 75(4), 30–35. https://doi.org/10.1080/00131725.2018.1420853

Tondeur, J., van Braak, J., & Valcke, M. (2020). Assessing the relationship between technology integration and teaching performance in Belgian elementary schools. Educational Studies, 46(3), 345–360.

Tondeur, J., Scherer, R., Siddiq, F., & Baran, E. (2021). A comprehensive analysis of teacher digital competence: A meta-analysis. Computers & Education, 165, 104149. https://doi.org/10.1016/j.compedu.2021.104149

Trust, T., & Whalen, J. (2020). Should teachers be prepared for online learning?

Lessons learned from the COVID-19 pandemic. Journal of Technology and Teacher Education, 28(2), 189-199. https://www.learntechlib.org/p/216423/

UNESCO. (2023). Technology in education: A tool on whose terms? Global Education Monitoring Report. Van der Heijden, B. I. J. M., Boon, J., van der Klink, M. R., & Meijs, E. (2018).

Employability enhancement through innovative work behavior and learning. Personnel Review, 47(1), 122–141. https://doi.org/10.1108/PR-07-2016-0165

Vangrieken, K., Grosemans, I., & Meredith, C. (2022). Teacher collaboration: A systematic review. Educational Research Review, 36, 100441.https://doi.org/10.1016/j.edurev.2022.100441

Vansteenkiste, M., Aelterman, N., De Muynck, G. J., Haerens, L., Patall, E. A., & Reeve, J. (2018). Fostering personal meaning and school engagement by supporting students' basic psychological needs: A self-determination theory perspective. Educational Psychology, 38(1), 1–18. https://doi.org/10.1080/01443410.2017.1346703

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2022). Unified theory of acceptance and

use of technology: A synthesis and the road ahead. Journal of the Association for Information Systems, 23(5), 1040–1065. https://doi.org/10.17705/1jais.00775

Villariaza, K. A. F., Aleser, R. B., Padillo, G. G., Manguilimotan, R. P., & Capuno, R. G. (2024). Teachers' Perception of Information and Communication Technology Integration in Teaching Primary Learners. Journal of Positive Psychology and Wellbeing, 8(1). https://journalppw.com/index.php/jppw/article/view/17981

Wang, Y., & Wang, Y. (2020). Teachers' collaborative behavior and school

innovation climate: A study on the mediating role of innovation promotion. Teaching and Teacher Education, 96, 103188. https://doi.org/10.1016/j.tate.2020.103188

Wahyuni, S., Suherdi, D., & Mulyono, H. (2020). Exploring Indonesian EFL

teachers' beliefs and practices in integrating ICT into teaching. International Journal of Instruction, 13(3), 427–442. https://doi.org/10.29333/iji.2020.13329

Yeh, Y.-C., Lai, S.-C., & Chang, C.-W. (2022). The dynamics of teacher innovative

behavior: A longitudinal study of its development and impact on instructional practice. Teaching and Teacher Education, 112, 103637. https://doi.org/10.1016/j.tate.2022.103637

Yosso, T. J., & Solórzano, D. G. (2021). Critical race theory in teacher education:

Rethinking curriculum, pedagogy, and research. Teachers College Press. https://doi.org/10.1177/0042085920981033

Zhang, Z., & Burry-Stock, J. A. (2021). Assessment practices and beliefs of teachers in technology-enhanced classrooms. Educational Assessment, Evaluation and Accountability, 33(3), 325–344. https://doi.org/10.1007/s11092-021-09367-1

Zuraik, A., & Kelly, L. (2019). The role of shared leadership in fostering innovative work behavior in teams: A social identity perspective. Journal of Business Research, 103, 212–221.https://doi.org/10.1016/j.jbusres.2019.06.014