International Journal of Research Studies in Education
2026 Volume 15 Number 3, 105-117

Teachers' instructional competence, self-efficacy, and technology integration knowledge among secondary school teachers

Candelaria, Jaymar D. ✉
Graduate School, Lyceum of the Philippines University – Batangas, Philippines

ISSN: 2243-7703
Online ISSN: 2243-7711

Received: 3 May 2026
Revised: 29 May 2026
Accepted: 31 May 2026
OPEN ACCESS
Available Online: 1 June 2026
DOI: 10.5861/ijrse.2026.26609

Abstract

This study focused on three critical variables: instructional competence, self-efficacy, and technological integration knowledge as the basis for improving faculty plans in the public educational institutions. This study aimed to determine the relationship between instructional competence, self-efficacy, and technological integration knowledge as viral components of a faculty improvement strategy. Employing a descriptive correlational research was used to examine secondary public school teachers' instructional competence, self-efficacy, and knowledge of technology integration. Data were collected via a questionnaire distributed to 500 teachers in secondary school teachers in the 2nd district of Batangas province. Demographic analysis revealed predominantly female respondents, 31 – 40 years old, with masters degree, and with 6 – 10 years of service experience. Findings indicate strong agreement regarding instructional competence, particularly in personal competencies. Self-efficacy was highly valued, especially in instruction and maintain discipline. Similarly, technological integration knowledge emphasized pedagogical content knowledge. Importantly, there exists a highly significant relationship among public school secondary teachers' instructional competence, teaching self-efficacy, and technological integration knowledge, highlighting their interconnectedness in driving positive outcomes for faculty improvement. These insights lighten the diversity and experiences of individuals involved in education and offer valuable guidance for enhancing school effectiveness. Additionally, the analysis revealed significant differences among the variables of instructional competence, self-efficacy, and technological integration knowledge, particularly highlighting sex, age, educational attainment, and years in service as influential factors in these dynamics. A faculty improvement plan was proposed for the enhancement of instructional competence, self-efficacy, and technological integration knowledge.

Keywords: instructional competence, self-efficacy, technological integration knowledge

© The Author(s) / Attribution-NonCommercial-NoDerivs CC BY-NC-ND

Teachers' instructional competence, self-efficacy, and technology integration knowledge among secondary school teachers

1. Introduction

The quality of teaching and learning is at the heart of educational success, shaping students' academic achievements and lifelong skills. As systems of education change, making teaching more effective and improving the students' learning experience has become a major focus. High-quality instruction is not only about knowing the content; it is about using appropriate and innovative teaching techniques, motivating the students, and participating in further professional development. Likewise, improving learners' outcomes requires promoting conditions that enable active participation, critical reflection, and flexibility among them. However, slow progress can result from outdated methods of teaching, insufficient funding, and lack of incentives for the teachers. This research aims at finding ways of enhancing the teaching and learning processes through teacher development, improving the educational content, and applying modern methods of teaching. This enhances the capacity of educational institutions to provide better educational outcomes through improved learning environments and student performance.

In this study, the variables under consideration are instructional competence of secondary teachers, self-efficacy and technology integration knowledge. These variables are interrelated in shaping the overall effectiveness of the teaching profession and the quality of education delivered in secondary schools. According to (Zhang, 2024), teachers' competence is the ability of teachers to effectively manage the classroom, deliver content, and facilitate student learning. It reflects teachers' professional training and experience in translating theory into practice. According to DepEd Order No 8, s.2010 stresses teachers' competencies have greatly impact students' academic performance. Prior to the current demands of the 21st century education, and in order that the country will be empowered in terms of global competitiveness, there is a need to fill the gap, if any, in teachers' instructional competencies and students' academic performances – and what purports effective teaching. In the field of education, by strengthening instructional competence, teachers are better equipped to create a learner-centered environment, promote active participation, and align teaching practices with curriculum standards. Furthermore, it supports the development of 21st-century skills such as problem-solving, collaboration, and communication, which are essential for students' holistic growth and future readiness.

Instructional competence of teachers refers to the set of skills that enable them to effectively facilitate learning for their students through efficient teaching methods, classroom management, and assessment practices. As DepEd transitions from modular distance learning back to face-to-face classes, it is essential to reassess and enhance the instructional competence of teachers to ensure the continued success of learners in this new educational landscape. Modular distance learning experience has taught the need to improve instruction competency among teachers to address the different needs of the learners as they undergo transformation back to face to face classes. Developing this competence further will allow teachers to establish more interactive and productive classroom dynamics that foster a more in-depth knowledge and participation. Post-pandemic educator competency is crucial since it provides teachers with new methods and innovative ways of operating that belong to the post-pandemic educational environment. Evaluating instructional competence will enable schools to know areas that need improvement and offer sufficient support to teachers. Increasing instructional competence does not only enhance student achievement, but also enhances the quality of education as a whole and equity. Furthermore, implementing sustainability into the curriculum empowers students to believe in their own abilities to accomplish tasks and overcome challenges. Self-efficacy, influences learners' motivation, persistence, and resilience in the face of academic difficulties. When students develop confidence in their capacity to succeed, they are more likely to engage actively in learning activities, set higher goals, and sustain effort until mastery is achieved. Integrating self-efficacy into the curriculum may be done through goal-setting activities, providing constructive feedback,

modeling successful strategies, and creating opportunities for learners to experience small but meaningful achievements. In this way, the curriculum does not only focus on the acquisition of knowledge and skills but also nurtures students' belief in their potential, which contributes significantly to both academic performance and personal development.

Teacher's self-efficacy, however, is defined as the teacher's sense or feeling of his or her ability to positively impact student learning, achievement, and motivation. Parcutilo et. al., (2021) found that self-efficacy is correlated with students' academic adjustment, classroom practices, teacher behavior and teacher well-being such as job satisfaction, accomplishments and commitment. Self-efficacy can be different across different topics, grade level, or learning mode. For example, a teacher might be very confident in teaching in a classroom setting but not as confident teaching online/blended. This gap can influence the way teaching is approached and the use of technology in the teaching-learning process.

Technology integration knowledge as important key in education to improve the teaching and learning process of the students inside the classroom. The successful application of the digital tools and platforms presupposes that teachers should have not only the content and pedagogical competency but also remarkable knowledge of technological knowledge and its implementation in the educational classroom. The use of technology in learning encourages student interaction, facilitates differentiated learning and the development of 21st-century capabilities like critical thinking, teamwork, and digital literacy. Nevertheless, the level at which educators are able to effectively incorporate technology is dependent on their knowledge level in technology, their confidence and institutional support. Thus, this research examines the extent of technology integration knowledge among the teachers and how it affects their teaching experiences, in an effort to offer some insights that can inform the professional growth and improvement of the policy to achieve quality education.

Technology has had a significant impact on the education sector, revolutionizing the way education is delivered from traditional methods to more innovative and learner-centered approaches. The teacher must not only be competent in teaching but also confident of teaching, and must have the ability to use technology in the classroom. Technology integration knowledge, instructional competence and self-efficacy are critical factors in effective teaching and learning. This study is grounded on the observation that some teachers in senior high schools in public schools were still using traditional teaching methods and limited in using technology in teaching. Although technology provides multiple opportunities to enhance lessons and make them more interactive, not all teachers are comfortable using technology in their classrooms. Furthermore, new teachers are likely to be shy or nervous when speaking and teaching in front of students, which may impact their classroom management and teaching skills. These instances emphasize the significance of investigating teachers' self-efficacy because teacher self-efficacy is crucial for effective teaching strategies and willingness to use modern teaching methods. In addition, this study aims to understand how the instructional competence and self-efficacy of teachers affect their technology integration knowledge. The interdependence of these variables could be useful in the identification of teacher difficulties in meeting the contemporary needs of the education system. The results of this study could be used as a foundation for designing training, seminars and professional development sessions that would strengthen teachers' instructional abilities, build confidence, and increase their ability to effectively use technology in teaching and learning.

Effective teaching requires instructional competence, self-efficacy, and integration of technology to achieve the intended teaching goal in the Department of Education. Having great instructional competence, teachers can organize interesting lessons, implement various teaching methods, and evaluate student learning in an effective way. Their self-efficacy gives them the ability to manage their classroom problems, be motivated and they keep on enhancing their practice to produce better learning results. In the meantime, integration of technology also improves instructional delivery by making lessons interactive, relevant and more accessible by using the digital technology and online platform. When the three elements come into play, teachers will be better equipped, confident, and more innovative thus leading to the creation of quality education that will prepare the learners with the skills necessary to navigate the fast changing world.

The aim of this study was therefore motivated by the necessity to find innovative solutions to educational problems via teacher-based initiatives within the Department of Education (DepEd). This research will evaluate how much instructional competence, self-efficacy, and technology integration among the teachers are being built and implemented in classroom environments by enhancing the competency. The results will give an idea of the ways in which teachers can enhance their teaching behaviors, successfully imbibe technology in smartness, and attain a sense of security in their job descriptions. This research is ultimately aimed to achieve the enhancement of the teaching quality and to ensure the effective learning experience that would meet the aspirations of the 21st century education.

Objectives of the Study - This study aimed to investigate instructional competence, self-efficacy, and technology integration knowledge among secondary school teachers in the 2nd district of Batangas Province. Specifically, it evaluate teacher's instructional competence in terms of instructional delivery, classroom management, assessment and personal competencies; determined the teaching self-efficacy through instruction, motivation, maintain discipline and cope with change; analyzed the technology integration knowledge as to technological content knowledge, technological pedagogical knowledge, and technological pedagogical content knowledge; tested the significant relationship among the three variables; and lastly, proposed an enhanced faculty development program to strengthen instructional competence, self-efficacy, and technology integration knowledge based on the result of the study.

2. Methods

Research Design - To align with the objectives of this study, descriptive correlational research was used to examine secondary public school teachers' instructional competence, self-efficacy, and knowledge of technology integration. This is quantitative research in which numerical data were gathered using standardized questionnaires and instrumentation. A correlational research design was used to examine possible relationships among instructional competence, self-efficacy, and technology integration knowledge among secondary public-school teachers. This has been done because research seeks an association between the variables under study.

Participants of the Study - This research's target population includes teaching staff with experience in public school at 2nd District of Batangas Province. The researcher will employ a stratified random sampling method to ensure that the obtained sample is truly representative of the targeted population. The target population comprises 1038 secondary school teachers, from which a representative sample of at least 500 participants were selected using stratified sampling. This approach is used to allow every teacher to be selected and, in effect, minimize the impact of selection bias and increase the reliability of the findings. For stratified random sampling, the researcher first distinctly number each teacher in the population. Stratified random sampling is a method of sampling that involves the division of a population into smaller sub-groups known as strata. It was used to identify the number of respondents per school in the Batangas Province. After that, the chosen respondents will be invited to respond to the survey questionnaire. This sampling strategy thus adheres to the principles of fairness and randomness. It promotes gathering generalizable data in a way that would adequately respond to research questions.

Data Gathering Instrument - In this study, data were collected using a modified questionnaire and measured by Likert 4 scale. The first part was to investigate the personal information of the respondents. The second part was about teachers' instructional competence, including four dimensions, such as instructional delivery, classroom management, assessment and personal competencies (Asis et. al.,2023). The third part was self-efficacy, including instruction, motivation, maintain discipline and cope with change adapted to NTES. The fourth part was technology integration knowledge, including technological content knowledge, technological pedagogical knowledge, and technological pedagogical content knowledge (Hosseini, 2022). Following the completion of the preliminary design, thirty specialists were asked to do a pre-test of the questionnaire, these helped to improve the questionnaire's language and structure. The demographic profile section of the questionnaire was in checklist format. Conversely, a four-point Likert scale was employed to describe the major variables to avoid uncertain responses. The scale included the following verbal descriptions: 4 – Strongly Agree; 3 – Agree; 2 – Disagree; 1 – Strongly Disagree. Instructional

competence and self-efficacy variable comprised four subdomains, while technological integration compromised three subdomains. A test of reliability was conducted to establish the consistency of the questionnaire, utilizing the Cronbach Alpha coefficient. The reliability index for the whole questionnaire is 0.874 consisting of 82 items all in all.

Table 1
Reliability Test Results

Indicators	Cronbach Alpha	Remarks
Teachers' Instructional Competence		
Instructional Delivery	0.785	Acceptable
Classroom Management	0.841	Good
Assessment	0.856	Good
Personal Competencies	0.903	Excellent
Self-efficacy		
Instruction	0.868	Good
Motivation	0.873	Good
Maintain Discipline	0.937	Excellent
Cope with Change	0.946	Excellent
Technological Integration		
Technological Content Knowledge	0.843	Good
Technological Pedagogical Knowledge	0.897	Good
Technological Pedagogical Content Knowledge	0.864	Good

George and Mallery (2003) provide the following rules of thumb: "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 – Unacceptable"

Data Gathering Procedure - Modern technology was employed by the researcher to ensure that the questionnaire will be delivered to each respondent in a timely manner. Prior to the actual survey, the researcher sent an official letter of permission to Batangas Province, requesting assistance in the dissemination of the questionnaire. The survey was administered through printing out survey questionnaire to give participants convenience for their responses. Also, the researcher visited school to formally notify research offices about research to be carried out and to get teacher responses from the questionnaire. To prioritize participant security and privacy, the questionnaire included a comprehensive data privacy consent form. The consent form contained the purpose of the research, the intended use, and how the confidentiality of the participants treated. Data gathering was done through questionnaires that should be accessible to participants. The approach was a big way to maintain privacy and confidentiality of the respondents, while data collection was efficient. The researcher tabulated the results, send them to the statistician, and analyze the data after gathering the intended responses.

Data Analysis - These statistical techniques helped the researcher properly and systematically analyze the information collected from the questions in the survey. The combination of comparative analysis (Weighted Mean), and correlational analysis (Pearson Product Moment Correlation) provided a comprehensive understanding of the relationships among the study variables. **Weighted Mean and Ranking Analysis** will be used to evaluate teacher's instructional competence in terms of instructional delivery, classroom management, assessment and personal competencies; determine the teaching self-efficacy through instruction, motivation, maintain discipline and cope with change; analyze the technology innovation of teachers on creativity, risk-taking and pedagogical skills. The data will be tested for normality. Pearson Product Moment Correlation / Spearman rho were used to test the significant relationship of the treated variables. In addition, post hoc test will also be conducted. The following Likert Scale was used in assessing the variables: 3.50- 4.00 = Strongly Agree; 2.50-3.49 –Agree; 1.50 – 2.49 – Disagree; and 1.00 – 1.49 –Strongly Disagree. In addition, all data were treated using a statistical software known as SPSS version 26 that further interpret the result of the study using an alpha level of 0.05.

Ethical Considerations - This study was conducted with ethical considerations at the forefront, ensuring that every step of the research process upholds the highest standards of integrity, transparency, and respect for participants. All data and information collected used strictly and exclusively for academic and research purposes, with a strong commitment to maintaining integrity, credibility, and overall quality of the study. To protect the privacy and anonymity of all respondents, the researcher employed a secure internet-based platform to distribute questionnaires. These questionnaires were designed in such a way that no personal identifiers were required or recorded, ensuring

that participants responded freely without fear of their identities being disclosed. Furthermore, the researcher took proactive steps to guarantee that participation was entirely voluntary. Before distributing the questionnaire, clear instructions and informed consent were provided, emphasizing that respondents were under no obligation to participate and may choose to withdraw at any time without any consequences. By taking these measures, the study aimed to create a safe and respectful environment for honest and thoughtful participation. The researchers made sure that the study was conducted in an ethical manner and was approved by the proper research ethics committee of Lyceum of the Philippines University. This was done to guarantee that the study followed ethical standards in conducting research, including the protection of participants' rights.

3. Results and discussion

Table 2
Summary Table on Instructional Competence

Indicators	Composite Mean	Verbal Interpretation	Rank
Instructional Delivery	3.75	Strongly Agree	2
Classroom Management	3.73	Strongly Agree	3
Assessment	3.71	Strongly Agree	4
Personal Competencies	3.77	Strongly Agree	1
Overall Composite Mean	3.74	Strongly Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 2 present the summary table on instructional competence. The results indicate a high level of agreement among respondents regarding various aspects of instructional competence. It offers a comprehensive overview of respondents' perception regarding various aspects of instructional effectiveness within the school. The composite mean of 3.74 indicates that the respondents strongly agreed in general meaning participants have highly positive rating on their instructional skills. Among the items item, personal competencies (3.77) read that first followed by instructional delivery (3.75). The results provide valuable insight into the perception of respondents regarding various aspects of instructional competence within the classroom setting. The high level of agreement among respondents suggests a strong consensus regarding the effectiveness of instruction in several key areas. This emphasis on personal competencies that the teachers of the school are viewed as very competent, specifically, in the domain of personal competencies which implies that they are responsive, respectful, and responsible towards students which makes them effective in the creation of the positive and supportive learning environment. The good score on instructional delivery shows that teachers tend to be highly effective in planning and applying lessons, whereas the score is slightly lower than the personal competencies, which is an indication that a further improvement of teaching strategies and approaches may be provided by continuous professional development. Overall, the findings suggest the necessity to focus on personal competencies and at the same time on enhancing the instructional practice so that it could guarantee effective and consistent student learning outcomes.

On the other hand items such as classroom management (3.73) and assessment (3.71) rated the least. The lower ratings for these items indicate potential areas for improvement within the instructional competence read it although the scores for this item still reflect a generally positive perception, the slightly lower rating suggests that teachers may perceive room for enhancement in strategic planning and decision-making processes. Furthermore, theses findings, although teachers are usually competent, classroom management and assessment are the spheres that may be developed further. The ratings are slightly lower, which may mean that teachers may require further assistance with the adoption of effective classroom management practices, designing or using assessments that can properly track student learning. These areas would be improved and the overall instructional competence of the teachers would be more effective, which results in more well-organized learning spaces and informed choices in instruction that are more conducive to student achievement.

Structural issues such as misalignment between assessment tasks and learning objectives, time constraints, and insufficient feedback practices also contribute to the failure of assessment to accurately reflect student understanding or promote learning These challenges suggest that improving assessment literacy and systemic support are essential for assessments to fulfill their role in enhancing student achievement.

Table 3
Summary Table on Self-efficacy

Indicators	Composite Mean	Verbal Interpretation	Rank
Instruction	3.73	Strongly Agree	1.5
Motivation	3.70	Strongly Agree	3
Maintain Discipline	3.73	Strongly Agree	1.5
Cope with Change	3.64	Strongly Agree	4
Overall Composite Mean	3.70	Strongly Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 3 presents summary on self-efficacy. The result reflects a favorable perception of self-efficacy within the school community. The composite mean of 3.70 indicates that the respondents strongly agreed in general meaning participants have a highly positive rating on all indicators mentioned. Among these indicators, instruction and maintain discipline got both 3.73 which is ranked first. The findings suggest that educators feel very competent in major aspects of instructional practice and classroom management especially in the instruction and discipline maintenance, which are very critical in teaching and learning. This high self-efficacy means that teachers feel they are apt to teach successfully and provide a proper classroom atmosphere ensuring it is structured and respectful in their classrooms. The teacher self-efficacy may be high enough to achieve increased student engagement, classroom management, and learning. The results also outline the possibility to use the strong sides to improve the areas where the levels of self-efficacy are slightly lower so that the teaching effectiveness in all spheres will be always high.

While "motivation" (3.60), and "cope with change"(3.64) ranked last. These findings related to motivation and cope with change imply that, although teachers have a general perception that they can perform well in terms of the instructional delivery and the preservation of the discipline process, they might have lesser confidence in their ability to motivate the students and adapt to the changes in the educational environment. This shows the possible areas that the professional development and support can be enhanced to enhance the capabilities of teachers to inspire and engage the students at all times particularly where the students lack interest or have difficult tasks. The marginally lower score in coping change also implies that teachers might have some problems working with new teaching techniques, adjust to curriculum changes, or even handling heterogeneous classrooms.

Otherwise, these issues may undermine the quality of teaching methods and decrease the general learning results. To promote student engagement and perseverance, the ability of teachers to improve their motivation strategies, including the delivery of diverse teaching methods, providing meaningful, and helping students to have strong self-efficacy, can be enhanced. Similarly, to enhance the adaptability and flexibility in teaching approaches, specific training should be offered to teachers to enhance their ability to meet the changing educational needs. The targeted areas would help schools to train teachers to be more resilient, more versatile and more effective educators, which will eventually contribute to more pleasant and dynamic learning environment. Sealing these gaps is also critical towards ensuring that the high self-efficacy that teachers have in teaching and discipline is complemented with the capacity of the teacher to motivate his or her students and effectively go through change.

Teachers who feel less confident in motivating disengaged students often face challenges in using varied engagement techniques and sustaining student interest, especially when students show low participation or lack intrinsic motivation. Studies have found that self-efficacy in student engagement is a key predictor of teachers' ability to encourage persistence and positive learning attitudes, and teachers with lower confidence in this area may struggle to implement effective motivational practices

In addition, the ability to cope with change, such as adopting new instructional methods or adapting to curriculum revisions, has been identified as an important component of teacher effectiveness. Research indicates that teachers with higher adaptability skills and self-efficacy are more likely to embrace instructional change, integrate innovative practices, and sustain performance during educational reforms.

Table 4

Summary Table on Technological Integration Knowledge

Indicators	Composite Mean	Verbal Interpretation	Rank
Technological Content Knowledge	3.70	Strongly Agree	2
Technological Pedagogical Knowledge	3.72	Strongly Agree	1
Technological Pedagogical Content Knowledge	3.68	Strongly Agree	3
Overall Composite Mean	3.70	Strongly Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 4 presents summary on technological integration knowledge. The results reflect a favorable perception of knowledge on integrating technology in classroom settings. The composite mean of 3.70 indicates that the respondents strongly agreed in general meaning participants have a highly positive rating on all indicators mentioned. Among these indicators, technological pedagogical knowledge ranked first with 3.72 result. Followed technological content knowledge (3.72). The findings suggest that the teachers feel their competence in both the pedagogical content knowledge (PCK) and in technological content knowledge (TCK), which is the high level of knowledge of not only the subject matter, but also the effective way to teach it. The presence of high ratings in PCK implies that teachers have confidence in their choice of suitable teaching strategies, lesson planning, and dealing with misconceptions of students, factors that are critical in helping students to experience meaningful learning. Equally, the high perception of knowledge in technological content implies that teachers can incorporate technology in their teaching to improve engagement, communication and learning results.

On the other hand, item technological pedagogical content knowledge (3.68) rated the least. The lower score in technological pedagogical content knowledge (TPACK) implies that educators might continue experiencing difficulties in the process of successfully combining technology, pedagogy, and content knowledge to a unified instructional practice. Although teachers have no reservations about their pedagogical or technological knowledge in isolation, integrating both fields in coming up with lessons where technology is meaningfully implemented to aid learning seems to be the challenge. It means that a professional development including the emphasis on TPACK-based instructional design, which will assist teachers in choosing the right technologies, matching them to the subject content, and using efficient teaching methods at the same time can be required. Enhancement of TPACK has the ability to enhance the quality of the lesson delivered, enhance student engagement and promote the understanding of the subject matter. Besides, improving the TPACK skills of teachers empowers them to identify the different learning conditions, adopting new instructional models, and instructing students on how to use technology in a meaningful way to learn. The elimination of this gap will make sure that the technological and pedagogical competencies of teachers are transformed into good classroom routines instead of just being a tool in isolation.

Table 5 presents the relationship between instructional competence and self-efficacy across different domains. The results show that all computed Spearman rho-values are positive and statistically significant ($p<.001$), indicating a significant positive relationship between instructional competence and self-efficacy. This means that as teachers' instructional competence increases, their level of self-efficacy in various teaching-related aspects also tends to increase. In terms of instructional delivery, the results show moderate to strong positive relationships with the domains of self-efficacy. The strongest relationship is observed with instruction ($\rho=.671$), followed by maintain discipline ($\rho=.585$), cope with change ($\rho=.503$), and motivation ($\rho=.490$). These findings suggest that teachers who are more competent in delivering instruction tend to have greater confidence in their ability to teach effectively, manage classroom discipline, motivate students, and adapt to changes in the teaching environment.

For classroom management, all relationships with self-efficacy are also positive and highly significant, although the strength varies. The strongest association is with maintain discipline ($\rho = .545$), followed by instruction ($\rho = .493$) and motivation ($\rho = .397$), while the weakest but still significant relationship is with cope with change ($\rho = .297$). This indicates that effective classroom management is closely linked with teachers' confidence in maintaining discipline and facilitating instruction, while its relationship with coping with change is comparatively weaker.

Table 5
Relationship Between Instructional Competence and Teaching Self-efficacy

Instructional Delivery	rho-value	p-value	Interpretation
Instruction	.671**	<.001	Highly Significant
Motivation	.490**	<.001	Highly Significant
Maintain Discipline	.585**	<.001	Highly Significant
Cope with Change	.503**	<.001	Highly Significant
Classroom Management			
Instruction	.493**	<.001	Highly Significant
Motivation	.397**	<.001	Highly Significant
Maintain Discipline	.545**	<.001	Highly Significant
Cope with Change	.297**	<.001	Highly Significant
Assessment			
Instruction	.756**	<.001	Highly Significant
Motivation	.561**	<.001	Highly Significant
Maintain Discipline	.663**	<.001	Highly Significant
Cope with Change	.478**	<.001	Highly Significant
Personal Competencies			
Instruction	.648**	<.001	Highly Significant
Motivation	.568**	<.001	Highly Significant
Maintain Discipline	.628**	<.001	Highly Significant
Cope with Change	.602**	<.001	Highly Significant

Legend: Significant at p-value < 0.05

In terms of assessment, the results reveal some of the strongest relationships in the table. The highest correlation is between assessment and instruction (ρ = .756), indicating a strong positive relationship. This is followed by maintain discipline (ρ = .663), motivation (ρ = .561), and cope with change (ρ = .478). These findings suggest that teachers who are more competent in assessing student learning tend to exhibit higher confidence in instructional practices and classroom management. Finally, personal competencies also demonstrate moderate to strong positive relationships with all domains of self-efficacy. The strongest relationship is with instruction (ρ = .648), followed by maintain discipline (ρ = .628), cope with change (ρ = .602), and motivation (ρ = .568). This implies that teachers who possess strong personal competencies—such as professionalism, adaptability, and interpersonal skills—are more confident in their ability to perform various teaching tasks effectively.

Secondary school teachers tasked with nurturing adolescents' intellectual and social development play a pivotal role in shaping the educational landscape. The intricate relationship between teacher competence, the amalgamation of knowledge, skills and pedagogical prowess, and self-efficacy, the belief in one's ability to achieve desired outcomes, has been a subject of scholarly interest and debate.

Table 6 presents the relationship between instructional competence and technological integrated knowledge. The results indicate that most of the correlations between the domains of instructional competence and technological integration knowledge are positive and highly significant, suggesting that teachers who demonstrate stronger instructional competence also tend to possess higher levels of technological knowledge integration in their teaching practices. In terms of instructional delivery, all three components of technological integration knowledge show moderate and highly significant positive relationships. Specifically, Technological Content Knowledge (ρ =.457, p<.001) shows the strongest relationship, followed by Technological Pedagogical Content Knowledge (ρ=.435, p<.001) and Pedagogical Content Knowledge (ρ=.371, p<.001). These findings suggest that teachers who are effective in delivering instruction are more likely to integrate technology with subject content and teaching strategies. In practice, this means that teachers who are confident in explaining lessons and presenting learning materials also tend to use technology to support and enhance their instruction.

With regard to classroom management, the relationships with technological integration knowledge are generally weaker but still meaningful. Technological Content Knowledge (ρ= .250, p< .001) and Technological Pedagogical Content Knowledge (ρ =.176, p< .001) both show significant positive relationships, indicating that teachers who manage their classrooms effectively also tend to apply technology in organizing and facilitating learning activities. However, Pedagogical Content Knowledge (ρ=.071, p=0.112) shows a very weak relationship, suggesting that classroom management may not strongly influence the integration of pedagogy and content

knowledge in technology use.

Table 6

Relationship Between Instructional Competence and Technological Integration Knowledge

Instructional Delivery	rho-value	p-value	Interpretation
Technological Content Knowledge	.457**	<.001	Highly Significant
Technological Pedagogical Knowledge	.371**	<.001	Highly Significant
Technological Pedagogical Content Knowledge	.435**	<.001	Highly Significant
Classroom Management			
Technological Content Knowledge	.250**	<.001	Highly Significant
Technological Pedagogical Knowledge	0.071	0.112	Highly Significant
Technological Pedagogical Content Knowledge	.176**	<.001	Highly Significant
Assessment			
Technological Content Knowledge	.482**	<.001	Highly Significant
Technological Pedagogical Knowledge	.376**	<.001	Highly Significant
Technological Pedagogical Content Knowledge	.386**	<.001	Highly Significant
Personal Competencies			
Technological Content Knowledge	.532**	<.001	Highly Significant
Technological Pedagogical Knowledge	.362**	<.001	Highly Significant
Technological Pedagogical Content Knowledge	.486**	<.001	Highly Significant

Legend: Significant at p-value < 0.05

In the area of assessment, all domains of technological integration knowledge demonstrate moderate and highly significant positive relationships. The strongest association is with Technological Content Knowledge (ρ = .482, p<.001), followed by Technological Pedagogical Content Knowledge (ρ=.386, p<.001) and Pedagogical Content Knowledge (ρ=.376, p<.001). These results imply that teachers who are competent in assessing student learning are also more likely to use technology to support evaluation processes, such as digital quizzes, online feedback systems, and technology-assisted monitoring of student progress. Lastly, personal competencies show some of the strongest relationships with technological integration knowledge. The highest correlation is with Technological Content Knowledge (ρ=.532, p<.001), followed by Technological Pedagogical Content Knowledge (ρ=.486, p<.001) and Pedagogical Content Knowledge (ρ =.362, p< .001). This suggests that teachers who possess strong personal competencies—such as adaptability, openness to innovation, and professional commitment—are more likely to embrace and effectively integrate technology into their teaching.

Effective teaching today requires not only deep content knowledge and pedagogical skill but also the ability to integrate technology in ways that enhance learning. Studies indicate that teachers who are more competent in instructional practices—such as lesson design, assessment, and classroom management—are also more likely to use technology meaningfully to support student learning, because instructional competence helps them align digital tools with pedagogical goals. Moreover, research using the TPACK (Technological Pedagogical and Content Knowledge) framework emphasizes that instructional competence and technological integration cannot be treated as separate constructs: successful technology use in the classroom depends on the teacher's ability to blend technology with subject matter and pedagogy.

Table 7 presents the relationship between teachers' self-efficacy and technological integration knowledge. The results show that all the computed Spearman rho-values are positive and highly significant (p < .001), indicating that self-efficacy is significantly associated with teachers' ability to integrate technology in teaching. In general, the findings suggest that teachers who have stronger confidence in their teaching abilities also tend to demonstrate higher levels of technological integration knowledge.

In terms of instruction, all components of technological integration knowledge show moderate and highly significant positive relationships. The strongest relationship is observed with Technological Pedagogical Content Knowledge (ρ=.527), followed by Pedagogical Content Knowledge (ρ=.421) and Technological Content Knowledge (ρ=.366). These results imply that teachers who feel confident in delivering instruction are more likely to effectively combine technology, pedagogy, and content in their teaching practices.

With regard to motivation, the correlations also show significant positive relationships with technological

integration knowledge. Technological Pedagogical Content Knowledge (ρ=.418) demonstrates the strongest association, followed by Technological Content Knowledge (ρ=.359) and Pedagogical Content Knowledge (ρ = .249). This indicates that teachers who believe in their ability to motivate students are more inclined to use technology to support learning activities and engage students in the classroom.

Table 7
Relationship Between Instructional Competence and Technological Integration Knowledge

Instruction	rho-value	p-value	Interpretation
Technological Content Knowledge	.366**	<.001	Highly Significant
Pedagogical Content Knowledge	.421**	<.001	Highly Significant
Technological Pedagogical Content Knowledge	.527**	<.001	Highly Significant
Motivation			
Technological Content Knowledge	.359**	<.001	Highly Significant
Pedagogical Content Knowledge	.249**	<.001	Highly Significant
Technological Pedagogical Content Knowledge	.418**	<.001	Highly Significant
Maintain Discipline			
Technological Content Knowledge	.293**	<.001	Highly Significant
Pedagogical Content Knowledge	.151**	<.001	Highly Significant
Technological Pedagogical Content Knowledge	.535**	<.001	Highly Significant
Cope with Change			
Technological Content Knowledge	.275**	<.001	Highly Significant
Pedagogical Content Knowledge	.297**	<.001	Highly Significant
Technological Pedagogical Content Knowledge	.623**	<.001	Highly Significant

Legend: Significant at p-value < 0.05

For maintaining discipline, the results reveal positive and highly significant relationships across all domains of technological knowledge. The strongest correlation is with Technological Pedagogical Content Knowledge (ρ = .535), followed by Technological Content Knowledge (ρ = .293) and Pedagogical Content Knowledge (ρ = .151). Although the relationship with pedagogical content knowledge is relatively weaker, the findings still suggest that teachers who are confident in managing classroom discipline also tend to incorporate technology into their teaching strategies. Finally, in terms of coping with change, the results demonstrate some of the strongest relationships in the table. The highest correlation is observed with Technological Pedagogical Content Knowledge (ρ = .623), indicating a strong positive relationship. This is followed by Pedagogical Content Knowledge (ρ = .297) and Technological Content Knowledge (ρ = .275). These findings suggest that teachers who are more adaptable and confident in dealing with changes in the educational environment are also more capable of integrating technology effectively into their instructional practices. Teachers' belief about their ability to successfully implement information technology integration behavior is closely related to TPACK, and it is one of the vital factors affecting decision-making and the use of technology in class. The research has confirmed that when teachers have a strong belief in information technology integration and believe that learning and using technology is interesting, important and useful, they will have a stronger motivation to improve the ability of information technology integration, and then obtain a higher level of TPACK.

Table 8
An Enhanced Faculty Development Program for Secondary Public School Teachers

Key Result Area (KRA) /Objectives	Program/Strategies	Success Indicators	Persons/ Department Involved
1. Teachers' Instructional Competence Assessment *Objective:* To enhance teachers ability to gathers evidence on student learning that informs instructional decisions effectively.	PROJECT PAPER AND PEN: Conduct sessions on designing effective formative and summative assessments, creating rubrics, and aligning assessments with learning outcomes.	-95% of the teachers regularly collect and process the information on the learning of students to make instructional choices. -95% of the teachers adhere to Quality and conformity to learning objectives of assessment instruments.	School Head, Master Teachers, Subject Coordinators
2. Teachers' Self-efficacy 2.1 Cope with Change *Objective:* To strengthen teachers' confidence and self-efficacy in managing instruction by utilizing appropriate	PROJECT THEORY TO PRACTICE: Use role-playing or case studies to involve teachers in simulating the real classroom conditions in mixed-age groups and in	-95% of the teachers reflect on practice, such as journals or portfolios documenting strategies tried and lessons learned. -95% of the teachers observe improvement in classroom management and instructional outcomes, especially in mixed-age or	School Head, Master Teachers, Subject Coordinators

group composition and implementing effective strategies for mixed-age group learning	shifting instructional setting.	heterogeneous groups	
3. Technological Integration Knowledge 3.1 Technological Pedagogical Content Knowledge *Objective:* To enhance teachers' ability to use specific tools to support learning and research.	PROJECT CYBERTOOL : Direct teachers to develop lessons that can embrace technology in order to capture content learning and improve the learning outcomes.	-95% of the teachers Increased integration of technology in lesson plans and classroom instruction. -95% of the teachers demonstrate effective use of technology for learning, research, and student engagement. -Active participation in workshops, mentoring, and collaborative sessions.	School Head, Master Teachers, Subject Coordinators

4. Conclusions and recommendations

The respondents strongly agreed on the Instructional competence utilized by teachers in terms of instructional delivery, classroom management, assessment, and personal competencies. However, respondents favored Personal competencies and perceived importance in academic excellence. Strong agreement among respondents regarding Self-efficacy in terms of instruction, motivation, maintain discipline, and cope with change. However, instruction and maintain discipline emerged as particularly strongly agreeing that instruction and maintaining discipline was important in achieving educational excellence. Respondents strongly agreed on Technological Integration Knowledge in terms of technological content knowledge, pedagogical content knowledge, and technological pedagogical content knowledge. However, there was a robust agreement that pedagogical content knowledge is effective and informative. There exists a highly significant relationship among public school secondary teachers' instructional competence, teaching self-efficacy, and technological integration knowledge. This finding means that teachers who are good at teaching tend to feel more confident, and teachers who feel confident are more capable of using technology effectively—creating a strong cycle that enhances overall teaching quality. This further reinforces the idea that effective teaching in the modern classroom depends on the alignment of skills, beliefs, and technological understanding. An enhanced faculty development program was proposed to improve public school secondary teachers' instructional competence, self-efficacy, and technological integration knowledge.

School Division Offices may enhance the faculty development initiatives by offering systematic education that is aimed at advancing the instructional proficiency, evaluation ability, and self-efficacy as well as technological integration expertise of teachers. The office must also encourage the usage of digital tools, programs, and internet access and encourage research-based training and performance tracking of teachers to ensure that there are areas that require specific attention. School heads may support unceasing professional growth through guaranteeing that teachers take part in workshops, mentoring programs and reflective practice activities in addition to encouraging flexible grouping approaches and acknowledging teachers who show high levels of self-efficacy, innovation and proper utilization of technology. Department Heads may promote the culture of sharing best practices and instructional improvement through leading collaborative lesson planning, mentoring less experienced teachers, arranging peer learning sessions, and guiding evidence-based instruction. Teachers may build up their instructional competence by engaging in frequent skill training in assessment, classroom management, motivation and instructional delivery, and actively building their self-efficacy through reflective practice, collaborative teaching, and action research. They are also expected to incorporate the appropriate use of technological tools to support content delivery, student engagement, and research, and to adopt flexible strategies such as mixed-age grouping and differentiated instruction to accommodate students' diverse needs. Human Resource may discuss the improved faculty development program for secondary teachers in public schools for implementation and evaluation to further improve instructional competence, self-efficacy and technology integration knowledge of the faculty members. Additionally, the program can be used as a blueprint for professional development programs that meet the changing needs of 21st century teaching and learning. Future researchers may investigate other contributing variables to teacher competence and self-efficacy, study the influence of technological integration knowledge of teachers on student achievement, learning engagement, and teaching quality. Also, they may use a broader research context across other regions or grade levels and conduct longitudinal research to determine the long-term outcomes of faculty development programs on teacher performance and confidence.

5. References

Asis, Johanna Mae N., Caballes, Dennis G., Ortiz Jr., Oliver E. (2023), Instructional competence of public secondary school teachers in the district of Naic: Basis for instructional enhancement program

Hosseini, Zahra (2022), Questionnaire to Measure Perceived Technology Integration Knowledge of Teachers (TPCK) Item for measuring Technology Knowledge.

Parcutilo, Racel A., Baluyos, Genelyn R. (2019), Teachers' Self-Efficacy in Relation to Pupils' Academic Performance.

Teacher self-efficacy, Adopted from Translation of the Norwegian Self-efficacy scale (NTSES). https://www.studocu.com/ph/document/holy-cross-of-davao-college/bachelor-of-secondary-education/teacher-self-efficacy-survey-questionnaire/46050518

Zhang Xian (2024), Teacher's instructional competence, commitment, and satisfaction: Basis for professional development program. International Journal of Research Studies in Education