

21st century skills, instructional leadership, work ethics, and teachers' competence

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Abstract

Aim: This study examined the relationships among 21st-century skills, instructional leadership, work ethics, and teachers' competence. It specifically aimed to determine how these variables influence teachers' competence and identify which factors significantly predict teachers' effectiveness in the educational setting.

Methodology: The study employed a predictive–correlational research design involving 130 elementary school teachers in Don Carlos I District, selected through stratified random sampling. Data were collected using validated adapted questionnaires. Descriptive statistics were used to determine the levels of the variables, while Pearson Product-Moment Correlation examined their relationships. Multiple Regression Analysis identified significant predictors of teachers' competence, and Structural Equation Modeling (SEM) tested the hypothesized model and examined the direct and indirect relationships among the variables.

Results: Findings revealed that teachers demonstrated very high levels of 21st-century skills, particularly in information, media, and technology literacy and critical thinking. School heads were perceived as highly competent in instructional leadership, while teachers exhibited very high levels of work ethics and competence across pedagogical, social, professional, and personality domains. Teachers' competence showed significant positive relationships with 21st-century skills, work ethics, and instructional leadership. Critical thinking, ethical decisiveness, and achievement orientation emerged as key predictors of teacher competence.

Conclusion: The study concludes that teacher competence is influenced by the interaction of professional skills, ethical values, and instructional leadership support. Strengthening teachers' cognitive skills, professional ethics, and leadership support systems is essential for improving instructional effectiveness and promoting positive learning outcomes in schools.

Keywords: *21st-century skills, instructional leadership, work ethics, teacher competence*

INTRODUCTION

The transformation of educational systems in the 21st century has intensified expectations for teacher competence, positioning it as a critical determinant of instructional quality and learner success. Rapid technological advancement increased digital integration, and the growing complexity of learner needs requires teachers to move beyond traditional pedagogical approaches toward adaptive, innovative, and ethically grounded practice. Globally and within the Philippine educational context, reform initiatives emphasize the cultivation of higher-order thinking, collaboration, communication, and creativity among learners (Mgaiwa & Milinga, 2024). However, persistent constraints, including uneven professional development opportunities, limited technological infrastructure, and evolving competency standards, continue to challenge teachers' capacity to consistently deliver high-quality instruction (Amemasor et al., 2025). These realities underscore the necessity of examining the multidimensional factors that shape teacher competence in contemporary school environments.

In the ever-evolving landscape of education, the demand for teachers who are competent in both technical and soft skills has never been more critical. While the Philippine education system promotes 21st-century learning, many teachers struggle to fully integrate these competencies into classroom practice due to limited instructional leadership support and varying levels of work ethics (Herlinawati et al., 2024). Moreover, school heads are often challenged in nurturing these essential qualities among their teaching staff, affecting overall school performance (Sagragao et al., 2025).



The inconsistency in teachers' competence, especially in communication, collaboration, innovation, and problem-solving, signals an urgent need to examine the interplay between 21st-century skills, instructional leadership, and educational work ethics. This study sought to address these gaps to help schools strengthen teacher effectiveness and learning outcomes.

This study on 21st-century skills, instructional leadership, work ethics, and teachers' competence is strongly aligned with the goals of the United Nations, particularly Sustainable Development Goal 4, which seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. By examining the factors that enhance teachers' competence, the study directly supports the improvement of teaching quality, a key component of Sustainable Development Goals (SDG) 4. Strengthening teachers' 21st-century skills and professional ethics contributes to developing learners equipped with critical thinking, collaboration, and problem-solving skills necessary for sustainable development (Rusmin et al., 2024).

Moreover, this study aligns with the priorities of the Second Congressional Commission on Education, which emphasizes improving teacher quality, strengthening school leadership, and enhancing professional development systems (Montefrio-Farrol & Martir, 2024). By examining how instructional leadership and work ethics influence teachers' competence, this study provides empirical evidence to guide policy reforms and capacity-building initiatives in Philippine education.

Thus, the findings of this study can contribute to both global and national educational agendas by supporting efforts to enhance teacher effectiveness, improve learner outcomes, and build a future-ready education system.

Review of Related Literature and Studies

This review of related literature encompasses both conceptual and research literature on teachers' competence. The related literature describes and explains 21st-century skills, instructional leadership, educational work ethics and teachers' competence.

Teachers' 21st Century Skills

21st-century skills refer to essential competencies such as critical thinking, problem-solving, communication, collaboration, and self-regulation. In education, these skills enable teachers to design learning experiences that develop higher-order thinking, creativity, and various literacies. Teachers are also expected to continuously adapt their pedagogical and technological practices to meet evolving demands (Real, 2022).

Studies highlight the importance of these competencies in improving teaching effectiveness. Zamora and Zamora (2022) emphasized that teachers must internalize critical thinking, collaboration, communication, and creativity to enhance instruction and learner engagement. Similarly, Rupole and Ching (2025) found that strong instructional leadership fosters teacher competence and innovation through guidance, feedback, and professional development.

Recent research shows that teachers generally demonstrate high levels of 21st-century skills. Debalos and Oco (2025) reported strong competence in critical thinking and self-direction, indicating that teachers can support independent and meaningful learning. Likewise, Cagatan and Quirap (2024) found that activities requiring analysis and decision-making help develop students' higher-order thinking skills.

In terms of teaching approaches, Guerrero and Bautista (2023) identified inquiry-based learning as effective in promoting analysis and evaluation. This approach encourages learners to explore questions and engage deeply with content, supporting independent thinking.

Communication and collaboration are also key components of teacher competence. Ragas et al. (2024) found that effective interaction with students and collaboration with peers improve engagement and classroom responsiveness. They also recommended professional learning circles to strengthen these skills.

Although existing studies emphasize 21st-century skills, instructional leadership, and teaching strategies, most examine these variables separately. There is limited research integrating these factors with work ethics to explain teachers' overall competence. Additionally, few studies explore how these competencies are consistently applied across different contexts. Thus, a more comprehensive study is needed to examine the combined influence of 21st-century skills, instructional leadership, work ethics, and teachers' competence.

Instructional Leadership

Instructional leadership focuses on how school leaders direct teaching and learning to promote student outcomes. It has shifted from a principal-centric position to a more distributed and context-sensitive model that connects leadership to teacher practice, school atmosphere, and accomplishment.



Instructional leadership often entails establishing a clear school mission, overseeing the instructional program, and fostering a pleasant learning environment (Gechere et al., 2025). It entails integrating curriculum and teaching with goals, leveraging data to improve instruction, supporting teacher development, and encouraging learning-focused cooperation (Nurabadi et al., 2021).

According to studies conducted in Ethiopia, India, and Malaysia, instructional leadership frequently has an indirect impact on school atmosphere, teacher efficacy, and teachers' task performance. Relationship-focused study reveals that principals' instructional leadership is dependent on solid relationships with themselves, middle leaders, teachers, and external stakeholders (Meng & Chang, 2024; Shaked, 2021).

The evidence on direct effects on student achievement is mixed. Some studies and meta-analyses found minor to moderate positive relationships, which were frequently mediated by teacher performance and school procedures (Ralebese et al., 2025). Other large-scale analyses discover that, once background and GPA are controlled for, leadership effects on achievement can become non-significant (Kemethofer et al., 2022) or that average correlations are close to zero with significant variation across countries and levels of development (Pietsch et al., 2023). According to empirical research, many principals continue to dedicate more time to administration than to instruction, and the influence of their own instructional techniques is rated as weak. Comparative and mapping studies emphasize the field's rapid regional growth and the creation of integrated leadership models that combine instructional, transformational, and other techniques (Ralebese et al., 2025)

Despite great efforts, gaps persist. Many studies rely on cross-sectional surveys and principal self-reports, which may overestimate instructional leadership while underestimating actual practice; more observation-based and mixed-method research is required, particularly in developing and under-resourced contexts (Ralebese et al., 2025; Rodrigues & de Lima, 2021). Evidence on causal effects and specific processes relating leadership to learning remains sparse and sometimes inconsistent, especially across cultures and development levels (Pietsch et al., 2023; Kemethofer et al., 2022; Raman et al., 2022). Further research is needed on distributed instructional leadership teams, social justice-oriented leadership, and the evolving role of instructional leadership in policy reforms and post-COVID settings Ralebese et al., 2025).

Work Ethics

Teachers' work ethics refer to the moral principles and professional standards guiding their responsibilities, relationships, and commitment to learners' welfare (Osias & Ladica, 2024). Wei (2023) found that teachers who value accountability and ethics show greater commitment, professionalism, and resilience. Emphasizing collaboration and service also strengthens teacher-student relationships, highlighting the importance of work ethics in effective teaching.

Mwesigwa and Nakato (2025) found that altruism and dedication encourage teachers to engage in professional development and mentorship. Teachers with strong service values support colleagues, enhance learner-centered practices, and integrate ethics into instruction. These qualities strengthen teacher identity and professional integrity.

Tortola (2024) reported that honesty and fairness build learner trust and improve classroom climate. Ethical decision-making supports moral development and helps teachers address diverse learner needs. Teachers who uphold these values demonstrate higher instructional effectiveness and competence.

Cachero (2025) emphasized that commitment to lifelong learning drives continuous teacher improvement. Teachers who value growth adopt new strategies, enhancing engagement and critical thinking. Aligning with ethical standards also improves classroom management and collaboration.

Bucal and Lipit (2025) highlighted that responsibility and service orientation foster supportive learning environments. Teachers who uphold honesty and accountability enhance credibility and encourage active learner participation. Strong work ethics also promote confidence in implementing instructional innovations.

A study of 300 Filipino teachers showed that strong work ethics are linked to positive behavior, attitudes, and performance (Osias & Ladica, 2024). Teachers with high ethical values demonstrate responsibility and professionalism, supporting findings that integrity and dedication drive effective teaching.

A systematic review found that core teacher values influence wellbeing, commitment, and classroom engagement (Al-Thani et al., 2025). Professional qualities like organization and creativity improve instructional outcomes (Gamboa & Quicho, 2025), while ethical traits such as honesty and patience strengthen professionalism and learning environments (Rayo, 2025).

Despite extensive studies highlighting the importance of educational work ethics in enhancing teachers' competence, most research treats it as an isolated factor. There is limited understanding of how work ethics interact with 21st-century skills and instructional leadership within a single framework. This gap calls for a more integrated approach to better explain how these factors collectively influence teachers' competence

Teachers' Competence

Teacher competence involves the knowledge, skills, and attitudes needed for effective teaching. It includes integrating pedagogy, content, and technology with reflective and ethical practices to ensure quality learning.

Serriere and Daniela (2025) found that teachers who combine strong content knowledge with varied teaching strategies show higher competence in lesson delivery. Adaptive teaching and reflective practices improve flexibility, problem-solving, and overall learning outcomes.

Lopez et al. (2025) emphasized that continuous assessment improves instructional competence. Teachers who monitor progress and use data to guide decisions can better address diverse learner needs and enhance classroom effectiveness.

Mayantao and Tantiado (2025) highlighted that technological proficiency strengthens teaching effectiveness. Teachers who use digital tools and interactive resources can diversify instruction and promote critical thinking, making technology a key component of competence.

Research shows that teacher competence across pedagogical, personality, social, and professional domains shapes effective teaching. Strong skills in these areas improve engagement, classroom climate, instructional quality, and student outcomes (Oco, 2025).

Teacher competence combines pedagogy, content, assessment, and technology to enhance instruction and learning outcomes. Research shows that adaptive strategies, data use, and digital skills improve teaching effectiveness, but these elements are often studied separately. This highlights the need for more integrated and context-specific research.

Overall, the literature shows that teachers' competence is influenced by 21st-century skills, instructional leadership, and work ethics. These factors improve teaching effectiveness, support professional growth, and enhance learning outcomes. However, most studies examine them separately, with limited focus on how they interact in real contexts. This creates a gap for a more integrated and context-based framework to better explain teachers' overall competence.

Theoretical Framework

The study draws on four key theories to explain teacher competence: self-regulated learning (teachers as reflective, lifelong learners), instructional leadership (the role of school leaders in guiding teaching quality), work ethics (values shaping commitment and identity), and pedagogical content knowledge (integration of subject expertise and teaching skills). Together, these perspectives show how personal growth, leadership support, values, and knowledge combine to enhance teacher effectiveness.

Teacher competence involves content knowledge, pedagogy, and professional ethics, closely linked with 21st-century skills like critical thinking, collaboration, and digital literacy. Research shows these skills improve teaching quality, adaptability, and student engagement, while strong instructional leadership further supports teacher development through collaboration and reflective practice.

Conceptual Framework

Figure 1 presents a conceptual framework illustrating how teachers' competence is influenced by three key factors: 21st-century skills, instructional leadership, and educational work ethics. Teachers' competence is positioned as the main outcome, while the other variables serve as significant contributors that shape and enhance their overall effectiveness in the teaching-learning process.

The diagram suggests that teachers equipped with modern skills, supported by strong instructional leadership, and guided by solid professional ethics are more likely to perform competently. These factors work together: skills provide capability, leadership offers direction and support, and work ethics ensure consistency and professionalism, resulting in a well-rounded and effective teacher in today's educational environment.

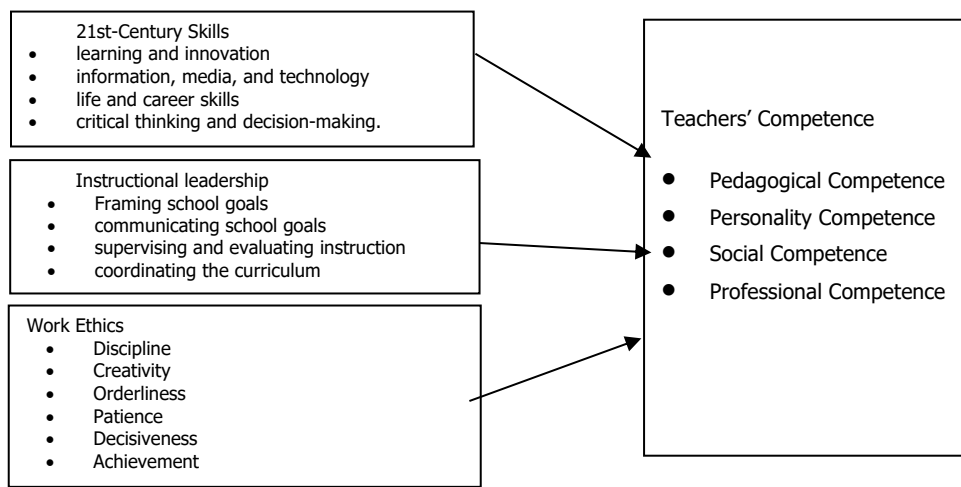


Figure 1. Schematic presentation showing the relationship between the independent and dependent variables of the study

Statement of the Problem

Teacher competence is widely recognized as a fundamental determinant of instructional effectiveness and learner success. In the context of 21st-century education, teachers are expected to demonstrate advanced professional skills, including critical thinking, collaboration, communication, and the effective use of information, media, and technology. However, many teachers continue to face challenges in consistently integrating these competencies into classroom practice. These challenges are often influenced by multiple factors, including the level of instructional leadership provided by school heads and the ethical values that guide teachers' professional behavior.

Instructional leadership plays an important role in shaping teaching practices by establishing clear goals, supervising instruction, and supporting teachers' professional development. At the same time, teachers' work ethics, including discipline, responsibility, creativity, and commitment to professional growth, influence how educators perform their instructional responsibilities. Despite the recognized importance of these factors, limited research has examined how 21st-century skills, instructional leadership, and teachers' work ethics collectively influence teachers' competence.

Understanding the interaction among these variables is essential in strengthening teacher development programs and improving instructional quality. Therefore, this study investigates the levels and relationships of 21st-century skills, instructional leadership, and teachers' work ethics and determines how these factors influence teachers' competence in public elementary schools.

Research Objectives

General Objective

To examine the influence of 21st-century skills, instructional leadership, and work ethics on teachers' competence.

Specific Objectives

Specifically, this study sought to:

1. Determine the level of teachers' 21st-century skills in terms of:
 - learning and innovation
 - information, media, and technology
 - life and career skills
 - critical thinking and decision-making.
2. Describe the level of instructional leadership of school heads as perceived by teachers in terms of:
 - framing school goals
 - communicating school goals
 - supervising and evaluating instruction
 - coordinating the curriculum

- promoting professional development.
3. Evaluate the level of teachers' educational work ethics in terms of:
 - discipline
 - creativity
 - orderliness
 - patience
 - decisiveness
 - achievement.
4. Determine the level of teachers' competence in terms of:
 - pedagogical competence
 - personality competence
 - social competence
 - professional competence.
5. Examine the significant relationship between teachers' competence and:
 - 21st-century skills
 - instructional leadership
 - teachers' educational work ethics.
6. Identify which among the variables singly or in combination significantly predict teachers' competence.
7. Examine the structural model that best fits teachers' competence.

Research Questions

1. What is the level of teachers' 21st-century skills in terms of:
 - learning and innovation
 - information, media, and technology
 - life and career skills
 - critical thinking and decision-making?
2. What is the level of instructional leadership of school heads as perceived by teachers in terms of:
 - framing school goals
 - communicating school goals
 - supervising and evaluating instruction
 - coordinating the curriculum
 - promoting professional development?
3. What is the level of teachers' educational work ethics in terms of:
 - discipline
 - creativity
 - orderliness
 - patience
 - decisiveness
 - achievement?
4. What is the level of teachers' competence in terms of:
 - pedagogical competence
 - personality competence
 - social competence
 - professional competence?
5. Is there a significant relationship between teachers' competence and:
 - 21st-century skills
 - instructional leadership
 - teachers' educational work ethics?
6. Which among the variables singly or in combination significantly predict teachers' competence?
7. What structural model best fits teachers' competence?

Hypotheses

H01: There is no significant relationship between teachers' competence and their 21st-century skills, instructional leadership, and educational work ethics.

H02: 21st-century skills, instructional leadership, and educational work ethics do not significantly predict teachers' competence.

METHODS

Research Design

The study employed a predictive–correlational research design using standardized questionnaires to examine relationships among variables without manipulation. This approach allowed the identification of predictive links and efficient data collection from a large sample, improving reliability and generalizability.

Structural Equation Modeling (SEM) was used to analyze the data, as it enables the simultaneous testing of relationships among multiple variables, including direct and indirect effects. SEM is appropriate for examining complex models and latent constructs while accounting for measurement error and assessing overall model fit (Kangwanrattanakul & Ingard, 2025).

Population and Sampling

The study participants were the 130 elementary school teachers of Don Carlos District I, Division of Bukidnon, during the school year 2025–2026. To ensure fair representation of subgroups, stratified random sampling was utilized. In this study, the population was stratified based on school grouping, as it was considered a relevant characteristic in the research context. Respondents were then randomly selected from each group in proportion to its size. This approach minimized sampling bias and ensured that all groups were adequately represented, resulting in more reliable and generalizable findings.

Instruments

Data were collected using adapted questionnaires from established sources. Teachers' 21st-century skills were based on Sahin et al. (2019), instructional leadership on Hallinger and Murphy (1985), work ethics on Giray (2021), and teachers' competence on Mohamad (2015), covering their respective sub-variables.

The questionnaires underwent content validation and pilot testing on 30 non-participants. A pilot test with 30 teachers in Cagayan de Oro assessed reliability. All instruments showed high reliability, with Cronbach's alpha values above 0.7: 21st-century skills (0.937), instructional leadership (0.961), work ethics (0.972), and teachers' competence (0.960)

Data Collection

To ensure an orderly data collection process, clearance was secured from the Liceo de Cagayan Research and Ethics Board (REB), along with approval from the Dean of the School of Teacher Education. Formal requests were also submitted to the Schools Division Superintendent, Public Schools District Supervisor, and school administrators to administer the survey. The researcher personally distributed and retrieved the questionnaires from the participants.

Upon collection, the data were immediately checked for completeness, then tallied and tabulated to prepare them for analysis. All ethical standards, required disclosures, and proper documentation procedures were strictly observed throughout the study.

Treatment of Data

To address Research Problems 1, 2, 3, and 4, the mean and standard deviation were utilized. For Research Problem 5, which aimed to determine the significant relationship between teachers' competence and the school heads' instructional leadership, teachers' educational work ethics, and 21st-century skills, the Pearson Product-Moment Correlation Coefficient (r) was employed. To identify which variable or combination of variables best predicted teachers' competence (Research Problem 6), Multiple Regression Analysis was applied. Finally, for Research Problem 7, Structural Equation Modeling (SEM) using SmartPLS was employed to determine the interrelationships among latent variables and to test the hypothesized model.

Ethical Considerations

Ethical considerations were rigorously adhered to throughout the study. Ethics approval was obtained from the institution's review board prior to data collection. Informed consent was secured from all teacher respondents, ensuring they understood the study's purpose and their right to withdraw at any time without consequence. Permissions were granted to administer the survey instrument, and confidentiality was maintained by anonymizing responses. These measures ensured that ethical standards were upheld throughout the research process to safeguard the rights and welfare of all participants.

RESULTS and DISCUSSION

This section presents the findings of the study according to the order of the research problems. Descriptive statistics were used to determine the levels of the variables, Pearson r was employed to examine relationships, multiple regression analysis identified predictors of teachers' competence, and Structural Equation Modeling (SEM) determined the best-fitting structural model.

I. Level of Teachers' 21st Century Skills

Table 1 presents the teachers' level of 21st-century skills, which include sub-constructs of Learning and Innovation (LI), Information, Media, and Technology (IMT), Life and Career (LC), and Critical Thinking and Decision Making (CTDM). The results indicate that teachers rated themselves very high in Learning and Innovation ($M = 4.57$, $SD = 0.446$), Life and Career skills ($M = 4.57$, $SD = 0.464$), and Critical Thinking and Decision Making ($M = 4.59$, $SD = 0.476$). Information, Media, and Technology ($M = 4.46$, $SD = 0.510$) received a slightly lower rating but still within the high range. Overall, the teachers' 21st-century skills were rated as very high ($M = 4.55$, $SD = 0.418$), indicating strong competencies.

Table 1

Teachers' Level of 21st Century Skills

Sub-constructs	M	SD	Interpretation
Learning and Innovation	4.57	0.446	Very High
Information, Media, and Technology	4.46	0.510	High
Life and Career	4.57	0.464	Very High
Critical Thinking and Decision Making	4.59	0.476	Very High
Overall	4.55	0.418	Very High

Note. Scale: 5 = Strongly Agree (Very High); 4 = Agree (High); 3 = Undecided (Moderately High); 2 = Disagree (Low); 1 = Strongly Disagree (Very Low).

The findings indicate that teachers possess a very high level of 21st-century skills across all measured domains, reflecting strong overall competence. Among the sub-constructs, Critical Thinking and Decision Making obtained the highest mean, suggesting that teachers are particularly confident in their ability to analyze situations and make informed decisions. Learning and Innovation, as well as Life and Career skills, also received equally high ratings, indicating that teachers are well-equipped to foster creativity, adaptability, and professional growth. Although Information, Media, and Technology skills received a slightly lower mean, it still falls within the high range, implying that teachers are generally proficient in using digital tools, though this area may offer room for further enhancement. Overall, the results suggest that teachers are highly capable of meeting the demands of 21st-century education and effectively supporting student learning in modern classrooms.

The findings are supported by Cabahug et al. (2024) which indicate that adaptability, collaboration, communication, creativity, and technology literacy are central to effective 21st-century teaching and help educators design relevant, inquiry-based instruction. In addition, Almasco (2023) revealed that reflective decision-making, critical thinking, and collaborative practices strengthen teachers' capacity to adjust instruction in real time, foster inquiry, and model essential skills for students.

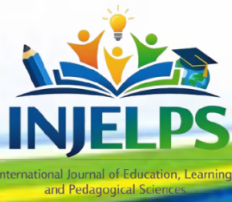
2. Level of Instructional Leadership as Perceived by Teachers

Table 2 presents the teachers' perception of instructional leadership. Supervising and Evaluating Instruction (SEI) received the highest rating ($M = 4.52$, $SD = 0.491$), indicating that teachers acknowledge strong oversight of teaching processes. Other sub-variables, such as Framing Goals (FG), Communicating School Goals (CSG), Coordinating Curriculum (CC), and Promoting Professional Development (PPD), were all rated as highly competent. The overall mean ($M = 4.49$, $SD = 0.468$) reflects that teachers perceive their school heads as highly competent instructional leaders, supporting the implementation of effective school programs.

Table 2

Level of Instructional Leadership as perceived by Teachers

Sub-variables	M	SD	Interpretation
Framing School Goals (FG)	4.48	0.513	Highly Competent
Communicating School Goals (CSG)	4.46	0.787	Highly Competent
Supervising and Evaluating Instruction (SEI)	4.52	0.491	Very Highly Competent
Coordinating Curriculum (CC)	4.50	0.498	Highly Competent
Promoting Professional Development (PPD)	4.48	0.509	Highly Competent



Overall	4.49	0.468	Highly Competent
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Note. Scale: 5 =Very Highly Competent; 4 = Highly Competent; 3 = Moderately Competent; 2 = Less Competent; 1 = Not Competent.

These results indicate that school heads consistently demonstrate competence in key instructional leadership areas, including guiding instructional practices, ensuring curricular coherence, establishing and communicating goals, and supporting professional growth among teachers. The high mean scores across all sub-variables suggest that school heads are effective in fostering a collaborative and goal-oriented school environment while promoting instructional quality and professional development.

These findings are supported by the claim of Culdaz (2023) that effective instructional leaders facilitate teacher growth by providing continuous professional development opportunities. Principals who actively engage in instructional leadership practices—such as providing coaching, mentoring, and professional learning opportunities—help promote teachers’ growth and pedagogical competence.

3. Level of Teachers’ Work Ethics

Table 3 shows that teachers’ work ethics are very highly evident across all sub-variables, including Discipline (M = 4.61, SD = 0.486), Creativity (M = 4.54, SD = 0.510), and Orderliness (M = 4.60, SD = 0.464). Other dimensions such as Patience, Decisiveness, and Achievement also received very high ratings, with an overall mean of 4.56 (SD = 0.446).

Table 3
Level of Participants’ Work Ethics

Sub-variables	Mean	SD	Interpretation
Discipline	4.61	.486	Very Highly Evident
Creativity	4.54	.510	Very Highly Evident
Orderliness	4.60	.464	Very Highly Evident
Patience	4.56	.493	Very Highly Evident
Decisiveness	4.54	.494	Very Highly Evident
Achievement	4.53	.504	Very Highly Evident
Overall Mean	4.56	.446	Very Highly Evident

Note. Scale: 5 = (Very Highly Evident); 4 = (Highly Evident); 3 = (Moderately Evident); 2 = (Less Evident); 1 = (Not Evident).

The results indicate that teachers demonstrate a very high level of work ethics across all measured dimensions, reflecting strong professional values and commitment. Discipline and orderliness received among the highest ratings, suggesting that teachers consistently maintain structure, responsibility, and organization in their work. Creativity also scored very highly, indicating that teachers are able to approach tasks with innovation while maintaining ethical standards. Additionally, the high ratings in patience, decisiveness, and achievement imply that teachers are resilient, capable of making sound judgments, and driven to accomplish goals. The overall mean further confirms that strong work ethics are deeply evident among teachers, which likely contributes to their effectiveness and reliability in fulfilling their professional roles.

These findings are supported by the claim of Osias & Ladica (2024) that teachers with strong ethical work values typically demonstrate greater responsibility, professional behavior, and ethical classroom engagement, reflecting high work ethics in practice. Moreover, ethical principles in teaching, including patience, honesty, and acting as role models—are recognized as fundamental components of teacher professionalism, contributing to a supportive and motivating educational environment. Research in private basic education also affirms that teachers’ professional attributes, including fairness and achievement orientation, are essential in sustaining continuous improvement and fostering a culture of excellence in schools (Rayo, 2025).

4. Level of Teachers’ Competence

Table 4 summarizes the teachers’ self-perceived competence across pedagogical, personality, social, and professional dimensions. All sub-constructs were rated as very highly competent, with Pedagogical Competence receiving the highest rating (M = 4.63, SD = 0.786). The overall mean of 4.59 (SD = 0.496) suggests that teachers perceive themselves as highly competent professionals, consistent with findings that effective teaching is multidimensional, encompassing knowledge, personality, social skills, and professional attitudes

Table 4
Summary of the teachers' level of Competence

Sub-constructs	M	SD	Interpretation
Pedagogical competence	4.63	0.786	Very highly competent
Personality competence	4.55	0.522	Very highly competent
Social competence	4.59	0.491	Very highly competent
Professional competence	4.59	0.511	Very highly competent
Overall Mean	4.59	0.496	Very highly competent

Note. Scale: 5 = (Very Highly Competent); 4 = (Highly Competent); 3 = (Moderately Competent); 2 = (Less Competent); 1 = (Not Competent).

The findings suggest that teachers consistently exhibit very high competence in pedagogical, personality, social, and professional domains, which collectively contribute to effective teaching practices and positive learner outcomes. These findings are supported by the claim of Oco (2025) that when teachers possess strong pedagogical skills, they are better able to manage instruction and adapt learning to students' needs, which contributes to deeper engagement and understanding among learners. Complementarily, personality competence such as confidence and self-efficacy is associated with higher teaching quality and enthusiasm, which students perceive as positive and motivating (Ke & Razali, 2024). Social competence, including effective communication and interpersonal interaction, further enhances teachers' ability to create supportive classroom climates that promote student participation and well-being. Moreover, professional competence such as mastery of subject matter and ongoing professional growth, has been linked to improved instructional quality and student outcomes (Kusumawati & Umam, 2025).

5. Relationship between Variables

Table 5
Relationship between Teacher Competence, 21st- Century Skills, Instructional Leadership Skills, and Teachers' Educational Work Ethics

Variables	r	P	Interpretation
Learning and Innovation (LI)	.557**	.000	Significant
Information, Media, and Technology (IMT)	.537**	.000	Significant
Life and Career (LC)	.562**	.000	Significant
Critical Thinking and Decision Making (CTDM)	.627**	.000	Significant
21st Century Skills (CS)	.647**	.000	Significant
Framing Goals (FG)	.633**	.000	Significant
Communicating School Goals (CSG)	.357**	.000	Significant
Supervising and Evaluating Instruction (SEI)	.588**	.000	Significant
Coordinating Curriculum (CC)	.645**	.000	Significant
Promoting Professional Development (PPD)	.643**	.000	Significant
Instructional Leadership of School Heads (ILSH)	.659**	.000	Significant
Discipline (D)	.708**	.000	Significant
Creativity (C)	.775**	.000	Significant
Orderliness (O)	.771**	.000	Significant
Patience (P)	.770**	.000	Significant
Decisiveness (DE)	.814**	.000	Significant
Achievement (A)	.838**	.000	Significant
Work Ethics (WE)	.863**	.000	Significant

Note: $p < 0.01$ (2-tailed). Correlations are significant at the 0.01 level.

Correlation analysis (Table 5) reveals significant positive relationships between teachers' competence and all 21st-century skills, instructional leadership sub-variables, and work ethics ($p < 0.01$). Notably, work ethics ($r = 0.863$) and

achievement ($r = 0.838$) showed the strongest correlations with competence, highlighting that ethical behavior and goal achievement are critical in shaping teacher performance. This supports previous literature linking ethical practices and professional skills with effective teaching outcomes (Nasir et al., 2024). The strong correlation between work ethics and competence confirms the view that professional values strongly influence teaching effectiveness. These findings suggest that competence is not solely skill-based but also value-driven.

6. Predictors of Teachers' Competence

Table 6 presents the results of the multiple regression analysis predicting teachers' competence. The model accounted for 80.8% of the variance in competence ($R^2 = 0.808$, $F(15, 115) = 32.20$, $p < 0.001$), demonstrating a strong predictive power. Among all predictors, Critical Thinking & Decision Making (CTDM), Supervising & Evaluating Instruction (SEI), Decisiveness in Ethics (DE), and Achievement (A) were statistically significant, while other variables were not. This indicates that higher-order cognitive skills, effective instructional oversight, ethical decision-making, and achievement orientation are the most critical determinants of teacher competence (Darling-Hammond, 2017).

Table 6
Multiple Regression Results for Predictors of Teachers' Competence

Predictors	B	Std. Error	Beta	T	Sig.	Interpretation
(Constant)	0.202	0.246	—	0.822	0.413	Not Significant
Learning Innovation (LI)	-0.133	0.080	-0.120	-1.66	0.100	Not Significant
Information, Media, Technology (IMT)	0.079	0.066	0.081	1.199	0.233	Not Significant
Life and Career Skills (LAC)	-0.041	0.085	-0.038	-0.480	0.632	Not Significant
Critical Thinking & Decision Making (CTDM)	0.261	0.091	0.251	2.87	0.005	Significant
Framing Goals (FG)	-0.017	0.080	-0.017	-0.208	0.836	Not Significant
Communicating School Goals (CSG)	-0.019	0.032	-0.031	-0.605	0.546	Not Significant
Supervising & Evaluating Instruction (SEI)	-0.224	0.090	-0.221	-2.482	0.014	Significant
Coordinating Curriculum (CC)	-0.047	0.099	-0.047	-0.476	0.635	Not Significant
Professional Development (PPD)	0.064	0.073	0.065	0.869	0.387	Not Significant
Decisiveness (D)	.126	.074	.124	1.705	.091	Not Significant
Creativity (C)	-0.072	0.109	-0.074	-0.664	0.508	Not Significant
Orderliness (O)	0.051	0.117	0.048	0.437	0.663	Not Significant
Patience (P)	0.088	0.105	0.087	0.835	0.405	Not Significant
Decisiveness in Ethics (DE)	0.468	0.105	0.466	4.47	0.000	Significant
Achievement (A)	0.378	0.087	0.384	4.351	0.000	Significant

Model Summary:

$R = 0.899$

$R^2 = 0.808$ (Explains 80.8% of variance in Teachers' Competence)

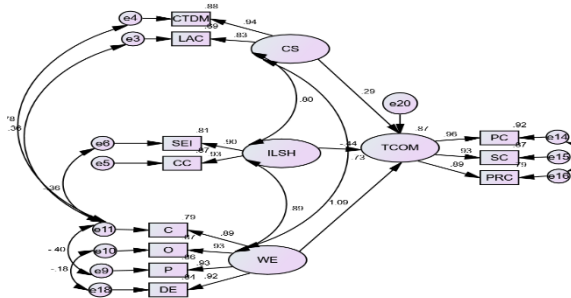
$F(15,115) = 32.20, p = 0.000$

7. Structural Model

The Structural model that best fit teachers' competence, which examines the relationships among selected 21st-century skills, instructional leadership, personal traits, and teachers' competence. In this model, 21st-century skills are represented by life and career skills (LAC) and critical thinking and decision-making (CTDM), which are hypothesized to influence teachers' overall competence. Instructional leadership of school heads (ILSH), operationalized through framing school goals (FG), supervising and evaluating instruction (SEI), and coordinating the curriculum (CC), provides structural and instructional support expected to enhance teachers' professional effectiveness.

Legend:

- LAC-life and career.
- CTDM-critical thinking and decision making
- CS-21st Century Skills
- FG-framing the school goals
- SEI-supervising and evaluating instruction.
- CC-coordinating the curriculum
- ILSH-instructional leadership of the school heads
- C-creativity
- O-orderliness
- P-patience
- DE-decisiveness
- WET-Work Ethics
- PC-personality competence.
- SC-social competence; and
- PRC-professional competence
- TCOMP-Teachers' Competence



Personal traits, including creativity (C), orderliness (O), patience (P), decisiveness (DE), and work ethics (WET), are included as predictors that shape teachers' professional behaviors and consistency in applying skills. Teachers' competence (TCOMP) is conceptualized as comprising personality competence (PC), social competence (SC), and professional competence (PRC), which together serve as the outcome indicators of the model. This structural model focuses on how the interplay of selected skills, leadership, and personal attributes collectively determines the levels of teachers' professional competence.

Conclusions

The study revealed that teachers demonstrate very high levels of 21st-century skills, instructional competence, and educational work ethics, indicating strong readiness for contemporary, student-centered educational environments. School heads were also perceived as highly competent in instructional leadership, particularly in supervising instruction and supporting professional development.

The findings further revealed that teachers' competence is significantly influenced by the combined effects of 21st-century skills, instructional leadership, and educational work ethics. Among these variables, work ethics emerged as the strongest predictor of teacher competence, while critical thinking, ethical decision-making, and achievement orientation also contributed significantly to professional effectiveness.

These results highlight the importance of strengthening teachers' cognitive, ethical, and professional capacities to enhance instructional quality. The study contributes to educational research by demonstrating how professional skills, ethical values, and leadership support interact to shape teacher competence. Strengthening these factors may contribute to improved teaching practices, enhanced student learning experiences, and the development of future-ready educational systems.

Recommendations

Based on the findings of the study, the following recommendations are proposed to strengthen teacher competence and improve educational practices.

1. Education policymakers may strengthen the integration of 21st-century skills into teacher professional development programs and curriculum initiatives to ensure that teachers remain responsive to the evolving demands of contemporary education.
2. School leaders may enhance instructional leadership practices by balancing instructional supervision with teacher empowerment, thereby encouraging teachers to exercise creativity, critical thinking, and ethical decision-making in instructional practice.
3. Teachers may continue developing their 21st-century competencies, particularly in critical thinking, collaboration, communication, and digital literacy, to improve instructional quality and promote meaningful student learning.
4. Learners may actively engage in collaborative, inquiry-based, and reflective learning activities that encourage the development of critical thinking and problem-solving skills.
5. Teacher education institutions and professional development providers may design training programs that integrate instructional leadership development, ethical professionalism, and 21st-century pedagogical competencies.

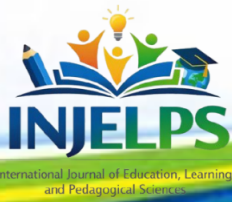
6. Future researchers may conduct longitudinal or comparative studies to further examine how teachers' 21st-century skills, instructional leadership, and work ethics influence teacher competence across different educational contexts.

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