

Teacher Digital Competence as Predicted by Instructional Leadership of Teachers and Digital Leadership Practices of School Heads: A Multiple Linear Regression Analysis

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ABSTRACT

Poor digital competence of teachers is a problem in education. Forecasting teacher digital competence as predicted by teacher instructional leadership and school head digital leadership practices was pursued. Predictive research design was used. The data from 262 randomly selected elementary teachers were surveyed. Through multiple linear regression analysis, it was found that predicting teacher digital competence using instructional leadership and digital leadership practices of school heads as predictors is significant. The predictive model was weak but significant, partially supporting the Theory of Planned Behavior. Future research may include additional variables to account for the remaining 84.3% of unexplained variance in the model, with qualitative designs explored to identify these factors. School leaders and educational authorities may support lesson planning collaboration and classroom observation for instructional leadership, alongside school-wide digital skills training and digital classroom monitoring for digital leadership practices.

Keywords: Teacher digital competence, instructional leadership of teachers, digital leadership practices, school heads, multiple linear regression analysis

INTRODUCTION

The Problem and Its Scope

The lack of digital competence among teachers remains a significant challenge that affects their ability to effectively integrate technology into teaching and learning (Garcia-Vandewalle Garcia et al., 2023). The rapid advancement of digital tools and instructional technologies has made it difficult for many educators to adapt, resulting in continued reliance on traditional teaching methods that limit students' exposure to technology-enhanced learning and the development of essential 21st-century skills (Niyazova et al., 2022; Basantes-Andrade et al., 2022).

Mattar et al. (2022) emphasized that digital competence is now an essential requirement for effective teaching in technology-driven educational environments. However, studies across different countries in Chile, Saudi Arabia and Africa reveal that many teachers still demonstrate low levels of digital competence due to insufficient training, lack of confidence, limited professional development opportunities, and inadequate technological resources (Silva-Quiroz & Morales-Morgado, 2022; Althubayani, 2024; Jere & Mpeti, 2024).

In the Philippines, teachers continue to encounter challenges in integrating digital tools because of limited access to modern equipment, insufficient institutional support, and poor technological infrastructure (Ballano et al., 2022). These challenges are more evident in areas such as the Zamboanga Peninsula, where poverty and inadequate resources further hinder the development of teachers' digital skills (Abella & Rosa, 2023).

Given these circumstances, there is a need to examine how instructional leadership and digital leadership practices influence teacher digital competence in the Malita South District. Despite ongoing efforts toward digital transformation in education, limited localized research exists on how school leadership affects teachers'

digital readiness. Thus, this study aimed to identify leadership practices that may help improve teacher digital competence and support more effective technology-integrated instruction.

Specifically, this study sought to answer the following research questions:

1. What is the level of instructional leadership practices of school heads in terms of:
 - a. defining the school mission;
 - b. managing the instructional program; and
 - c. promoting a positive school learning climate?
2. What is the level of digital leadership practices of school heads?
3. What is the level of teacher digital competence?
4. Is there a significant relationship between:
 - a. instructional leadership and teacher digital competence; and
 - b. digital leadership practices and teacher digital competence?
5. Do instructional leadership and digital leadership practices significantly predict teacher digital competence?

Significance of the Study

This study addresses a critical global need to strengthen teachers' digital competence through effective instructional and digital leadership, aligning education systems with the demands of the 21st century. By supporting innovation and collaboration, this study contributes to Sustainable Development Goals 9 (Industry, Innovation, and Infrastructure) and 17 (Partnerships for the Goals), promoting technology-driven and cooperative approaches to teaching and learning. The findings may offer valuable insights for policymakers and educational leaders in developing sustainable, future-ready learning environments worldwide. Moreover, the study reflects the vision and mission of Holy Cross of Davao College by fostering transformative, values-driven education and empowering educators to become competent, innovative, and socially responsible agents of change.

Statement of the Problem

The purpose of this study was to examine the significance of predicting teacher digital competence using instructional leadership and digital leadership practices of school heads as predictors. Specifically, the study aimed to achieve the following objectives:

To determine the levels of instructional leadership among teachers in terms of: instructional vision construction, school culture development, teacher growth and development support, and monitoring of instruction and innovation; digital leadership practices among teachers in terms of digital literacy, technology adaptation, technological vision, and data driven decision making; and digital competence among teachers in terms of information processing, communication, content creation, safety; and problem solving.

To determine the significance of the correlation between instructional leadership, digital leadership practices, and the digital competence.

To determine the significance of the model for teacher digital competence using instructional leadership and digital leadership practices as predictors.

Hypotheses

The hypotheses of the study were tested and treated at alpha 0.05 of the level of significance:

Ho1: Instructional leadership does not significantly correlate with teacher digital competence.

Ho2: Digital leadership practices does not significantly correlate with teacher digital competence.

Ho3: The model for teacher digital competence using instructional leadership and digital leadership practices as predictors is not significant.

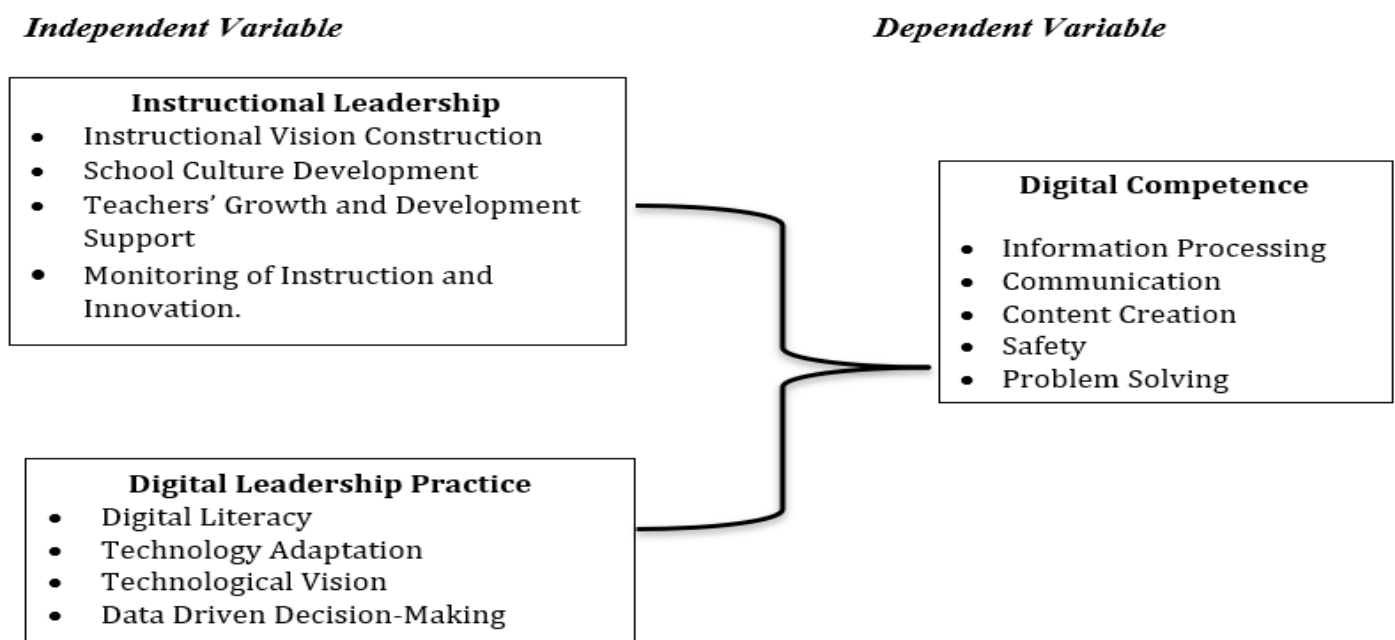
THEORETICAL FRAMEWORK

This study anchored on the Theory of Planned Behavior. This is an extension of the Theory of Reasoned Action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) which states that central factor in the theory of planned behavior is the individual intention to perform a given behavior. Intentions are assumed to capture the motivational factors that influence a perceived behavior. Factors that influence intentions include attitude towards the behavior, subjective norms and perceived behavioral control.

In this study, instructional leadership of teachers represents subjective norms, as it reflects the social expectations, professional influence, and shared practices that shape teachers' behavior within the school context. Similarly, the digital leadership practices of school heads represent perceived behavioral control, as these practices provide access to resources, guidance, and institutional support that enable teachers to effectively integrate technology. Meanwhile, digital competence of teachers is treated as actual behavior, indicating their readiness and willingness to apply digital tools in teaching. These constructs are assumed to influence teacher digital competence as manifested in key domains such as information processing, communication, content creation, safety, and problem-solving, which are widely recognized components of digital literacy frameworks.

Hence, this study is delimited to subjective norms, perceived behavioral control, and actual behavior. The intention element in the theory was excluded in this study. Hence, this study is partly anchored on this theory. However, the study did not include the construct of behavioral intention, which is considered a central component of TPB. The exclusion of intention was justified by the nature and scope of the study, which focused primarily on determining the direct predictive influence of leadership practices on teacher digital competence rather than examining the teachers' intentional readiness or planned behavior toward technology integration. Hence, Future studies may consider integrating TPB and TAM(Technology Acceptance Model) or adopting TAM as the primary framework to provide a more comprehensive explanation of teachers' digital competence and technology integration behaviors.

CONCEPTUAL FRAMEWORK



Limitations of the Study

This study has several limitations that should be considered in interpreting the findings. First, the predictive model explained only 15.7% of the variance in teacher digital competence, indicating that a large proportion (84.3%) of the variation is influenced by other factors not included in the study. Although instructional leadership and digital leadership practices were found to have a significant influence, these variables alone do not fully explain the complexity of teacher digital competence.

The remaining unexplained variance may be attributed to several unmeasured factors. These may include teachers' access to technological resources such as stable internet connection, availability of digital devices, and school ICT infrastructure. Prior training and professional development experiences related to educational technology may also affect teachers' digital competence. In addition, personal factors such as motivation to use technology, self-efficacy, attitudes toward digital learning, adaptability to technological change, and willingness to engage in continuous learning may contribute to differences in digital competence among teachers.

Furthermore, contextual factors such as administrative support, workload, teaching experience, peer collaboration, and opportunities for technology integration in classroom instruction may also influence teachers' digital competence but were not examined in the present study. Therefore, future researchers are encouraged to explore additional variables and utilize other research approaches, such as qualitative or mixed-method designs, to provide a more comprehensive understanding of the factors affecting teacher digital competence.

METHODOLOGY

This chapter presents the research design, locale, sample and sampling technique, data gathering technique, and data analysis techniques used in the study.

Research Design

This study utilized predictive research design with multiple linear regression analysis. Predictive research aims to determine whether specific variables can forecast or predict an outcome by analyzing patterns in existing data (Lee, 2023). This design is particularly useful when the goal is not only to examine relationships among variables but also to identify which factors have the strongest influence on an outcome.

Locale of the Study

The study was conducted in Malita South District, which is one of the educational districts under the Municipality of Malita, the capital town of the Province of Davao Occidental. Malita South District encompasses several barangays that are mostly rural, with schools that cater to a diverse population of students, many of whom come from indigenous groups such as the Tagakaulo, B'laan, and Manobo tribes. The district is under the supervision of the Department of Education - Division of Davao Occidental, and it serves both public elementary and secondary schools.

Sample and Sampling Technique

The respondents of this study were 262 elementary teachers employed in the Department of Education during the school year 2025–2026. The study utilized the total enumeration sampling technique, wherein all teachers who met the inclusion criteria were included as respondents. Total enumeration, also known as the census method, is a sampling technique in which every member of the target population is surveyed to ensure complete representation of the population (Ahmed, 2024). This approach was deemed appropriate because the target population was manageable and accessible, allowing the researchers to gather comprehensive data from all identified respondents without selecting only a subset of participants.

Table 1- DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS(N=262)

PROFILE VARIABLES	CATEGORY	FREQUENCY(F)	PERCENTAGE
AGE	21-30 years old	46	18
	31-40	55	21
	41-50	81	31
	51 years old and above	80	30
	Total	262	100%
YEARS OF SERVICE	1-5 years	73	28
	6-10 years	88	34
	11-15 years	101	38
	Total	262	100%

PROFILE VARIABLES	CATEGORY	FREQUENCY(F)	PERCENTAGE
AGE	16-20 years old		
	21 years and above	262	100
	Total	262	100%
EDUCATIONAL ATTAINMENT	Bachelor's Degree	125	47.70
	With Master's Units	120	45.80
	Master's Degree Holder	10	3.82
	With Doctoral Units	5	1.92
	Doctoral Degree Holder	2	0.76
	Total	262	100%

Data Gathering Technique

In this study, the survey was used as a data-gathering technique. A survey is a research method in which researchers collect data from participants using a structured set of questions, such as questionnaires or interviews. It may be administered to a sample or an entire population, and the collected data are statistically analyzed to identify trends, relationships, and differences within the group (Goodfellow, 2023).

There were three adapted and modified questionnaires used in this research, namely: the Instructional Leadership of School Heads questionnaires from Mejica et al. (2019), with 35 items and a Cronbach Alpha of 0.957. Moreover, the Digital Leadership questionnaire was adapted from Subade (2024), with 20 items and a Cronbach Alpha of 0.956. Additionally, the Teacher Digital Competence questionnaire was adapted from Al Kateeb (2017), with 35 items and a Cronbach Alpha of 0.957. These instruments were selected to measure the instructional leadership of teachers and digital leadership practices of school heads as predictors of digital competence of teachers.

Data Analysis Technique

In this study, data were analyzed using descriptive analysis, correlation analysis and multiple linear regression techniques. Descriptive data analysis is a statistical method used to summarize and describe the main features of a dataset using measures such as mean, frequency, and standard deviation, usually presented in tables and graphs. It is applied at the beginning of a study to organize data, identify patterns, and describe characteristics of a sample without making predictions. Its advantages include simplifying large datasets and providing a clear overview of data (Wisniewski & Brannan, 2024; Lim, 2025). Moreover, correlation data analysis measures the strength and direction of the relationship between two variables and is applied when researchers want to determine whether variables are related without implying causation. Its advantages include identifying relationships and supporting further analysis (Schober et al., 2023). The Pearson product moment correlation was the statistical treatment used under this analysis. Furthermore, multiple linear regression is a statistical technique used to predict one dependent variable based on two or more independent variables and is applied when examining complex relationships and predicting outcomes. Its advantages include identifying key predictors and improving prediction accuracy (Dorta-González, 2023). The

unstandardized Beta coefficient was the statistical treatment used.

In the succeeding page, the matrix containing the scale, descriptive level, and corresponding interpretation assigned to each variable involved in this study was presented. This measure was used particularly in describing the level of promotion of social justice, knowledge of special education, and evolving inclusive practices.

Scale	Level	Instructional Leadership	Digital Leadership Practices	Digital Competence
1.00 – 1.74	Very low	Very Poor	Very Good	Very Good
1.75 – 2.49	Low	Poor	Poor	Poor
2.50 – 3.24	High	Good	Good	Good
3.25 – 4.00	Very high	Excellent	Very Good	Excellent

Standard Deviation Value Ranges and Interpretation

Range	Description	Interpretation
SD ≤ 0.50	High Consistent Responses	Strong and Uniform Perception
SD = 0.51 – 1.00	Moderate Consistent Responses	Acceptable Consistency
SD = 1.01 – 1.50	Low Consistent Responses	Differing Views or Experiences
SD > 1.50	Very Low Consistent Responses	High Variability and Lack of Consensus

For the interpretation scale of *r*-value, the following scheme was used as proposed by Guilford (1956):

Computed *r*

+/- 1.00

Between +/- 0.75 – +/- 0.99

Between +/- 0.51 – +/- 0.74

Between +/- 0.31 – +/- 0.50

Between +/- 0.01 – +/- 0.30

0.00

Descriptive Interpretation

Perfect correlation

High correlation

Moderately high correlation

Moderately low correlation

Low correlation

No correlation

β Value Range

±0.00 – ±0.09

±0.10 – ±0.29

±0.30 – ±0.49

±0.50 – ±0.69

±0.70 and above

Predictive Strength

Very Weak

Weak

Moderate

Strong

Very Strong

Ethical Considerations

This research adhered to strict ethical standards by ensuring voluntary participation, respect for autonomy, and the right of respondents to withdraw from the study at any stage without penalty. Prior to data collection, informed consent was secured from all participants, clearly explaining the purpose of the study, the procedures involved, and the intended use of the data. The principles of confidentiality and privacy were strictly observed, with respondents' identities protected through anonymity and secure handling of all research records.

Participants were treated with dignity, fairness, and respect, and all inquiries were addressed professionally and without discriminatory language.

Furthermore, the study underwent ethical review and was approved by the Holy Cross of Davao College Research Ethics Committee prior to the conduct of data gathering. Permission to conduct the study was also secured from the Department of Education and the respective school heads involved in the study.

Moreover, the study upheld research integrity and quality by avoiding plagiarism, ensuring accurate and honest data collection, and complying with the Society of Moral Integrity and Legal Ethics (SMILE) Framework of Holy Cross of Davao College, which emphasizes ethical scholarship, meaningful learning, and responsible engagement. In addition, the research strictly followed the institution's data privacy protocol to ensure the proper handling, review, and approval of research information in accordance with established institutional and legal guidelines.

RESULTS

Included in this chapter are the descriptive, correlation and regression tabular presentation, and the corresponding analysis and interpretation of the statistical results. This chapter is ended with the summary of findings.

Descriptive Results

Table 1 presents the descriptive statistics of the study. It contains the variables, namely: Instructional Leadership, Digital Leadership and Digital Competence of Teachers. The table displays the standard deviation, mean, and corresponding descriptive levels for each variable and their indicators.

Table 1: Descriptive Statistics (N=262)

Variables	N	Standard Deviation	Mean	Descriptive Level
Instructional Leadership	262	.39	3.71	Very High
Instruction Vision Construction	262	.39	3.70	Very High
School Culture Development	262	.41	3.74	Very High
Teacher Growth and Development Support	262	.43	3.71	Very High
Monitoring of Instruction and Innovation	262	.42	3.72	Very High
Digital Leadership	262	.38	3.65	Very High
Digital Literacy	262	.46	3.65	Very High
Technology Adaptation	262	.45	3.60	Very High
Technological Vision	262	.42	3.69	Very High
Data Driven Decision Making	262	.42	3.68	Very High
Digital Competence of Teachers	262	.39	3.57	Very High
Information Processing	262	.42	3.66	Very High
Communication	262	.37	3.72	Very High
Content Creation	262	.53	3.50	Very High
Safety	262	.51	3.53	Very High
Problem Solving	262	.56	3.42	Very High

Instructional leadership variable obtained a mean of 3.71, described as very high. This signifies that the instructional leadership as perceived by the teachers excellent. All of the indicators also described very high level. The standard deviation of 0.39 indicates that the responses of teachers are highly consistent. Furthermore, the digital leadership variable gained a mean of 3.65, described as very high. This denotes that the digital leadership of school heads as perceived by the teachers is very good. All other indicators also described a very high level. The standard deviation of 0.38 indicates that the perceptions among the respondents are highly consistent. Finally, the digital competence variable obtained a mean of 3.57, described as very high. This indicates that the digital competence as perceived by the teachers is excellent. All other indicators also described very high level. The standard deviation of 0.39 indicating that the responses of the teachers are highly consistent.

Instructional leadership, digital leadership, and teacher digital competence were all perceived at very high levels, with instructional leadership rated slightly higher than digital leadership, and both exceeding digital competences. Across all variables, responses were consistently aligned, indicating strong agreement among teachers in their assessments.

Correlation Results

Presented in Table 2 is the correlation between predictive variables and the criterion variable. Likewise, the r-value, p-value, decision on hypothesis testing, and interpretation are presented.

Table 2: Correlation Table (N=262)

Variables	Digital Competence of Teachers			
	r-value	p-value	Decision on H_0	Interpretation
Instructional Leadership	.365	.000	Reject H_0	Moderately low positive significant correlation
Digital Leadership	.361	.000	Reject H_0	Moderately low positive significant correlation

Level of Significance: 0.05 , Decision Rule: Reject H_0 if $p < 0.05$

The correlation between instructional leadership and teacher digital competence obtained a p-value of 0.000, which is lower than the 0.05 level of significance. Hence, the null hypothesis was rejected. This indicates that the relationship is statistically significant. The r-value of 0.365 shows a moderately low positive significant correlation. This implies that as instructional leadership practices increase, the outcome variable tends to improve. Moreover, the correlation between digital leadership and digital competence also obtained a p-value of 0.000, which is lower than the 0.05 level of significance; thus, the null hypothesis was rejected. This indicates that the relationship is statistically significant. The r-value of 0.361 is indicating a moderately low positive significant correlation. This implies that as digital leadership practices of school heads increase, the outcome variable tends to increase as well.

Both instructional leadership and digital leadership show statistically significant positive relationships with teachers' digital competence. Comparatively, instructional leadership demonstrates a slightly stronger association than digital leadership, though both exhibit similar moderate positive relationships.

Regression Results

Table 3 presents the regression analysis of predictive variables on the criterion variable. It also includes β value, S.E-value, t-value, p-value, decision on H_0 and interpretation.

Table 3: Regression Table (N=262)

Variables	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.	Decision on H_0	Interpretation
Constant	1.935	0.236	—	8.186	0.000	Reject H_0	Significant
Instructional Leadership	0.224	0.078	0.222	2.860	0.005	Reject H_0	Significant
Digital Practices	0.219	0.081	0.211	2.711	0.007	Reject H_0	Significant

Model Summary: $R = .397$; $R^2 = 0.157$; $F(2,259) = 24.166$; $p = 0.000$

Level of Significance: 0.05;

Decision Rule: Reject H_0 if $p < 0.05$

$TDC = 1.935 + 0.224 IL + 0.219 DP$

Specifically, the table shows the model for teacher digital competence using the predictive variables instructional leadership and digital practices is $TDC = 1.935 + 0.224 IL + 0.219 DP$. The corresponding p -value is 0.000, which is lower than 0.05 level of significance; hence, the null hypothesis was rejected. It indicates that the model to predict teacher digital competence is statistically significant. The R squared of 0.157 indicates that the strength (15.7%), of the model to predict teacher digital competence is weak. This implies that for every unit change in the predictors in the model, there is a corresponding change in the teacher digital competence.

Both instructional leadership and digital practices significantly predict teachers' digital competence, confirming the model's overall significance. Comparatively, instructional leadership shows a slightly stronger influence than digital practices, although the overall predictive strength of the model remains weak.

The standardized effect size of the regression model was computed using Cohen's f^2 to determine the practical significance of the predictors. Cohen's f^2 is calculated using the formula:

$$f^2 = \frac{R^2}{1 - R^2}$$

Using the obtained coefficient of determination ($R^2 = 0.157$), the effect size was computed as:

$$f^2 = \frac{0.157}{1 - 0.157} = \frac{0.157}{0.843} = 0.186$$

The resulting Cohen's f^2 value of 0.186 indicates a medium effect size based on Cohen's (1988) standards, where 0.02 is considered small, 0.15 is medium, and 0.35 is large. This finding suggests that instructional leadership and digital leadership practices have a moderate practical influence on teacher digital competence. Although the predictors significantly contributed to the model, the effect size also indicates that other factors not included in the study may substantially influence teacher digital competence.

SUMMARY OF FINDINGS

Based on statistical results, it was specifically found that:

1. Instructional leadership significantly correlate with teacher digital competence.
2. Digital leadership practices significantly correlate with teacher digital competence.
3. The strength of the model to predict teacher digital competence using instructional leadership and digital leadership practices as predictors is significant.

DISCUSSIONS

In this chapter, the results of the descriptive, correlational, and regression analyses are presented and discussed in relation to previous studies and theoretical perspectives. Conclusions and recommendations based on the findings are also provided.

Although instructional leadership and digital leadership practices significantly predicted teacher digital competence, the model explained only 15.7% of the variance, indicating weak predictive strength despite statistical significance. This suggests that leadership practices contribute to teacher digital competence but are not the sole influencing factors. The weak predictive strength may be due to other unmeasured variables such as technological infrastructure, internet access, availability of digital devices, peer support, self-efficacy, prior ICT training, motivation, and institutional support. Therefore, future studies are encouraged to examine these additional variables to provide a more comprehensive understanding of teacher digital competence.

Instructional Leadership and Digital Competence Correlation

The findings of the study revealed that instructional leadership is significantly correlated with digital competence. This supports Hallinger (2020), who emphasized that effective instructional leadership plays a

crucial role in enhancing teacher professional capacities, particularly in integrating technology into teaching and learning processes. Similarly, the current finding also supports Leithwood et al. (2021), who found that strong instructional leadership contributes to improved teacher competencies by fostering supportive learning environments and continuous professional development. However, the finding of the present study contradicts the results of other research which suggest that instructional leadership does not always significantly influence teachers' digital competence. This contradiction aligns with Nguyen (2025), who claimed that despite the presence of instructional leadership practices, there was no significant relationship with teachers' digital competence, as external factors such as limited access to technology, insufficient training, and lack of institutional support played a more decisive role.

Digital Leadership Practices and Digital Competence Correlation

The finding of the study revealed digital leadership practices is significantly correlated with digital competence which implies that as school heads demonstrate stronger digital leadership practices, teacher digital competence likewise increases. This finding is consistent with the study of Dexter et al. (2020), highlighting that digital leadership significantly influences teacher ability to effectively utilize technology in instruction. In addition, the current finding supports Sheninger (2019), who reported that school leaders model and support digital transformation positively impact teacher technological skills and classroom innovation. However, the findings of the present study contradict those of Rahman and Park (2025), who reported that despite strong digital leadership practices among school leaders, there was no statistically significant relationship with teachers' digital competence. Their results suggest that many teachers rely more on self-directed learning and peer collaboration to develop their technological skills, indicating that factors beyond leadership may play a more influential role.

Digital Competence as Predictors by the Instructional Leadership and Digital Leadership Practices

The findings of the study revealed that instructional and digital leadership significantly predict teacher digital competence. This supports Anwar and Warman (2025), who emphasized that leadership practices have a strong direct influence on teacher technological capability. Similarly, the current finding also supports the assertion of Samosa (2023), explaining that digital leadership and school leadership practices are positively associated with higher levels of teacher digital competence. However, the findings of the present study contradict those of other research, particularly Dioquino and Paglinawan (2024), which suggest that leadership alone may not be the strongest determinant of support for teacher digital competence. Their study highlights that factors such as resource availability and technological mindset may have a more substantial influence, indicating that structural and contextual conditions can, in some cases, outweigh the effects of leadership.

CONCLUSION

Based on the findings, it is concluded that predicting teacher digital competence, using instructional leadership and digital leadership practices of school heads as predictors, is significant.

This result partially supports the Theory of Planned Behavior, which states that central factor in the theory of planned behavior is the individual intention to perform a given behavior. Intentions are assumed to capture the motivational factors that influence a perceived behavior. Factors that influence intentions include attitude towards the behavior, subjective norms and perceived behavioral control.

RECOMMENDATIONS

Future research may include other variables not covered in the study to account for the remaining 84.3% unexplained variance in the strength of the model. Qualitative research designs may also be explored to identify additional potential variables. Moreover, school leaders and educational authorities may initiate specific educational activities suited to instructional leadership of teachers, such as lesson planning collaboration and review, as well as classroom observation and feedback cycles. Meanwhile, for digital leadership practices of school heads, appropriate activities may include school-wide digital skills training programs and digital classroom observation and monitoring.

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Questionnaires:

Questionnaires on Instructional Leadership

Instructions: Please read each statement carefully and indicate the extent to which you agree or disagree by choosing the option that best represents your opinion. Kindly answer honestly based on your knowledge, perceptions and experiences.

Use the following scale in responding (check the box ✓ that applies to you)

4-Strongly Agree

3-Agree

2-Disagree

1-Strongly Disagree

Instructional Leadership of Teacher

Instructional Vision Construction

<i>My School Head ...</i>	4	3	2	1
sets clear goals and expectations for student achievement and classroom instruction;				
formats and structures the curriculum map for regular teacher interaction;				
processes for sustained professional development to ensure all staff have the skills necessary to attain goals;				
review systems for formally monitoring and evaluating progress;				
allocates the proper resources to accomplish goals;				
collects, shares, and affects others with his/her leadership to ensure goals and expectations are met; and				
clearly articulates, data-driven goals for student achievement and classroom instruction.				

School Culture Development

<i>My School Head...</i>	4	3	2	1
develops and manages a school culture conducive to conversations about the core technology of instruction by building norms of trust, collaboration, and academic press among staff;				
promotes an academic learning climate;				
operates more through the school's culture and by modeling rather than through the direct supervision and evaluation of teaching;				
tunes in to all of the pertinent issues and current events related to curriculum, effective assessment, and pedagogical strategies;				
supports collegial relationships among teachers and instructional leaders;				
creates and sustains a learning community that supports teachers as learners and leaders;				
encourages teachers and other school personnel to collaborate in the improvement of instructional practices in schools;				
promotes a culture of cooperative work among teachers, superiors' learners and other stakeholders; and				
develops professional linkages among all the clienteles.				

Teachers' Growth and Development Support

<i>My School Head...</i>	4	3	2	1
1. engages teacher in the planning, designing, and evaluation of individual professional development programs;				
2. encourages job – embedded professional development activities;				
3. provides opportunities for dialogue among teachers and instructional leaders on curriculum, teaching and learning;				
4. provides differentiated professional development activities to address career patting, teaching assignment, adult learning and teaching styles, interest, needs among others;				
5. encourages teachers to engage in self-assessment and personal relations to guide own professional development;				
6. normalizes processes for sustained professional development to ensure all staff have the skills necessary to attain goals;				
7. provides training opportunities, support, and follow-up required for teachers to strengthen their content knowledge and ascertain research-based instructional strategies; and				
8. upholds the practice of the Code of Ethics for Professionals.				

Monitoring of Instruction and Innovation

<i>My School Head...</i>	4	3	2	1
1. establishes healthy supervisory relationship in self-assessment among teachers based on respect and trust in their personal and professional competence;				
2. encourages teachers to establish good relationships with student peers and superiors.				
3. furnishes system for formally monitoring and evaluating progress;				
4. possesses fair and just planning and observation skills as well as proficiency in research and evaluation of both staff and student performance;				
5. reviews actions and accepts feedback in an atmosphere of collegiality and collaboration;				
6. upholds responsibility and willingness to accept decisions on supervisory;				
7. inquires about the effects, implications of actions or decisions on others (e.g. colleagues, teachers, students, etc.) as a guide for future decisions;				
8. encourages teachers to inquire on good practices and to pursue better alternatives for the improvement teaching and learning; and				
9. assists teachers in identifying strengths and growth areas through monitoring and evaluation.				

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Questionnaires on Digital Leadership

Digital Literacy

<i>My School Head ...</i>	4	3	2	1
feels confident about using computers				
has the knowledge about computer terminologies				
ensures that data privacy and security measures are in place for digital systems				
has the knowledge on how to navigate computer programs (microsoft, google and wps programs etc.)				
can determine the basic functions of each computer hardware				

Technology Adaptation

<i>My School Head ...</i>	4	3	2	1
uses technology to collect and analyze data, interpret results, and publish results, to improve teaching and learning				
employs diverse methods to assess the utilization of technological resources, with the aim of improving educational and operational productivity				
evaluates the use of technology among faculty and staff				
Uses technology to staff professional development				
makes decisions about staff and their professional development accordingly				

Technological Vision

<i>My School Head ...</i>	4	3	2	1
supports various learning styles (e.g. use media for auditory and visual learners) using technology				
supports innovation in learning by developing a technological learning environment				
inspires a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision				
maintains an inclusive and cohesive process to develop, implement, and monitor a dynamic, long- range, and systemic technology plan to achieve the vision				

Data Driven Decision Making

<i>My School Head ...</i>	4	3	2	1
allocates financial and human resources to ensure that technology programs are maintained				
ensures that teachers are making full use of the resources at their disposal by driving technological solutions, strategic integration, and improvement measures				
implements standardized procedures to ensure the continued improvement and refinement of technology systems				
uses learners' data to promote their self-regulation of learning and achievement of their goals				
provides a student-centered technological learning environment that can be adapted to the individual differences of students				

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Questionnaires on Digital Competence of Teachers

A. Information Processing

<i>As a teacher, I...</i>	4	3	2	1
can look for information online using different search engines such as Mozilla Firefox, Google Chrome, Microsoft Edge and the like?				
know that not all online information is valid and reliable source of information?				
use some filters when searching to compare and assess the reliability of the information found in the internet?				
can assess the validity and credibility of information using a range of criteria?				
can save or store files/content and retrieve them once saved or stored?				
classify the information in an orderly and systematic way of using folders and backup information that have been saved?				
can save information found on the internet either in the internal or external storage device or even using cloud storage?				

Communication

<i>As a teacher, I...</i>	4	3	2	1
can communicate with others using Skype or chat, using basic features such as voice messaging, SMS, and text exchange?				
use a wide range of communication tools such as e-mail, chat, SMS and social networks for online communication whether related in class or not?				
can use the features of communication tools for webinars and virtual conferences like Zoom, Google Meet, Microsoft Teams, Telegram, Webex and others?				
can share files and content of my presentation and documents using simple tools?				
can use collaboration tools and contribute to e.g., shared documents/files that someone else has created.				
can participate and use the different online services such as public services, e-banking, online shopping and the like?				
am aware of social networking sites and can create and manage content with collaboration tools like project management systems, online spreadsheets and other tools?				

Content Creation

<i>As a teacher, I...</i>	4	3	2	1
can produce simple digital content such as text, tables, images, and audio files in at least one format using digital tools?				
can produce complex digital content in different formats such as text, tables, images, audio files of which I can use various tools for creating webpages or blogs?				
can apply basic formatting (e.g., insert footnotes, charts, tables) to the content that have been produced?				
can use formatting functions of different tools like mail merge, merging documents of different formats, using advanced formulas, macros and others?				
know how to – and when is necessary to – apply licenses and copyrights?				
can modify simple functions of software and applications as changing default settings?				
can use several programming languages, know how to design, create and modify databases with a computer tool?				

Safety

<i>As a teacher, I...</i>	4	3	2	1
1. have installed security programs on the device(s) that used to access the Internet like antivirus and firewall?				
2. frequently check the security configuration and systems of my devices and/or of the applications I use on a regular basis to access the Internet?				
3. am aware that my credentials such as username and password can be stolen and that my private information may be revealed online?				
4. use different passwords to access equipment, devices and digital services and modify them on a periodic basis?				
5. know how to react if my computer is infected by a virus such as configuring or modifying the firewall and other necessary security settings of my digital devices?				
6. understand the health risks associated with the use of digital technology such as risk of addiction and exposure to radiation?				
7. understand the positive and negative impact of technology on the environment?				

Problem Solving

<i>As a teacher, I...</i>	4	3	2	1
1. can solve frequent problems that arise when using any kinds or types of digital technologies?				
2. can find support when a technical problem possibly occurs or when using a new program in my digital device?				
3. can frequently choose the right tool, device, application, software or service to solve problems in my digital devices?				
4. can solve technological problems by exploring the settings and options of programs or tools?				
5. am aware of new technological developments and understanding how new tools work in my digital devices?				
6. regularly update my digital skills through trainings and seminars and exploring the internet in order to be aware of the limits and try to fill the gaps to improve my digital competence?				
7. frequently update my digital skills by sharing my knowledge and skills to others to decrease my limits and increase my digital knowledge?				

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