

Grade 8 Students' Perceptions of Teachers' Instructional Competence as a Predictor of Social Studies Process Skills

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Abstract

Introduction: Social Studies process skills are essential for developing learners' inquiry, analytical, interpretive, and critical-thinking abilities. However, the relationship between teachers' instructional competence and students' process skills remains insufficiently examined in the local secondary school context.

Objective: This study determined Grade 8 students' perceptions of their teachers' instructional competence and examined whether perceived instructional competence predicts their Social Studies process skills.

Methods: A convergent parallel mixed-methods design was employed. Quantitative data were obtained from 119 Grade 8 students selected through proportionate stratified random sampling using two validated questionnaires. Descriptive statistics and simple linear regression were used for analysis. Qualitative data were gathered through interviews with seven purposively selected students and analyzed thematically before integration with the quantitative findings.

Results: Students rated both teachers' instructional competence and their Social Studies process skills at high levels, with Content Knowledge receiving the highest rating. Perceived instructional competence significantly predicted process skills ($R = .758$, $R^2 = .575$, $\beta = .701$, $p < .001$), explaining 57.5% of the variance. Qualitative findings identified four themes: effective and engaging instructional delivery, strong content mastery, technology-enhanced learning, and active development of Social Studies process skills.

Conclusions: Perceived instructional competence significantly predicted students' Social Studies process skills, with qualitative findings providing contextual support. The findings underscore the importance of strengthening teachers' pedagogical, content, and technological competencies to foster inquiry, analysis, and higher-order thinking in Social Studies.

Keywords: Convergent Parallel Mixed Methods; Grade 8 Students; Instructional Competence; Social Studies; Social Studies Process Skills; TPACK.

Cite as: Artigo, R. A., & Paras, E. C. (2026). Grade 8 Students' Perceptions of Teachers' Instructional Competence as a Predictor of Social Studies Process Skills. *Sapientia Filipina: Review of Education and Multidisciplinary Studies*, 1(1), 22–41.



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1. Introduction

In the 21st-century classroom, teaching, learning, and technology increasingly intersect to shape students' learning experiences. Despite curriculum reforms that emphasize critical thinking, inquiry, and authentic problem solving, students continue to experience difficulties in developing higher-order and process-oriented skills in Social Studies. Philippine curriculum standards emphasize these competencies, yet classroom practices may still rely heavily on factual recall rather than inquiry, analysis, and evidence-based reasoning (Bautista et al., 2009; DepEd, 2016). This concern highlights the importance of examining instructional factors that may support the development of students' Social Studies process skills.

International evidence indicates persistent challenges in students' abilities to question, analyze information, interpret sources, communicate explanations, and engage in evidence-based reasoning (Barton & Levstik, 2004; Muñoz et al., 2022; Wineburg, 2001). Large-scale assessments have likewise documented difficulties in critical evaluation, evidence-based judgment, and civic reasoning among learners across contexts (OECD, 2019; Schulz et al., 2017). Similar concerns have been reported in the Philippines, where students experience difficulties in historical reasoning, methodological inquiry, and the application of disciplinary approaches in Social Studies (Castillo, 2025; Pandan et al., 2025). These challenges underscore the importance of teachers' instructional competence in translating curricular expectations into classroom practices that foster higher-order thinking and inquiry.

Teachers' instructional competence may be understood through the Technological Pedagogical Content Knowledge (TPACK) framework, which conceptualizes effective technology-integrated teaching as the interaction of technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK), together with their intersections: pedagogical content knowledge (PCK), technological content knowledge (TCK), technological pedagogical knowledge (TPK), and the integrated TPACK construct (Mishra & Koehler, 2006). Research has associated teachers' TPACK with effective technology-enhanced instruction and improved instructional practices across subject areas (Archambault & Crippen, 2009; Voogt et al., 2013). Recent studies have similarly reported relationships between TPACK and instructional effectiveness in mathematics and English education, while Philippine research has linked TPACK with teachers' readiness to implement curriculum reforms (Kholid et al., 2023; Merino, 2025; Siloterio & Cajandig, 2025). These findings suggest that teachers' integrated technological, pedagogical, and content knowledge may contribute to learning environments that support higher-order thinking.

Social Studies process skills—including observation, inquiry, analysis, interpretation, research, communication, and ethical reasoning—are likewise central to disciplinary learning and civic competence (National Council for the Social Studies, 2010). Inquiry-oriented instruction that engages learners in analyzing and interpreting evidence can strengthen students' reasoning and problem-solving abilities (Barton & Levstik, 2004; Wineburg, 2001). Studies further suggest that technology-supported and TPACK-informed instruction can facilitate critical thinking, collaboration, and inquiry when digital resources are meaningfully integrated into instruction (Bostan & Şener, 2021; Pitpit et al., 2025; Wulandari, 2022). In the Philippine context, teachers with stronger TPACK have also been associated with student-centered and technology-supported instructional practices (Siloterio & Cajandig, 2025; Merino, 2025).

Despite these findings, limited research has examined the relationship between teachers' instructional competence and students' Social Studies process skills, particularly in the Philippine secondary education context. Existing TPACK research has predominantly focused on mathematics, science, and language education, while relatively little attention has been given to Social Studies and its disciplinary process skills (Kholid et al., 2023; Merino, 2025). Similarly, research on Social Studies process skills has largely emphasized students' competencies without sufficiently examining teachers' instructional practices as a potential explanatory factor. Evidence from mixed-methods research that combines students' quantitative perceptions with their classroom experiences also remains limited. The study contributes to Social Studies education by providing empirical evidence on the relationship

between teachers' instructional competence and students' process skills. The findings may inform teacher professional development, instructional planning, and technology-integrated pedagogy aimed at strengthening inquiry, analysis, evidence-based reasoning, and other higher-order competencies in Social Studies.

Theoretical Framework

The study is based on such a framework as Technological Pedagogical Content Knowledge (TPACK) created by Mishra and Koehler (2006). The framework holds the view that the three critical areas, which include Technological Knowledge (TK), Pedagogical Knowledge (PK) and Content Knowledge (CK) interrelate to facilitate effective teaching in the technology-enhanced classrooms. TPACK framework is a mixture of Technological Content Knowledge (TCK), Pedagogical Content Knowledge (PCK), and Technological Pedagogical Knowledge (TPK). The research employs the TPACK framework to analyze how the enhancement of the skills of the Social Studies process and how the students perceive the ability of their teachers to combine the knowledge of technology, pedagogy, and content influence the perception of their teachers. The more teachers possess TPACK, the higher the chances that the teacher will be able to design learning activities that will teach the students how to be better citizens by teaching the students how to observe, analyze, interpret, and think in an ethical manner.

This can be considered in line with the Zone of Proximal Development theory (ZPD) originally formulated by Vygotsky (1978) in which the concept of scaffolding is emphasized so as to facilitate the process of students transitioning between those tasks that they can independently perform and those that require teacher assistance. This, in terms of social studies, implies that the teacher who is skillful in combining pedagogy and technology will be able to help students navigate through complicated reasoning exercises, like evaluating evidence or analyzing primary sources until such high-level skills are gradually internalized. The conceptual framework of the current study can be improved with the help of the Social Learning Theory proposed by Bandura (1977) that highlights a great importance of modeling and guided practice. Students are taught how to perform such tasks as analyze data, make moral decisions, or ask questions through observing their teachers perform these tasks and with time improving their performance. All these theories, TPACK, ZPD, and Social Learning Theory collaborate to demonstrate to us that the opinions of students concerning how their teachers teach can assist them in learning how to ask questions, think critically and make good choices in social studies.

Research Questions

To examine the relationship between teachers' instructional competence and students' Social Studies process skills, this study sought to answer the following questions:

1. What is the level of teachers' instructional competence as perceived by Grade 8 students across the following TPACK domains?
 - a) Technological Knowledge (TK)
 - b) Pedagogical Knowledge (PK)
 - c) Content Knowledge (CK)
 - d) Technological Pedagogical Knowledge (TPK)
 - e) Technological Content Knowledge (TCK)
 - f) Pedagogical Content Knowledge (PCK)
 - g) Technological Pedagogical Content Knowledge (TPACK)
2. What is the level of Grade 8 students' Social Studies process skills in terms of:
 - a) Observation and Inquiry;
 - b) Analysis and Interpretation of Data;
 - c) Research and Evidence Evaluation;
 - d) Communication and Argumentation; and
 - e) Ethical Reasoning and Civic Awareness?

3. To what extent does perceived teachers' instructional competence predict Grade 8 students' Social Studies process skills?
4. How do Grade 8 students describe their teachers' instructional practices and the development of Social Studies process skills?
5. How do the quantitative findings complement the qualitative results regarding teachers' instructional competence and students' Social Studies process skills?

2. Materials and Methods

2.1. Research Design

The study employed a convergent parallel mixed-methods design (Creswell & Creswell, 2022), in which quantitative and qualitative data were collected and analyzed separately and integrated during the interpretation phase. The quantitative strand used a descriptive-correlational design to determine Grade 8 students' perceptions of their teachers' instructional competence across the seven TPACK domains and assess their Social Studies process skills. It also examined the predictive relationship between perceived instructional competence and students' process skills. The qualitative strand employed a phenomenological approach to explore students' lived experiences and perceptions of teacher instructional practices and their role in developing Social Studies process skills. The integration of both strands provided a more comprehensive understanding of the relationship between teachers' instructional competence and students' Social Studies process skills.

2.2. Respondents and Sampling Procedure

The study population consisted of 1,142 Grade 8 learners enrolled in public secondary schools in the Asuncion District of Davao del Norte during the 2025–2026 academic year. An a priori power analysis was conducted using G*Power 3.1 (Faul et al., 2009), assuming a power of 0.80, a significance level of $\alpha = .05$, and a medium effect size ($f^2 = .15$), yielding a minimum required sample of 103 participants. To account for potential nonresponse, the sample was increased by 15%, resulting in a final quantitative sample of 119 learners. Proportionate stratified random sampling was employed to ensure representation of learners from each participating school according to their proportion in the population. For the qualitative strand, seven students were purposively selected to provide varied perspectives on their teachers' instructional practices and the development of Social Studies process skills. The selected participants took part in semi-structured interviews, which explored their experiences and perceptions of their teachers' instructional competence and its relationship to their Social Studies learning experiences.

2.3. Research Instruments

The study employed two complementary instruments for the quantitative and qualitative strands. For the quantitative phase, two adapted questionnaires were used. The first assessed students' perceptions of teachers' instructional competence based on the Technological Pedagogical Content Knowledge (TPACK) framework developed by Schmid, Brianza, and Petko (2020). The second measured students' Social Studies process skills based on indicators from the K–12 Araling Panlipunan Curriculum Guide (Department of Education, 2016). Both instruments used a five-point Likert scale to determine the extent of students' agreement with each statement. For the qualitative phase, the researchers developed a semi-structured interview guide to explore students' experiences and perceptions of teachers' instructional practices and their perceived role in developing Social Studies process skills. The questions provided contextual information on teacher–student interaction, classroom learning practices, student engagement, and the use of technology in instruction, thereby complementing the quantitative findings. The instruments underwent expert validation and pilot testing to establish their validity and reliability. Three experts in educational and social research reviewed the items for clarity, relevance, and alignment with the intended constructs. The instruments obtained perfect content validity indices (I-CVI = 1.00, S-CVI/Ave = 1.00, and S-CVI/UA = 1.00). Following expert validation, a pilot test was conducted to assess internal consistency. The TPACK and Social

Studies process-skills scales demonstrated excellent reliability, with McDonald's $\omega = .939$ and $.949$ and Cronbach's $\alpha = .937$ and $.945$, respectively. These results indicate strong internal consistency across the items of both instruments.

2.4. Data Collection and Analysis

Quantitative data were analyzed using descriptive and inferential statistics, including mean, standard deviation, frequency, and percentage, to summarize students' perceptions of teachers' instructional competence and their Social Studies process skills. Multiple regression analysis was used to examine the extent to which perceived instructional competence predicts students' Social Studies process skills. Prior to regression analysis, the assumptions of independence, linearity, homoscedasticity, and normality were assessed. Multicollinearity was examined using the variance inflation factor (VIF) and tolerance values, with VIF values below 5 and tolerance values above .20 indicating no substantial multicollinearity. For the qualitative data, verbatim interview transcripts were analyzed using thematic analysis, supported by open and axial coding to identify recurring patterns and themes related to students' experiences of teachers' instructional practices and the development of Social Studies process skills. The quantitative and qualitative findings were subsequently integrated through a joint display to facilitate comparison and triangulation. This integration examined areas of convergence and complementarity between students' quantitative ratings and their qualitative accounts, providing a more comprehensive interpretation of teachers' instructional competence and students' Social Studies process skills.

2.5 Ethical Considerations

The study adhered to established ethical principles for research involving human participants. Prior approval was obtained from the school principal and relevant authorities before data collection to ensure compliance with institutional research requirements. Because the participants were Grade 8 learners, informed consent was secured from their parents or guardians, and student assent and voluntary participation were observed. Participants were informed of the study's purpose, procedures, and their right to withdraw at any time without penalty or adverse consequences. All collected data were treated as confidential and used solely for academic purposes. No personally identifying information was included in the dataset or research reports, thereby maintaining participants' anonymity and confidentiality. The researchers also ensured that the survey and interview questions were appropriate, non-discriminatory, and designed to minimize potential psychological discomfort. The principles of beneficence, justice, respect for persons, and protection of participant welfare guided the conduct of the study throughout the data collection and reporting processes.

3. Results and Discussion

Table 1 provides the estimates of the reliability of the two major scales of the study. Process Skills scale was with $\alpha = 0.945$ and $\omega = 0.949$. Instructional Competency scale had a Cronbach α of 0.937 and a McDonalds ω of 0.939 . The internal consistency is quite good as all the coefficients are beyond the desirable level of 0.70 . The results indicate the extent to which the items on each of these scales are good measures of the concepts they were intended to measure.

Table 1. Reliability and Validity Checks

Scale	Cronbach's α	McDonald's ω
Instructional Competence	.937	.939
Process Skills	.945	.949

Note. α = Cronbach's alpha; ω = McDonald's omega.

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The items seem to be correlated in a high manner and the extremely high reliability coefficients show that they make significant contribution to their respective fields. The range of scores above 0.90 is believed to indicate the existence of improved reliability in educational studies, which is in accordance with psychometric requirements. In general, the findings indicate that the tool is highly dependable. This implies that it is applicable to more statistical tests, including regression and correlation. That is why it is more likely that examining the correlation between the teaching ability and the skills of the Social Studies process is a fine idea because it ensures that the information actually represents the way students feel.

Table 2. Descriptive Statistics of Perceived Teachers' Instructional Competence and Process Skills of Students

Indicators	Mean	Mode	SD	Description
PK	4.14	5.00	0.815	High
CK	4.32	5.00	0.745	High
TK	4.02	4.00	0.793	High
PCK	4.20	5.00	0.876	High
TPK	4.08	5.00	0.844	High
TCK	4.12	5.00	0.871	High
TPACK	4.20	5.00	0.840	High
Instructional Competence (Overall)	4.15	5.00	0.731	High
OI	4.16	5.00	0.763	High
AID	3.86	4.00	0.829	High
AII	4.10	5.00	0.782	High
RE	4.06	5.00	0.730	High
CO	4.08	5.00	0.727	High
OES	4.09	5.00	0.775	High
Process Skills (Overall)	4.06	5.00	0.672	High

The lower mean in Data Analysis and Interpretation ($M = 3.86$) suggests that deeper analytic tasks remain more difficult for some students even though performance stays in the high range. This interpretation is directly consistent with evidence that students often enjoy observing phenomena and presenting results most, while processing data, question formulation, and conclusion drawing are among the most difficult stages (Rusmawan & Prasetya, 2026). It also fits evidence that critical thinking in social studies requires interpreting, analyzing, and evaluating information, which is cognitively more demanding than simple observation (Hafifah et al., 2024).

More broadly, the high ratings across domains are consistent with literature showing that social studies inquiry develops higher-order thinking through generating ideas, linking evidence with claims, discussion, reasoning, and communication (Brugar et al., 2024), and that critical thinking, problem-solving, and related skills positively support social studies learning outcomes (Maksum et al., 2021). Overall, your Table 2 supports the conclusion that students perceived both teacher competence and social studies process skills positively, with the strongest performance in CK and observation-inquiry and a relative weakness in data analysis and interpretation.

Table 3a. Linear Regression on the Influence of Instructional Competence on Students' Process Skills

Model	R	R ²	Adjusted R ²	Overall Model Test				Interpretation
				F	df1	df2	p	
1	0.758	0.575	0.571	157	1	116	<.001	Strong

Table 3a shows that the R value of 0.758 indicates a strong positive association between students' process skills and perceived teaching ability, and the R² of 0.575 indicates that teaching ability explains a substantial share of the variance in process skills in the present sample. This interpretation is consistent with studies showing that teacher competence predicts instructional quality and student development, often through classroom processes such as cognitive activation, supportive climate, and classroom management (Kunter et al., 2013; Blömeke et al., 2022; Fauth et al., 2019; Blömeke et al., 2016). An explained variance of 57.5% is large for educational research, although effect sizes and predictive strength vary across outcomes, measures, and contexts (Blömeke et al., 2022; Schneider & Preckel, 2017; Tittsworth et al., 2015; Blömeke et al., 2016). The small drop from R² = 0.575 to adjusted R² = 0.571 suggests that the model remains stable after accounting for sample size, and the significant F test indicates that the regression predicts process skills better than an intercept-only model; those statistics come from your dataset, but they fit a broader literature where teacher competence and instructional quality show meaningful predictive value and models often explain substantial variance (König et al., 2021; Blömeke et al., 2016; Tittsworth et al., 2015; Sumyadi et al., 2020). These findings also suggest that students develop stronger process skills when they view their teachers' teaching ability positively, which aligns with evidence that student-reported classroom processes can mediate links between teacher competence and academic outcomes, though the evidence is not fully uniform across settings (Lauermann & Hagen, 2021; Christ et al., 2022). More specifically, the literature suggests that better organization of learning activities, clearer explanation, and stronger teaching methods contribute to students' higher-order thinking and achievement (Schneider & Preckel, 2017; Loes et al., 2015; Wang et al., 2015; Hamzah et al., 2022; Antonio & Prudente, 2023; Lee & Youn, 2024).

Table 3b. Omnibus ANOVA Test

	Sum of Squares	Df	Mean Square	F	p	Description
Instructional Competence	30.7	1	30.655	157	<.001	Significant
Residuals	22.7	116	0.195			

The Omnibus ANOVA shows that instructional competence is a prevailing factor that affects process skills of students as shown in Table 3b. The value of the residual variance (SS = 22.7) is by far less than the value of the sum of squares of the model including instructional competence (SS = 30.7). The value of F 157 (p <.001) indicates that the regression model is extremely significant. The ANOVA value is lower, which proves a very strong impact of instructional competence on the performance of students in the sphere of process skills. This is also cementing the fact that classroom training to learn skills that are critical, analytical and practical is highly dependent on the quality of teachers.

Table 3c. Model Coefficients - Process Skills

Predictor	Estimate	SE	t	p	Standardized Estimate
Intercept	1.149	0.235	4.87	< .001	—

Instructional Competence	0.701	0.056	12.52 < .001	0.758
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Note. SE = standard error. The standardized estimate ($\beta = .758$) indicates a strong positive predictive relationship between perceived instructional competence and Social Studies process skills.

Table 3c indicates that instructional competence is a strong, statistically significant predictor of students' process skills, with higher competence associated with higher skill levels in the present study. This interpretation fits broader evidence that teacher competence predicts instructional quality and student development, often through classroom processes such as cognitive activation, student support, and classroom management (Kunter et al., 2013; Yang & Kaiser, 2022; Blömeke et al., 2022; Fauth et al., 2019). It also aligns with findings that pedagogical competence predicts instructional quality and contributes to student progress, although the strength and mediation of these links can vary across contexts (König et al., 2021; Blömeke et al., 2016; Sudargini & Purwanto, 2020).

The practical implication is that teachers who plan well, teach interactively, and provide clear support are more likely to strengthen student learning processes (Daniel et al., 2024; Juma, 2024). Immediate feedback and scaffolding are plausible mechanisms, because feedback tends to improve achievement overall, especially explanatory feedback, while scaffolded support can aid learning across different settings (Cai et al., 2023; Ajogbeje, 2023; Smith et al., 2025; Cabı & Türkoğlu, 2025; Chien et al., 2024; Matsuda et al., 2020). The finding that instruction explains a substantial share of variation in students' process skills is also consistent with evidence that professional development improves teacher-level outcomes and can translate into better student outcomes when it strengthens classroom practice (Juma, 2024; Sancar et al., 2021; Ventista & Brown, 2023; Sims et al., 2023; Lynch et al., 2025).

Table 4. Qualitative Thematic Analysis Parallel to the Quantitative Survey on Students' Perceptions of Instructional Competence as a Predictor of Process Skills

Issues Probed	Core Ideas	Codes	Essential Theme
Pedagogical Knowledge (PK) – teaching clarity and strategies	Teacher explains step-by-step; lessons are engaging; uses varied activities such as group work, role-play, and posters; re-explains difficult topics; uses real-life examples	Clear explanation; engaging activities; patience; organization	Effective and Engaging Instructional Delivery
Content Knowledge (CK) – mastery of Social Studies concepts	Teacher demonstrates expertise; uses updated examples and current events; simplifies difficult topics; connects historical and contemporary events.	Subject mastery; concept simplification; real-world connection	Strong Content Mastery that Supports Deep Understanding
Technological Knowledge (TK), Technological Pedagogical Knowledge (TPK), and Technological Content Knowledge (TCK) – use of digital tools in teaching	Uses projectors, videos, and digital maps; incorporates online quizzes and games; uses updated visuals and timelines; makes lessons interactive and motivating.	Technology integration; interactive learning; multimedia support	Technology-Enhanced Learning that Improves Participation

Social Studies Process Skills – observation and inquiry, data and information interpretation, critical thinking, research skills, communication of ideas, and ethical and responsible participation	Identifies key details; analyzes maps, charts, and timelines; evaluates reliability using author, date, and evidence; compares sources; communicates respectfully and clearly.	Observation and inquiry; Active Development of critical thinking; Social Studies Process information literacy; Skills communication skills; participation
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Note. PK = Pedagogical Knowledge; CK = Content Knowledge; TK = Technological Knowledge; TPK = Technological Pedagogical Knowledge; TCK = Technological Content Knowledge.

Data Integration of Quantitative and Qualitative Findings

The integration of the quantitative and qualitative findings provides a comprehensive account of Grade 8 students' perceptions of teachers' instructional competence and the development of Social Studies process skills. Quantitatively, students rated teachers' instructional competence highly across the TPACK domains (overall $M = 4.15$), while Social Studies process skills were likewise rated highly, with Observation and Inquiry receiving the highest mean ($M = 4.06$). Regression analysis further showed that perceived instructional competence significantly predicted Social Studies process skills, $R = .758$, $R^2 = .575$, $p < .001$. The qualitative findings provide contextual explanations for this statistical relationship. Students described teachers as knowledgeable, clear, engaging, and capable of using technology purposefully. These practices correspond particularly to the pedagogical, content, and technological dimensions of TPACK. Students further reported that classroom activities helped them identify important details, interpret maps and other sources, evaluate information credibility, conduct research, and communicate ideas. These accounts illustrate how instructional practices may provide opportunities for students to practice the process skills reflected in the quantitative results. The findings also demonstrate convergence with the study's supporting theoretical perspectives. Students' descriptions of teacher guidance and step-by-step explanations reflect scaffolding consistent with Vygotsky's Zone of Proximal Development (1978), while teacher demonstrations and guided activities are consistent with modeling under Bandura's Social Learning Theory (1977). Technology-supported activities further provided students with visual and interactive resources for engaging with Social Studies concepts.

The quantitative and qualitative strands converged in showing that students who perceived stronger instructional competence also reported stronger Social Studies process skills. The qualitative findings complemented the statistical results by illustrating the classroom practices through which instructional competence was experienced, particularly through effective pedagogy, content mastery, purposeful technology integration, scaffolding, and modeling. However, because the quantitative design was non-experimental, these findings should be interpreted as evidence of a significant predictive relationship rather than a causal effect. Collectively, the results highlight the relevance of TPACK-informed instructional practices for supporting students' observation, inquiry, interpretation, critical thinking, research, communication, and ethical participation in Social Studies.

Table 5. Joint Display of the Salient Quantitative and Qualitative Findings

Quantitative Findings	Qualitative Findings	Integrated Interpretation
Teachers' Instructional Competence: High ($M = 4.15$). All TPACK domains were rated high, with Content Knowledge (CK) receiving the highest rating ($M = 4.32$) and Technological Knowledge (TK) the lowest (M	Students described teachers as clear, patient, knowledgeable, and engaging. Teachers simplified difficult topics and connected lessons to real-life examples.	The high quantitative ratings are consistent with students' experiences of teachers demonstrating strong pedagogical, content, and pedagogical content knowledge. The qualitative findings provide context for the high ratings by highlighting teachers' clarity, organization, and subject-matter mastery.

= 4.02).

Social Studies Process Skills: High ($M = 4.06$). Observation and Inquiry received the highest rating ($M = 4.16$), while Analysis and Interpretation received the lowest ($M = 3.86$).	Students reported developing skills in identifying details, analyzing maps and charts, evaluating sources, comparing information, and communicating ideas.	Students' narratives provide concrete examples of the process skills assessed quantitatively. The qualitative findings help explain the relatively strong rating for Observation and Inquiry while suggesting the need for additional scaffolding in Analysis and Interpretation.
Regression Analysis: Perceived instructional competence significantly predicted Social Studies process skills, $R = .758$, $R^2 = .575$, $\beta = .701$, $p < .001$.	Students emphasized that teachers' explanations, modeling, digital tools, and guided activities helped them analyze, interpret, and evaluate information.	The qualitative findings contextualize the statistical relationship by illustrating classroom practices associated with the observed predictive relationship. Teachers' modeling, purposeful technology use, and scaffolding provided students with opportunities to practice higher-order reasoning and Social Studies process skills.

Note. M = mean; CK = Content Knowledge; TK = Technological Knowledge; R^2 = coefficient of determination; β = standardized regression coefficient. Qualitative findings contextualize the quantitative results and should not be interpreted as establishing causal mechanisms.

The combined presentation indicates smooth agreement of both quantitative and qualitative results. The quantitative findings refer to the high instructional competence displayed by teachers in all domains of the TPACK and the ability of such competence to predict the skills in the process of Social Studies in students. The qualitative results explain the relationships by demonstrating how teachers employ pedagogical, technological, and content expertise in ways that are meaningful and appear to assist learning (Koehler et al., 2013; Schmidt et al., 2009; Schmid et al., 2024; Usman et al., 2024). The more advanced quantitative mean scores in PK, CK, and TK are consistent with students' descriptions of engagement through lucid explanations, engaging strategies, strong content mastery, and deliberate technology use (Fakhriyah et al., 2022; Nuruzzakiah et al., 2022; Usman et al., 2024). This interpretation also fits evidence that basic knowledge domains such as PK, CK, and TK form the foundation for more integrative TPACK competence (Fakhriyah et al., 2022; Fakhriyah et al., 2026; Ning et al., 2024).

Qualitative accounts indicating that teachers demonstrate an ability to encourage critical thinking, present challenging tasks, and use digital tools to facilitate understanding also support the regression result that instructional competence explains more than half of students' process skills ($R^2 = .575$), although that exact value comes from the present study (Blömeke et al., 2022; Legg, 2023; Manik et al., 2022; Margolis, 2020; Puntambekar, 2021; Sanders & Welk, 2005; Suardipa, 2020). These findings are consistent with the TPACK framework, which explains effective teaching as the interaction of pedagogy, content, and technology rather than any one domain alone (Koehler et al., 2013; Masfuah et al., 2024; Schmidt et al., 2009). They are also supported by Bandura's modeling perspective, in which students learn through observation, imitation, and role modeling, especially from teachers (Iqbal et al., 2024; Legg, 2023; Manik et al., 2022; Marić et al., n.d.). They are likewise aligned with Vygotskian scaffolding, where modeling, feedback, questioning, tools, and gradually reduced support help students move toward independent understanding (Margolis, 2020; Puntambekar, 2021; Sanders & Welk, 2005; Suardipa, 2020).

4. Conclusion

Based on the integrated findings, Grade 8 students perceived their teachers' instructional competence as high across all TPACK domains. Students particularly recognized their teachers' content knowledge, pedagogical practices, and purposeful use of technology in Social Studies instruction. Students likewise reported a high level of Social Studies process skills, including observation and inquiry,

data interpretation, critical thinking, research, communication, and ethical participation. However, the comparatively lower rating for analysis and interpretation suggests an area where additional instructional support and scaffolding may be beneficial. This finding should be interpreted as a predictive relationship rather than a causal effect, given the nonexperimental design. The qualitative findings complemented these results by showing that students valued clear explanations, relevant examples, interactive activities, teacher–student interaction, and purposeful use of multimedia and digital tools. These practices provided students with opportunities to observe, analyze, interpret, evaluate, and communicate information. The findings are also consistent with the study’s theoretical perspectives: teachers’ step-by-step guidance reflects Vygotsky’s Zone of Proximal Development, while teacher demonstration and guided practice correspond with Bandura’s Social Learning Theory. The findings indicate that perceived instructional competence is an important predictor of students’ Social Studies process skills. The convergence of quantitative and qualitative evidence highlights the value of integrating pedagogical expertise, subject-matter knowledge, and meaningful technology use in Social Studies instruction. The findings support continued investment in teacher preparation and professional development focused on TPACK-informed pedagogy, inquiry-based learning, and explicit support for higher-order skills, particularly analysis and interpretation.

5. Limitations of the Study

This study has several limitations that should be considered when interpreting its findings. First, the study was conducted among 119 Grade 8 learners from public secondary schools in the Asuncion District of Davao del Norte during the 2025–2026 academic year. Although proportionate stratified random sampling was used to represent the participating schools, the relatively localized sample limits the generalizability of the findings to students in other districts, provinces, school types, grade levels, or educational contexts. Differences in school resources, teacher qualifications, technological infrastructure, curriculum implementation, and learner characteristics may produce different patterns of instructional competence and Social Studies process skills in other settings.

Second, the study employed a cross-sectional, nonexperimental design, which permits the examination of associations and predictive relationships but does not establish temporal precedence or causality. Although perceived instructional competence significantly predicted Social Studies process skills and accounted for 57.5% of their variance, this result should not be interpreted to mean that teachers’ instructional competence directly caused improvements in students’ process skills. The manuscript itself recognizes this distinction in interpreting the regression findings. Other unmeasured factors may have contributed to the observed relationship.

Third, both major quantitative variables were measured primarily through student self-report questionnaires. Students evaluated their teachers’ instructional competence using an adapted TPACK instrument and simultaneously reported their own Social Studies process skills. Consequently, the findings may be affected by common-method bias, social desirability, recall limitations, or students’ general impressions of their teachers. In particular, perceived instructional competence should not be equated with teachers’ objectively demonstrated instructional competence. Similarly, the process-skills instrument asked students to report the extent to which they practiced particular skills rather than directly assessing their actual performance. Objective measures such as classroom observations, teacher self-assessments, performance-based Social Studies tasks, or achievement measures could provide stronger evidence for future investigations.

Fourth, although the instruments underwent expert validation and demonstrated high internal consistency, the study primarily reported content validity and reliability evidence rather than more extensive construct-validation procedures. The instruments obtained I-CVI, S-CVI/Ave, and S-CVI/UA values of 1.00, while both scales demonstrated high reliability coefficients. However, high internal consistency does not by itself establish that the proposed TPACK domains and Social Studies process-skill dimensions are empirically distinct constructs. Future studies may strengthen measurement evidence through confirmatory factor analysis or other appropriate construct-validation procedures,

particularly because the instructional competence instrument encompasses seven interrelated TPACK domains.

Fifth, the regression model examined perceived instructional competence as a single overall predictor of Social Studies process skills. Thus, the analysis does not determine which particular TPACK domains—such as pedagogical, content, technological, or integrated knowledge—contribute most strongly to students' process skills. Moreover, potentially relevant student-, teacher-, and classroom-level variables, including prior academic performance, student engagement, teacher experience, instructional resources, classroom conditions, and access to technology, were not incorporated into the predictive model. The reported R^2 of .575 should therefore be interpreted as variance explained by the specified model rather than evidence that instructional competence alone accounts for students' Social Studies process skills.

Sixth, the qualitative strand involved only seven purposively selected students. While their accounts provided useful contextual explanations and contributed to convergence between the quantitative and qualitative findings, the small qualitative sample may not capture the full range of classroom experiences across all participating schools. The qualitative findings should consequently be viewed as contextual and illustrative rather than representative of all Grade 8 learners in the study population.

Finally, the study did not directly incorporate teacher- or classroom-level evidence despite focusing on teachers' instructional competence. Student perceptions provide an important learner-centered perspective, but observations of actual teaching practices and information from teachers themselves could have strengthened the triangulation of the findings. Because students were also nested within different schools and potentially exposed to different teachers and classroom environments, future studies may consider multilevel or hierarchical approaches when the sampling structure and sample size permit. These limitations suggest that future research should employ longitudinal or experimental/quasi-experimental designs, larger and more diverse samples, objective assessments of Social Studies process skills, classroom observations, and teacher-level data to more rigorously examine how specific dimensions of instructional competence relate to students' development of disciplinary skills.

Supplementary Details

Supplementary Materials & Data availability statement:

The data supporting the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available due to privacy and confidentiality considerations involving Grade 8 student participants.

Author Contributions:

Ronalyn A. Artigo contributed to the conceptualization, methodology, participant recruitment, data collection, data analysis, qualitative data analysis, interpretation of findings, and writing of the original draft, as well as the review and editing of the manuscript. Estela C. Paras contributed to the conceptualization, methodology, data collection, qualitative data analysis, interpretation of findings, and review and editing of the manuscript. Both authors reviewed and approved the final version of the manuscript and accept responsibility for the accuracy and integrity of the work.

Funding:

This research received no external funding.

Institutional Review Board Statement

Informed consent was obtained from the parents or legal guardians of the participating Grade 8 students. Student assent was also secured prior to participation. Participants were informed of the study's purpose, procedures, voluntary nature, confidentiality measures, and their right to withdraw from the study without penalty.

Informed Consent Statement:

Informed consent was obtained from all participants prior to their participation in the study. Participants were informed of the study's purpose, procedures, voluntary nature of participation, confidentiality measures, and their right to decline or withdraw from the study without penalty.

Acknowledgments:

The authors sincerely thank the participating school, teachers, parents or guardians, and Grade 8 students who contributed their time and insights to this study. Their cooperation and participation were essential to the completion of the research.

Conflicts of Interest:

The authors declare no conflict of interest.

Disclosure Statement:

The authors disclose that artificial intelligence (AI) tools were used solely to assist in editing the manuscript, particularly in improving language, grammar, clarity, and readability. AI tools were not used in the collection, analysis, interpretation, or generation of the study's findings. The authors reviewed, verified, and revised all AI-assisted edits and retain full responsibility for the accuracy, originality, and integrity of the manuscript and its contents.

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