



Collaborative Lesson Planning Practices and Instructional Competence of Pre-Service Teachers

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ABSTRACT

This study aims to determine the level of integration of collaborative lesson planning practices and instructional competence among elementary pre-service teachers and examine the relationship between the two variables. A quantitative correlational research design was used, both utilizing an adapted and validated survey instrument to collect data from a universal sample of 161 elementary pre-service teachers enrolled at a university in Davao City. As descriptive statistical tools, the mean and standard deviation were used to assess the levels of collaborative lesson planning and instructional competence. In addition, the Pearson's r correlation analysis was conducted to investigate the relationship between the two variables. Findings revealed a moderate positive correlation between collaborative lesson planning practices and instructional competence, indicating that engaging in structured and cooperative lesson design contributes meaningfully to enhancing teaching capabilities. The results highlight the significant role of collaboration in fostering professional development and pedagogical readiness among elementary pre-service teachers, emphasizing that well-facilitated lesson planning can support higher competence in instructional delivery.

Keywords: collaborative lesson planning, instructional competence, pre-service teachers, quantitative correlation design

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Introduction

Instructional competence is a significant element of effective teaching. It influences student learning outcomes, their performance, and the overall quality of education. As the learning environment changes, pre-service teachers should enhance their skills to meet the diverse needs of students. A study by Afalla and Fabelico (2020) emphasized that while pre-service teachers demonstrate a strong drive toward developing instructional competence, a gap remains in translating theoretical knowledge into practical teaching skills in real classroom settings. Despite their academic preparation, many elementary pre-service teachers struggle with applying what they've learned in a dynamic classroom environment. This disconnect between theory and practice is a key challenge that hinders the development of fully competent educators. This study investigates the correlation between collaborative lesson planning and instructional competence, an area that remains underexplored within a non-sectarian university in Davao City. By analyzing this relationship, the research aims to contribute to the existing body of knowledge regarding pedagogical practices and their impact on educational effectiveness in this particular academic setting.

The importance of instructional competence in providing high-quality education is a requirement recognized by worldwide educational standards for quality. The United States implements rigorous training programs for pre-service teachers that emphasize practical teaching skills and theoretical competence (Darling-Hammond, 2020). Many developing countries, such as the Philippines, require support to create effective teaching environments that prepare teachers for the complexities of managing classroom instruction. A study by the Philippine Institute for Development Studies (PIDS, 2023) highlights the need for a comprehensive strategy in developing practical skills, particularly in instructional competence. In the local setting, Ramirez's (2020) study reveals a disparity between the instructional competence teachers acquire during training in an education program and the real-world scenarios necessary for effective teaching. Learner-centered methods are believed to be challenging and a concern for student-teachers to put into practice.

Based on Vygotsky's Social Constructivist Theory (1978), this approach emphasizes the importance of social interaction in school learning. According to his study, learning is a process of social transmission in the environment; hence, group lesson planning might help suggest incorporating ideas and abilities. A cited article by Nickerson (2024) on Dewey's Theory of Experiential Learning (1938) emphasizes that effective learning occurs when students engage in a reflective manner based on their experiences. He highlighted the significance of interaction in teaching, emphasizing learners' engagement through shared experiences. In addition, Bandura's Social Learning Theory (1977) suggests that learning happens through group lesson planning strategies that involve observation, imitation, and modeling. Its foundations support the belief that group lesson preparation contributes more to the improvement of creating lesson plans, enhancing instructional quality.

Collaborative lesson planning occurs when teachers design instructional materials and lesson plans for teaching demonstrations. These involve sharing opinions and ideas, providing feedback on shared practices, and reflecting on trainings to enhance the teaching strategies of future educators. According to a study by Sally Gutierrez (2020), collaborative lesson planning creates a positive 'dissonance' compared to traditional individual lesson planning practices. This encourages teachers to reflect on their teaching and improve their training to become professionals, producing a continuous learning process that fosters student-teacher development. Therefore, as noted by Mendoza et al. (2022) in their study, which builds on Chong & Kong (2012), instructional competence improves through participation in collaborative lesson planning. Educational research highlights the significance of collaborative learning in helping teachers adapt to the growing learning demands of their students. Studies indicate that

collaborative lesson planning is linked to improvements in subject-specific teaching effectiveness (Chong & Kong, 2012) and the enhancement of instructional practices (Gutierrez, 2020).

Instructional competence is a teacher's ability to perform effective teaching, planning, designing, delivering, and assessing lessons, ensuring that the students meet the learning objectives of the subject. Several fundamental abilities include designing lessons, classroom management, creating instructional materials, and evaluating student performance, which support instruction competency. Strong competency has been demonstrated in studies to help teachers design lessons and instruction that cater to the diverse needs of students. These teaching strategies implement various assessments to evaluate student learning outcomes fairly (Gutierrez, 2020). Moreover, it has been shown that educators can enhance their effectiveness by developing comprehensive lesson plans through ongoing development and collaborative planning methods, ultimately improving the overall quality of instruction and student achievement (Muslimin, 2023).

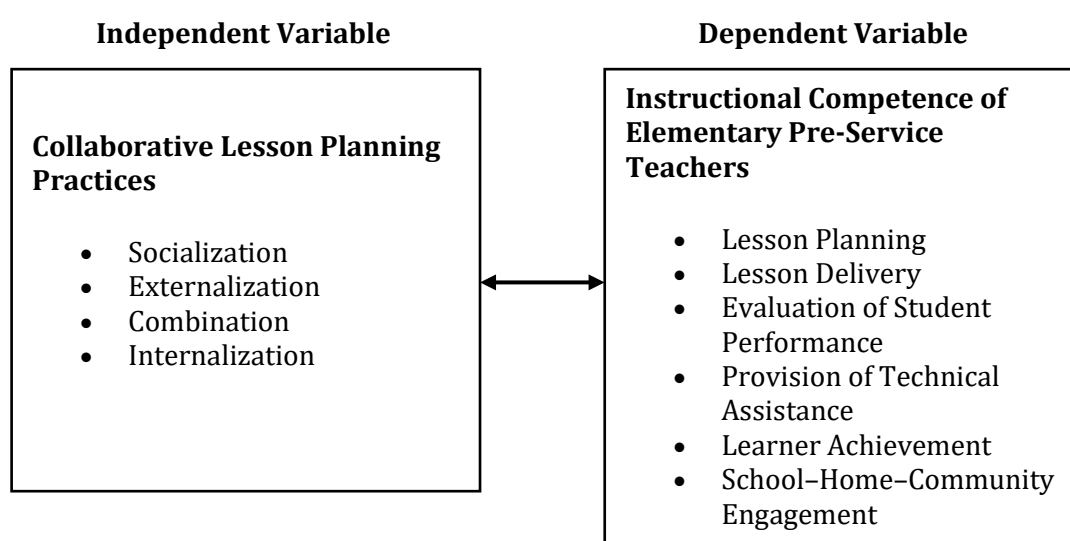


Figure 1: Conceptual Framework of the Study

The significance of this research aligns with the global demand for quality education, as articulated in the United Nations' Sustainable Development Goal 4 (2015), which underscores the importance of inclusive and quality education for all individuals (UNESCO, 2022). Proficiency in teaching is a fundamental component of providing high-quality education. Therefore, there is an opportunity for a worldwide dialogue focused on effectively training educators. By examining collaborative lesson planning as a strategy to enhance instructional competence, this research supports improving teacher preparation programs in the Philippines and worldwide. Strengthening the instructional skills of teachers can lead to improved educational outcomes for students, thereby addressing concerns regarding the quality of education. The following are the key research contributions of the study:

- provides empirical evidence on the effectiveness of collaborative lesson planning in improving instructional competence;
- contributes to the enhancement of teacher preparation and professional development practices in the Philippine context;
- offers insights that may inform curriculum design and faculty development in teacher education institutions; and
- supports global efforts to improve education quality by aligning teacher training practices with Sustainable Development Goal 4.

This study aims to explore the relationship between collaborative lesson planning and the instructional competence of elementary pre-service teachers. Specifically, it seeks to assess these teachers' collaborative lesson planning practices, emphasizing the dimensions of socialization, externalization, combination, and internalization. Additionally, the study intends to evaluate the level of instructional competence among elementary pre-service teachers across various areas, including lesson planning, delivery, evaluation of student performance, provision of technical assistance, learner achievement, and engagement with school, home, and community. Ultimately, the study aims to determine whether there is a significant relationship between collaborative lesson planning practices and the instructional competence of elementary pre-service teachers. Correspondingly, the null hypothesis posits no significant correlation between these practices and instructional competence within a private learning institution.

Methods

The total population of pre-service Elementary Education was 195. However, only first-year to third-year students were included, while fourth-year students were excluded due to their limited availability, as they were engaged in their fieldwork and internship requirements. Using Raosoft's sample size calculator, it initially suggested a sample size of 130 respondents. As cited by Rahman (2023) and Kline (2016), a renowned statistician in the field of structural equation modeling (SEM), suggests that a sample size ranging from 100 to 200 is considered small to medium but still acceptable for simple research models with normally distributed data.

The researchers employed purposive sampling to identify our participants. This method involves deliberately selecting individuals with specific characteristics or qualities pertinent to our research objectives. This study focused on elementary pre-service teachers engaged in collaborative lesson planning activities. As Palinkas et al. (2015) noted, purposive sampling is particularly suitable when researchers aim to include participants who can offer valuable insights about the investigated phenomenon. By concentrating on these individuals, the study seeks to achieve a deeper and more comprehensive understanding of how collaborative lesson planning practices can enhance the instructional competence of future elementary educators.

The collaborative lesson planning questionnaire utilized in this study was previously validated through rigorous analysis involving 540 primary and secondary school teachers from the private sector, demonstrating strong psychometric properties. This study's adapted version of the instrument, focusing on collaborative lesson planning practices, was further refined through expert validation using a standardized evaluation form. Two field experts assessed the tool, yielding an average score of 4.9, indicating that the instrument was perfect and suitable for pilot testing. After obtaining permission from the College of Teacher Education (CTE) Dean's office, a pilot test was conducted with 30 secondary pre-service teachers not included in the final study. The collected responses were meticulously encoded and sent to a statistician to assess the instrument's reliability. The results indicated a Cronbach's alpha of 0.876 for the Collaborative Lesson Planning Practices questionnaire, reflecting a high level of internal consistency. This score surpasses the accepted threshold of 0.70 for preliminary research, as Nunnally and Bernstein (1994) suggested, thereby confirming the tool's dependability and suitability for full-scale data collection. With this outcome, the instrument can be regarded as reliable in measuring the intended areas of the study, which is crucial for ensuring the accuracy and credibility of the findings.

The Instructional Competence questionnaire was adapted from an existing tool designed to assess various domains of teaching competence. It consists of 22 items categorized into six domains: lesson planning, delivery, evaluation of student performance, technical assistance, learner achievement, and school, home, and community involvement. The instrument underwent a thorough expert validation process, with two field experts assessing its content and structure. This evaluation yielded an average validation score of 4.9, indicating that the tool was appropriate for pilot testing. Additionally, a pilot test was conducted with 30 pre-service teachers not part of the main study sample. The responses were analyzed for internal consistency, resulting in a Cronbach's alpha of 0.865 for the Instructional Competence questionnaire.

The study employed a quantitative correlational research design to measure and generalize the relationship between collaborative lesson planning practices and instructional competence among elementary pre-service teachers. This quantitative approach facilitated the systematic collection and analysis of data to quantify values and test our study's hypotheses. Grounded in positivist and empiricist paradigms, the research followed structured procedures and methodologies for data collection and statistical analysis (Bryman, 2012; Creswell, 2023). We utilized correlation analysis as the statistical technique, which allowed us to assess the strength of the relationship between the two identified variables: collaborative lesson planning practices and instructional competence. This correlational design is effective for examining relationships without manipulating the variables under study, akin to the approach used in causal-comparative research (Cohen, 2007).

Descriptive statistics, including the mean and standard deviation, were employed to identify the general trends in the responses. Furthermore, Pearson's r was utilized to assess the strength and direction of the relationship between collaborative lesson planning practices and instructional competence, with correlation coefficients interpreted on a scale from -1.00 to +1.00. Throughout the research process, stringent ethical protocols were upheld to ensure the confidentiality and anonymity of the participants.

Results

Figure 2 presents the level of collaborative lesson planning practices based on four key domains. The overall level was interpreted as high, with a mean score of 3.83 and a standard deviation of 0.41, indicating it is often demonstrated among elementary pre-service teachers. Among the four domains, the combination resulted in the highest level, with a mean of 3.95 and a standard deviation of 0.54, indicating a high level, which is often demonstrated. In contrast, externalization and internalization marked the lowest levels, with each having a mean of 3.78 and standard deviations of 0.55 for externalization and 0.54 for internalization, both of which are interpreted as high. The findings indicate that elementary pre-service teachers typically exhibit a collaborative disposition; however, they often struggle to articulate their teaching ideas and to internalize the understandings gained from their peers.

Figure 2

Level of Collaborative Lesson Planning Practices

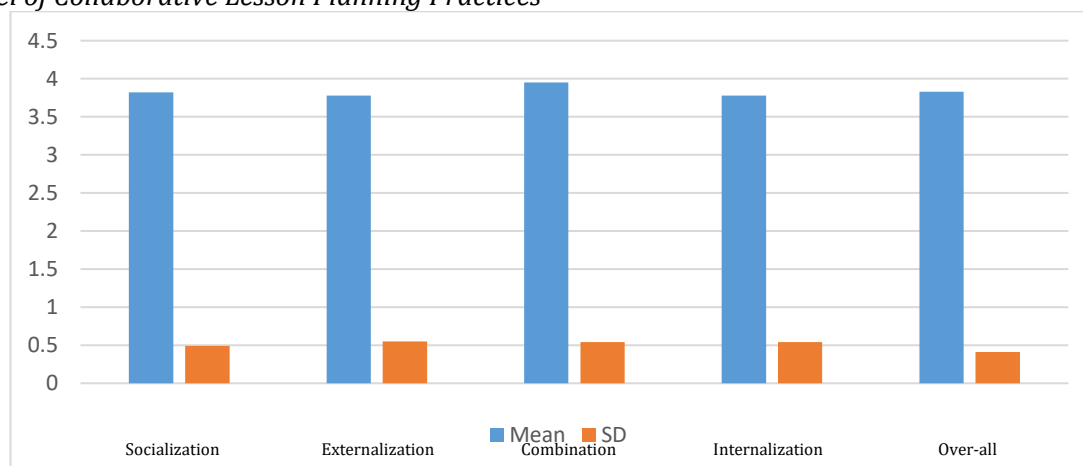


Figure 3 presents the level of instructional competence among elementary pre-service teachers across the six domains. The overall revealed a high level, with a mean score of 3.83 and a standard deviation of 0.41, indicating that instructional competence was often demonstrated throughout their demo teaching training. Lesson planning showed the highest level among the six domains, with a mean of 4.04 and a standard deviation of 0.57. This suggests that elementary pre-service teachers often confidently set clear objectives and prepare well-structured lessons. In contrast, the school, home, and community involvement domain recorded the lowest level, with

a mean of 3.70 and a standard deviation of 0.60. While this still falls within the high interpretation range, it indicates that engagement with external stakeholders is demonstrated only on an often basis.

Figure 3
Level of Instructional Competence

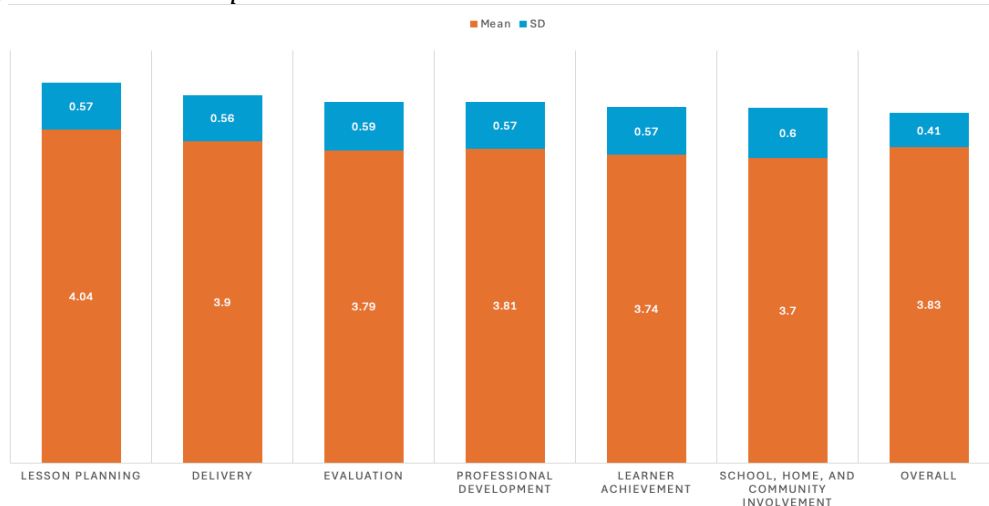


Table 3 presents the correlation results between collaborative lesson planning practices and instructional competence among elementary pre-service teachers. The findings revealed a very strong positive correlation between overall collaborative lesson planning practices and overall instructional competence, with a correlation coefficient of 0.649, which is highly significant at the 0.01 level. This suggests that greater involvement in collaborative lesson planning is strongly linked to higher instructional competence. Among the individual collaborative lesson planning practices domains, internalization exhibited the strongest relationship with overall instructional competence, with a correlation of 0.553, followed by combination at 0.525, and externalization at 0.497, all indicating moderate to strong positive correlations. Socialization, while still statistically significant, posted the lowest correlation, with a value of 0.441, suggesting that while collaborative interaction is important, its effect on instructional competence is less pronounced compared to internal application and strategic synthesis of ideas.

Table 1
Significant Relationship of Collaborative Lesson Planning Practices and Instructional Competence

	Lesson Planning	Lesson Delivery	Evaluation of Pupil's Performance	Professional Development	Learner Achievement	School, Home and Community Involvement	Overall Instructional Competence
Socialization	.368*	.379*	.339*	.262*	.280*	.276*	.441*
	.000	.000	.000	.000	.000	.000	.000
Externalization	.440*	.472*	.461*	.326*	.245*	.204*	.497
	.000	.000	.000	.000	.001	.004	.000
Combination	.477*	.476*	.460*	.343*	.321*	.193*	.525*
	.000	.000	.000	.000	.000	.007	.000
Internalization	.381*	.414*	.427*	.451*	.412*	.304*	.553*
	.000	.000	.000	.000	.000	.000	.000
Overall CLPP	.537*	.581*	.544*	.446*	.405*	.312*	.649*
	.000	.000	.000	.000	.000	.000	.000

p<0.01

Discussion

Collaborative Lesson Planning Practices

The lower levels among the domains are externalization and internalization. Despite being high, it initially implies that some elementary pre-service teachers face challenges in expressing their pedagogical thinking and applying collaborative inputs to their teaching practice. Responses like *I find it challenging to turn my initial teaching ideas into clear and structured viewpoints*, and *I sometimes struggle to connect and apply new teaching knowledge from my team's discussions*, revealing areas where confidence and clarity in expression may be needed to improve further. Nonetheless, the presence of positive responses, such as *implementing lessons after collaborative lesson planning, helps me internalize new teaching concepts*, suggesting that meaningful learning still occurs, particularly when collaborative insights are put into practice.

Vygotsky's work substantiates the findings presented here, particularly his Social Constructivist Theory (1978), which emphasizes the importance of learning through social interaction and collaborative meaning-making within the socialization domain. This strong engagement corresponds to Dewey's Experiential Learning Theory (1938) principles. Nickerson (2024) noted that effective learning is fostered through active reflection and practical application. Moreover, the challenges identified within the externalization domain align with Bandura's Social Learning Theory (1977), which argues that modeling, observation, and articulation are fundamental components of the learning process.

Afalla and Fabelico (2020) highlighted the challenges many pre-service teachers encounter when translating theoretical knowledge into practical application. Collaborative lesson planning addresses this issue by creating opportunities for peer dialogue and constructive feedback. In the national context, Ramirez (2020) and the Philippine Institute for Development Studies (2019) emphasized the necessity for more context-responsive teaching preparation, particularly in subject training. The current findings support this need, especially regarding the lower levels of engagement in internalization and articulation. Furthermore, this study resonates with Gutierrez (2020) and Mendoza et al. (2022), who underscored the importance of collaboration in enhancing instructional strategies and fostering reflective practices, ultimately advancing teacher readiness prior to demonstrations. Overall, the data contribute valuable insights into how collaborative practices meet the pedagogical development needs of future elementary educators. A study by Kirmizi and Mutlu (2025) reported increased collaboration, improved communication, integration of feedback and deeper understanding of instructional planning.

Instructional Competence

The high performance in lesson planning underscores the respondents' preparedness in designing instruction aligned with curriculum goals. Items such as *I clearly define and align my lesson objectives with learning outcomes* and *I carefully select lesson content and prepare appropriate instructional materials or teaching aids* highlight their ability to plan instruction with intentionality and coherence. This reflects thoughtful preparation rooted in curriculum alignment. However, agreement with *I often struggle to choose the most effective teaching strategies for my lessons* points to a need for enhanced exposure to differentiated instruction and adaptive planning. The delivery domain resulted high indicates competence in communicating ideas clearly and engaging students during instruction. Responses such as *I communicate ideas clearly and ensure that my students understand the lesson* demonstrate instructional clarity, although occasional difficulty in fostering higher-order thinking was noted, as seen in the item *I use questions that encourage students to think critically*.

Despite its high classification, School, Home, and Community Involvement emerged as a developmental area. Elementary pre-service teachers admitted to limited participation in activities beyond the classroom, with items like *I am not involved in school activities such as events, committees, or parent-teacher associations* and *I rarely engage with parents or the community in my students' learning process*. This suggests a need to enrich the field-based experiences of elementary pre-service teachers, particularly in building educational partnerships and promoting community engagement. As Leko and Brownell (2009) recommend, embedding collaboration with families and communities into teacher training supports inclusive practices. In 2014, Organization for Economic Co-operation and Development (OECD) also emphasizes that strong school-community collaboration enhances instructional quality and professional satisfaction. These findings indicate that while elementary pre-service teachers are competent in classroom planning and delivery, more emphasis should be placed on preparing them for the broader responsibilities of teaching within a community-oriented framework.

The high standards observed in lesson planning and delivery embodies Dewey's experiential learning theory, which emphasizes that learning is grounded in active engagement and reflection. The respondents' effectiveness in implementing structured lesson plans and engaging students aligns well with this principle. Additionally, Bandura's Social Learning Theory is evident in the areas of delivery and professional development, where pre-service teachers learn through observation, modeling, and feedback during their practicum and training experiences. Moreover, Vygotsky's Social Constructivism underscores the social dimension of teaching practice, highlighting how peer collaboration and shared dialogue contribute significantly to professional growth.

Afalla and Fabelico (2020) identified ongoing challenges in translating theoretical knowledge into practical classroom applications, a process known as demonstration teaching practice. This challenge is particularly evident in the areas of evaluation and school-community involvement, which received relatively lower scores. Similarly, Ramirez (2020) and the Philippine Institute for Development Studies (2019) highlight the importance of academic preparation that incorporates real-world applications. These findings suggest that while elementary pre-service teachers display strong foundational skills in lesson planning and instruction, there is a need for additional efforts to develop inclusive evaluation strategies and to cultivate sustainable connections with families and communities. Strengthening these areas will enhance their overall instructional readiness and support the delivery of responsive, learner-centered education.

Correlation between Collaborative Lesson Planning Practices and Instructional Competence

The findings of this study indicate that the depth of engagement in collaborative planning—particularly the capacity to absorb, reflect upon, and apply shared instructional insights—exerts a substantial influence on the pedagogical competence of elementary pre-service teachers. For instance, the significant correlation between internalization and instructional competence is corroborated by affirmative responses to statements such as *collaborative lesson planning assists me in integrating new teaching concepts into my lesson delivery* and *I contemplate how collaborative discussions shape my actual classroom practices*. These observations underscore the necessity of transcending mere participation and actively embracing the practical application of collaboratively generated ideas.

These responses highlight the importance of going beyond participation and embracing the practical application of shared ideas. In contrast, item statements from the socialization domain like *I regularly interact with my peers in planning sessions* and *We share similar goals*

during planning show consistent peer engagement but may reflect surface-level collaboration unless supported by further instructional action. This implies that teacher education programs should not only encourage group work but also strengthen activities that develop reflective practice, application, and ownership of collaboratively planned strategies.

These results imply that the depth of engagement in collaborative planning, particularly in terms of the ability to absorb, reflect on, and apply shared instructional insights, has a meaningful impact on the teaching competence of elementary pre-service teachers. For instance, the high correlation between internalization and instructional competence is consistent with positive responses to item statements such as *collaborative lesson planning helps me apply new teaching concepts into my own lesson delivery* and *I reflect on how collaborative discussions influence my actual classroom practices*.

The correlation findings are supported by several educational theories. Vygotsky's Social Constructivist Theory (1978) explains the foundational value of social interaction in learning, which aligns with the significance of socialization; however, the results suggest that its effect is limited without personal integration. Bandura's Social Learning Theory (1977) supports the strong link between modeling, observation, and practice, reinforcing the relevance of internalization. Furthermore, the strong correlation in internalization aligns with Dewey's Experiential Learning Theory (1938). This was emphasized by Nickerson (2024), which talks about how true learning is developed through reflection and active use.

Moreover, Gutierrez (2020) highlights that collaborative lesson planning is rooted in reflective practices whereby instructor feedback may enhance instructional quality through reflection. This notion is corroborated by Mendoza (2022) and Chong and Kong (2012), who discovered that shared lesson planning contributes to improved instructional strategies and enhances learner outcomes. The vital role of collaboration in elementary pre-service training is further reinforced by Reimers and Schleicher (2020), who emphasize the significance of adaptive, practice-based learning, and by Guerriero (2017), who posits that collaborative preparation cultivates effective and resilient educators equipped to meet the evolving demands of contemporary classrooms. Moreover, Guo et.al. (2025) state that collaborative lesson planning offers a promising approach for teacher education by fostering a collaborative learning environment and promoting regulatory behaviors.

Conclusions

The results revealed that elementary pre-service teachers consistently showed a high level of engagement in collaboration during lesson planning activities. Among the four domains of the variable collaboration lesson planning practices, the combination appeared to be the most practiced. It reflects their active participation in applying instructional strategies and also incorporates shared ideas in designing the lesson plan. In contrast, the domains of externalization and internalization showed that they were practiced less frequently. This suggests that while elementary pre-service teachers are active in collaboration, they may still face challenges and difficulties in articulating their own teaching insights or fully applying team-based contributions into individual classroom practices.

Instructional competence, including lesson planning, was the strongest area registered at a high level across all domains. However, school, home, and community involvement received the lowest score, indicating a need for greater exposure to inclusive, community-centered teaching strategies. Most importantly, these results revealed a strong positive correlation between collaborative lesson planning and instructional competence, affirming that when elementary pre-service teachers work together in designing of the lessons, they are more likely to develop vital teaching skills that may deliver more effective instruction.

The results of this study affirm the theoretical underpinnings that guided the research, particularly Vygotsky's Social Constructivism Theory (1978), Dewey's Experiential Learning Theory (1938), and Bandura's Social Learning Theory (1977). Vygotsky emphasized that learning occurs through meaningful social interactions, which is evident in the elementary pre-service teachers' frequent participation in collaborative lesson planning, especially in synthesizing and applying group ideas. Dewey's theory supports the idea that learning becomes effective when it is reflective and experiential, as reflected in how elementary pre-service teachers often engaged in combining peer feedback with instructional strategies. Bandura's theory, which emphasizes observation and modeling as essential learning tools, aligns with the role of collaboration in their teaching growth. However, the relatively lower scores in externalization make *it challenging for me to turn my initial teaching ideas into clear and structured viewpoints. In internalization, I sometimes struggle to connect and apply new teaching knowledge from my team's discussions to areas where these theories are not fully realized.* This implies a need for more structured opportunities in teacher training programs that facilitate reflective articulation, modeled teaching, and peer feedback, thereby reinforcing the application of shared knowledge into practice.

Similarly, the low rating in instructional competence regarding school, home, and community involvement, where *I rarely collaborate with parents or guardians regarding students' academic needs,* calls for stronger community integration in fieldwork. Schools and teacher education institutions are encouraged to organize localized immersion programs, conduct family engagement workshops, and facilitate inter-agency collaborations that would allow elementary pre-service teachers to develop confidence and competence in engaging stakeholders beyond the classroom. These enhancements would ensure that collaborative and inclusive practices are not only discussed in theory but effectively demonstrated in practice.

Declarations

1.1 Study Limitations

None

1.2 Acknowledgements

All contributors are listed above.

1.3 Funding source

None.

1.4 Competing Interests

None.

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