Collaborative Learning Approach and Critical Thinking Skills of College of Teacher Education Students at Sulu State College

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*ABSTRACT***.** This study examined the leadership styles of school heads in public elementary schools in Lugus District, Division of Sulu, as perceived by teachers. Specifically, it focused on autocratic, democratic, transformational, and laissez-faire leadership styles, and determined differences and relationships in teachers' perceptions when grouped according to selected demographic variables. A descriptive–exploratory research design was employed using a quantitative approach. One hundred (100) teachers were selected through purposive sampling during the School Year 2025–2026. Data were collected using a modified standardized questionnaire and analyzed using frequency, percentage, weighted mean, standard deviation, independent samples t-test, one-way analysis of variance (ANOVA), and Pearson correlation. Findings revealed that democratic and transformational leadership styles were highly practiced, while autocratic leadership was least observed and laissez-faire leadership was moderately practiced. No significant differences were found when grouped according to age, civil status, and length of service. However, a significant difference was observed in autocratic leadership based on gender and in transformational leadership based on educational attainment. Correlation analysis indicated a significant positive relationship between democratic and transformational leadership, and a significant negative relationship between autocratic and democratic leadership. The results suggest that leadership practices in the district are largely participative and developmental, emphasizing collaboration, empowerment, and professional growth among teachers.

KEYWORDS*: leadership styles, school heads, democratic leadership, transformational leadership, autocratic leadership, laissez-faire leadership, teachers' perceptions, Lugus District, Sulu*

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1. INTRODUCTION

Contemporary education places strong emphasis on the development of higher-order thinking and collaborative competencies that extend beyond the acquisition of basic knowledge. In the

context of teacher education, these competencies are particularly essential, as future educators are expected to demonstrate the ability to think critically, engage in reflective practice, and collaborate effectively within diverse learning environments. The integration of the Collaborative Learning Approach (CLA) and Critical Thinking Skills (CTS) has therefore become a central focus in preparing teacher education students to meet the complex demands of modern classrooms (Johnson et al., 2014; Facione, 2020; Trilling & Fadel, 2009).

Collaborative learning fosters active participation, shared responsibility, and meaningful interaction among learners, enabling them to construct knowledge collectively. At the same time, critical thinking equips students with the capacity to analyze information, evaluate arguments, and make reasoned decisions. When these two constructs are integrated, they create a learning environment that promotes both cognitive development and interpersonal growth. However, the effectiveness of collaborative learning is not always consistent, as factors such as unequal participation, communication challenges, and varying levels of engagement may hinder the development of critical thinking among students (Laal & Ghodsi, 2012; Choy & Cheah, 2009; Gokhale, 1995).

Within Sulu State College, particularly in the College of Teacher Education, efforts have been made to implement instructional strategies that enhance both collaboration and critical thinking. These approaches aim to prepare pre-service teachers who are capable of facilitating interactive learning and addressing real-world classroom challenges. Despite these initiatives, differences in student engagement and interaction patterns remain evident, which may influence how collaborative learning contributes to the development of critical thinking skills.

The importance of fostering collaborative and critical competencies is further reinforced by national and international educational frameworks. The Commission on Higher Education (CHED) Memorandum Order No. 46, series of 2012, underscores the need for outcomes-based education that develops analytical and collaborative skills among learners. Likewise, the Higher Education Act of 1994 (Republic Act No. 7722) mandates higher education institutions to produce competent and critically minded graduates. The Philippine Qualifications Framework (2012) also identifies critical thinking and collaboration as essential learning outcomes, while the United Nations Sustainable Development Goal 4 highlights the role of education in promoting skills necessary for lifelong learning and societal development (CHED, 2012; Republic Act No. 7722, 1994; Philippine Qualifications Framework, 2012; United Nations, 2015; UNESCO, 2017).

Although numerous studies have examined collaborative learning and critical thinking independently, there remains limited empirical research focusing on their relationship within teacher education contexts, particularly in geographically and culturally distinct settings such as Sulu. Most existing studies emphasize either instructional strategies or learning outcomes without fully exploring how collaborative engagement directly influences students' critical thinking development. This gap underscores the need for context-specific investigation that captures the interaction between these two key constructs.

Anchored on Vygotsky's Social Constructivism Theory and Ennis's Critical Thinking Theory, this study views learning as a socially mediated process in which knowledge is constructed through interaction and reflective reasoning. These theoretical perspectives provide a foundation for understanding how collaborative learning environments can facilitate the development of critical thinking skills among students.

This study aimed to examine the collaborative learning approach and critical thinking skills of College of Teacher Education students at Sulu State College, and to determine the differences and

relationship between these variables when grouped according to selected demographic characteristics.

2. METHODS

2.1. Research Design

This study employed a descriptive–correlational research design to examine the relationship between the Collaborative Learning Approach (CLA) and Critical Thinking Skills (CTS) among College of Teacher Education students at Sulu State College. The descriptive component was used to present the demographic characteristics of the respondents, while the correlational component determined the extent to which collaborative learning practices are associated with students' critical thinking abilities. This design is appropriate for identifying patterns, relationships, and existing conditions without manipulating variables.

2.2. Research Locale

The study was conducted at Sulu State College in Jolo, Sulu, particularly within the College of Teacher Education (CTE). The institution was selected due to its implementation of interactive and cooperative instructional strategies such as group discussions, peer evaluation, and project-based learning. These practices provide a suitable environment for examining how collaborative learning contributes to the development of critical thinking skills among pre-service teachers.

2.3. Participants of the Study

The participants consisted of 100 College of Teacher Education students enrolled during the Academic Year 2025–2026. These students were drawn from different year levels (first to fourth year) and programs, including Bachelor of Elementary Education (BEED), Bachelor of Secondary Education (BSED), and Bachelor of Early Childhood Education (BECED).

Table 1. Distribution of Participants by Program

Program	Number of Respondents
Bachelor of Elementary Education (BEED)	40
Bachelor of Secondary Education (BSED)	30
Bachelor of Early Childhood Education (BECED)	30
Total	100

2.4. Sampling Procedure

The study utilized a purposive sampling technique, selecting respondents who were actively engaged in collaborative learning activities and were capable of providing relevant insights regarding their learning experiences. This approach ensured that participants possess the necessary characteristics aligned with the objectives of the study.

2.5. Research Instrument

Data were collected using a structured questionnaire adapted from established instruments on collaborative learning and critical thinking. The instrument was based on the frameworks of Johnson and Johnson (1999) for collaborative learning and Facione (1990) for critical thinking.

The questionnaire consisted of three parts:

- Part I: Demographic profile (age, gender, year level, program)
- Part II: Collaborative Learning Approach (CLA)
- Participation and Engagement
- Cooperation and Teamwork
- Communication and Idea Sharing

Part III: Critical Thinking Skills (CTS)

- Analysis and Interpretation
- Problem-Solving and Decision-Making
- Reflection and Evaluation

Responses were measured using a 5-point Likert scale.

Table 2. Scale of Measurement

Scale	Range	Interpretation
5	4.50–5.00	Strongly Agree
4	3.50–4.49	Agree
3	2.50–3.49	Moderately Agree
2	1.50–2.49	Disagree
1	1.00–1.49	Strongly Disagree

2.6 Data Gathering Procedure

Prior to data collection, permission was obtained from the college administration. The researcher coordinated with instructors to administer the questionnaires to students across different year levels. The purpose of the study was clearly explained to the participants, and their participation was voluntary.

Completed questionnaires were collected, organized, and encoded for statistical analysis. All responses were treated with confidentiality and used solely for academic purposes, in compliance with the Data Privacy Act of 2012.

2.7 Ethical Considerations

Ethical standards were strictly observed throughout the study. Participants were informed about the purpose of the research and voluntarily agreed to participate. Confidentiality and anonymity were maintained, and no personal identifiers were disclosed. Data were collected, analyzed, and reported with honesty and integrity. The study adhered to institutional guidelines and ensured that no harm was caused to any participant.

3. RESULTS

Objective 1: Demographic Profile of Respondents

Table 3. Demographic Characteristics of Respondents (n = 100)

Variable	Category	Frequency	Percentage
Age	25 years old and below	98	98%
	26–30 years old	2	2%
Gender	Male	35	35%

	Female	65	65%
Year Level	First Year	25	25%
	Second Year	21	21%
	Third Year	31	31%
	Fourth Year	23	23%
Program	BEED	40	40%
	BSED	30	30%
	BECED	30	30%

The respondents were predominantly aged 25 years and below and mostly female. Distribution across year levels was relatively balanced, with a slightly higher proportion of third-year students. In terms of program, most respondents were enrolled in BEED, followed by BSED and BECED. This indicates a representative sample of teacher education students across programs and year levels.

Objective 2: Extent of Collaborative Learning Approach (CLA)

Table 4. Extent of Collaborative Learning Approach

Dimension	Mean	SD	Interpretation
Participation and Engagement	4.42	0.44	Agree
Cooperation and Teamwork	4.55	0.37	Strongly Agree
Communication and Idea Sharing	4.51	0.40	Strongly Agree
Overall Mean	4.49	—	Agree

The results indicate that collaborative learning is highly practiced among students. Cooperation and teamwork obtained the highest mean, followed closely by communication and idea sharing. Participation and engagement, while slightly lower, still reflect a strong level of involvement. Overall, students demonstrate a positive orientation toward collaborative learning practices.

Objective 3: Level of Critical Thinking Skills (CTS)

Table 5. Level of Critical Thinking Skills

Dimension	Mean	SD	Interpretation
Analysis and Interpretation	4.23	0.49	Agree
Problem-Solving and Decision-Making	4.38	0.42	Agree
Reflection and Evaluation	4.46	0.41	Agree
Overall Mean	4.36	—	Agree

The findings show that students possess a high level of critical thinking skills. Reflection and evaluation ranked highest, indicating strong metacognitive awareness. Problem-solving and decision-making also showed high levels, while analysis and interpretation, although slightly lower, remained within a positive range. Overall, students demonstrate well-developed critical thinking abilities.

Objective 4: Differences in CLA and CTS

Table 6. Differences in CLA and CTS According to Demographic Variables

Variable	Result	Decision
Age	No significant difference	Not Significant
Gender	No significant difference	Not Significant

Year Level	Year	Significant difference (Reflection & Evaluation only)	Partially Significant
	Program	No significant difference	Not Significant

The results indicate that most demographic variables do not significantly influence students' perceptions of collaborative learning and critical thinking. However, a significant difference was observed in reflection and evaluation when grouped by year level, suggesting that certain stages in academic progression may influence reflective thinking skills.

Objective 5: Relationship between CLA and CTS

Table 7. Correlation between Collaborative Learning and Critical Thinking

Variables	r-value	Interpretation
CLA and CTS (overall)	0.59 – 0.83	High to Very High

The findings reveal a strong positive relationship between collaborative learning and critical thinking skills. The highest correlation was observed between cooperation and teamwork and communication and idea sharing, indicating that students who actively collaborate also tend to engage more effectively in communication. Overall, the results confirm that collaborative learning is significantly associated with the development of critical thinking skills.

4. DISCUSSION

The findings of this study demonstrate that students in the College of Teacher Education at Sulu State College exhibit a strong orientation toward collaborative learning, particularly in the areas of cooperation, teamwork, and communication. The high ratings in these dimensions suggest that students are not only actively engaged in group activities but also value shared responsibility and mutual support. This indicates that collaborative environments within the institution foster meaningful interaction and collective learning. Such outcomes are consistent with the perspective of Geng, Wang, and Zhang (2025), who emphasized that collaborative settings create both social and cognitive conditions that enhance student engagement and participation.

Participation and engagement, while slightly lower compared to other dimensions, still reflect a positive level of involvement among students. This suggests that learners are generally willing to contribute and take responsibility in group tasks, although levels of initiative may vary. The observed pattern aligns with the argument of Eskiyurt and Özkan (2024), who noted that structured group activities encourage active participation but may still depend on individual motivation and group dynamics.

In terms of critical thinking skills, the results indicate that students demonstrate a well-developed capacity across all dimensions, with reflection and evaluation emerging as the strongest component. This finding highlights the students' ability to assess their own learning processes, identify areas for improvement, and make informed judgments. Such metacognitive abilities are essential in teacher education, as future educators must continuously evaluate their instructional practices. This observation supports the claim of De Klerk (2024), who pointed out that critical thinking is strengthened when learners are exposed to collaborative and reflective learning environments.

The relatively high performance in problem-solving and decision-making further suggests that students are capable of applying logical reasoning in addressing academic challenges. This

indicates that collaborative learning not only enhances interaction but also promotes the application of knowledge in practical situations. Previous studies, such as those of Dela Cruz (2016) and Santos and Villanueva (2017), have similarly shown that group-based learning environments contribute to improved reasoning and decision-making abilities by encouraging learners to consider multiple perspectives.

Meanwhile, the dimension of analysis and interpretation, although slightly lower than the other components, remains within a positive range. This suggests that students are able to process and evaluate information effectively, but there is still room for further development in deeper analytical thinking. Reyes (2018) highlighted that exposure to diverse viewpoints in collaborative discussions enhances analytical abilities, as students are challenged to justify and refine their ideas through interaction.

With regard to differences across demographic variables, the findings reveal that age, gender, and program do not significantly influence students' perceptions of collaborative learning and critical thinking skills. This indicates a consistent learning experience among students regardless of their background. However, a significant variation was observed in reflection and evaluation when grouped according to year level, suggesting that students' ability to engage in reflective thinking may develop as they progress academically. This supports the notion that higher levels of academic exposure contribute to more advanced cognitive and metacognitive skills.

The correlation analysis further strengthens the findings of the study, revealing a strong positive relationship between collaborative learning and critical thinking skills. The high correlations among cooperation, communication, and various critical thinking dimensions suggest that these constructs are closely interconnected. Students who actively participate in collaborative activities tend to demonstrate stronger analytical, problem-solving, and reflective abilities. This supports the argument of Reyes (2020) and Lopez (2019), who emphasized that structured interaction and dialogue in group settings enhance reasoning and cognitive processing.

Overall, the results confirm that collaborative learning serves as a significant mechanism for developing critical thinking skills among teacher education students. The integration of cooperation, communication, and active engagement creates an environment that supports both cognitive and social development. These findings highlight the importance of sustaining collaborative instructional strategies in teacher education programs to further strengthen students' readiness for professional practice.

5. CONCLUSION

This study established that College of Teacher Education students at Sulu State College demonstrate a high level of engagement in collaborative learning, particularly in terms of cooperation, teamwork, and communication. These findings indicate that students actively participate in group-based learning environments and value shared responsibility in achieving academic goals.

The results further revealed that students possess a strong level of critical thinking skills, with reflection and evaluation emerging as the most developed component, followed by problem-solving and decision-making, and analysis and interpretation. This suggests that students are

capable of applying reasoning, evaluating their learning processes, and making informed academic decisions.

Moreover, the findings showed that demographic variables such as age, gender, and program do not significantly influence students' perceptions of collaborative learning and critical thinking. However, variations in reflective thinking across year levels indicate that certain cognitive skills may develop progressively through academic experience.

Finally, the study confirmed a strong positive relationship between collaborative learning and critical thinking skills, indicating that increased engagement in collaborative activities is associated with enhanced cognitive development. Overall, the findings highlight the role of collaborative learning as an effective approach in fostering critical thinking among teacher education students.

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