

The Role of Peer Teaching in Enhancing Students' Achievement: A Collaborative Learning Mechanism

Luzviminda M. Bojos¹, Rael Christopher O. Plaza²

¹ Department of Education, Sta. Josefa District, Agusan del Sur, Philippines

² MA-SST Program, North Eastern Mindanao State University, Tandag City, Surigao del Sur, Philippines

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ABSTRACT

This study examined collaborative learning practices and students' perceived learning gains in the implementation of peer teaching in Araling Panlipunan 9. Specifically, it determined the level of practices in collaborative learning implementation, the students' learning gains after peer teaching as perceived by teachers and students, and the significant relationship between collaborative learning practices and students' learning gains. The study used a quantitative descriptive-correlational research design. It was conducted in Sta. Josefa District, Division of Agusan del Sur, Philippines, involving 15 Araling Panlipunan teachers and 181 Grade 9 learners from Aurora National High School, Sayon National High School, and Sta. Josefa National High School. Complete enumeration was used for the teacher-respondents, while the learner sample was determined using Slovin's formula. Peer teaching was implemented through teacher-facilitated collaborative activities that involved clear roles, peer explanation, group interaction, individual and group accountability, and group processing. Researcher-made questionnaires, validated by experts and pilot-tested, were used to measure collaborative learning practices and perceived learning gains, yielding excellent reliability coefficients of 0.97 for the teacher questionnaire and 0.90 for the student questionnaire. Weighted mean and correlation analysis were used to analyze the data. Findings showed that collaborative learning practices were generally practiced, with promotive interaction rated highest and group processing rated lowest. Students' learning gains were generally observed by teachers and moderately observed by students, with affective and motivational gains and communication and social skills receiving the strongest ratings. Significant relationships were found between several collaborative learning practices and students' learning gains, with correlation coefficients ranging from moderate to strong. The study concludes that peer teaching is most beneficial when collaboration is structured, interactive, accountable, and supported by teacher facilitation.

Keywords: peer teaching, collaborative learning, learning gains, Araling Panlipunan, student achievement

INTRODUCTION

Peer teaching can be seen as a collaborative learning mechanism in which students play a central role in the learning process. In this way, students provide explanations, give support to their classmates, ask questions, and enrich learning through meaningful interactions with others. The subject of Araling Panlipunan 9 requires discussion, explanation of ideas, interpretation of events, and shared responsibility in teaching and learning, making peer teaching applicable. If established with clear roles, scaffolded tasks, and facilitation by the teacher, it can contribute to academic learning and communication, confidence, cooperation, and motivation.

Recent studies have found that peer teaching and collaborative learning are proven to help increase student engagement and learning outcomes. When opportunities are provided for the learners to explain, practice, and receive support from their peers, peer teaching and peer tutoring have been shown to have a positive impact on academic achievement, procedural skills, theoretical knowledge, and other learning outcomes (Zhang et al., 2022; Hidayat & Saad, 2025). Other studies highlight its socio-affective aspect, regarding the reinforcement of

interaction, attention, communication, self-efficacy, comprehension and confidence (Dosoftei & Alexa, 2024; Pierce et al., 2024).

But, grouping students together is not sufficient to make peer teaching effective. Meaningful collaborative learning occurs when teachers structure the activity, assign roles and tasks, ensure positive interdependence and individual accountability, encourage student interaction, provide feedback, and conduct group processing (Adl-Amini et al., 2024; Li et al., 2022). In Sta. Josefa District, peer teaching was already used in some secondary schools, but was not yet structured, accountable and reflective for use in classrooms. Some students were very active, and others were dependent on other students and/or only lightly involved.

This study aimed to address the instructional problem discussed above by examining the extent to which collaborative learning practices are applied in peer teaching, the students' perceived learning gains after the implementation of peer teaching, and the correlation between the two. The results offer insights into the elements of collaboration that are most associated with learning gains and those that need further development. The study highlights localized evidence on how peer teaching may be strengthened as a structured and learner-centered teaching method in Araling Panlipunan 9.

Research Questions

This study aimed to determine the relationship between collaborative learning practices and students' learning gains in peer teaching in Araling Panlipunan 9. Specifically, it sought to answer the following research questions:

1. What is the level of practices in collaborative learning implementation in terms of structure and clarity, positive interdependence, promotive interaction, individual and group accountability, and group processing?
2. What are the students' learning gains after the peer teaching collaborative strategy has been implemented as perceived by teachers and students in terms of improvement of performance tasks, conceptual understanding and retention, metacognition and self-regulatory skills, communication and social skills, and affective and motivational gains?
3. Is there a significant relationship between the level of practices in collaborative learning implementation and students' learning gains?

METHODOLOGY

This study used a quantitative descriptive-correlational research design. To assess the level of practices in the implementation collaborative learning and student's learning gains after peer teaching, descriptive component was used. The correlational approach was employed to investigate the significant correlation between the collaborative learning practices and students' learning gains. This design was appropriate for describing patterns and testing relationships, but it did not establish causal effects.

The study was conducted in Sta. Josefa District, Division of Agusan del Sur, Philippines, during School Year 2025-2026. The schools involved in the study were Aurora National High School, Sayon National High School and Sta. Josefa National High School. These schools served as a small, medium and large school setting, respectively, and served as a meaningful context for the study of peer teaching in different Araling Panlipunan classroom settings.

There were 15 Araling Panlipunan teachers and 181 Grade 9 learners as respondents. All Araling Panlipunan teachers in the selected schools were included, hence complete enumeration was used for the teacher respondents. The sample of the learners was calculated with Slovin's formula with a 5% margin of error which was obtained from the population of grade 9 in the 3 schools.

Peer teaching was used as a school facilitation model to implement sa collaborative teaching strategy. During the Araling Panlipunan concepts discussion, learners talked in groups of two or three, explained and clarified ideas to each other, did their own tasks and group tasks and were guided by the teacher. The emphasis put on

implementation was on structure and clarity, positive interdependence, promotive interaction, individual and group accountability, and group processing, the primary collaborative learning activities explored in the study.

Researcher-made questionnaires were used to gather the needed data. The collaborative learning practices section measured structure and clarity, positive interdependence, promotive interaction, individual and group accountability, and group processing. The students' learning gains section measured improvement of performance tasks, conceptual understanding and retention, metacognition and self-regulatory skills, communication and social skills, and affective and motivational gains. Instruments have been tested by experts, modified according to their comments and suggestions and pilot-tested at Trento National High school. The internal consistency was found to be excellent with Cronbach's alpha value of 0.97 for the teachers' questionnaire and 0.90 for the students' questionnaire when the reliability analysis was performed.

Permission was secured from the concerned offices and school heads before data gathering. Respondents were informed of the purpose of the study, the voluntary nature of participation, and the confidentiality of their responses. Weighted mean was used to describe the level of collaborative learning practices and students' perceived learning gains. Correlation coefficients and p-values were used to determine the strength and significance of the relationship between collaborative learning practices and students' learning gains. The level of significance was set at 0.05.

RESULTS

The results are presented according to the three research questions of the study.

Table 1: Level of Practices in the Implementation of Collaborative Learning

Statements	Mean	Verbal Description
Structure and Clarity	3.38	Practiced
Positive Interdependence	2.57	Slightly Practiced
Promotive Interaction	3.80	Moderately Practiced
Individual and Group Accountability	2.59	Slightly Practiced
Group Processing	2.50	Slightly Practiced
Overall	2.97	Practiced

Table 1 shows that collaborative learning practices were generally practiced, with an overall mean of 2.97. Promotive interaction obtained the highest mean and was described as moderately practiced, indicating that teachers frequently provided opportunities for learners to communicate, exchange ideas, ask questions, and support one another. Group processing obtained the lowest mean and was slightly practiced, suggesting that post-activity reflection, evaluation of group performance, and processing of peer learning experiences were not yet consistently implemented.

Table 2: Teachers' and Students' Perceptions of Students' Learning Gains

Statements	Teacher Mean	Teacher Verbal Description	Student Mean	Student Verbal Description
Improvement of Performance Tasks	3.33	Observed	3.45	Moderately Observed
Conceptual Understanding and Retention	2.50	Slightly Observed	2.55	Slightly Observed

Metacognition and Self-Regulatory Skills	3.35	Observed	3.35	Observed
Communication and Social Skills	3.53	Moderately Observed	3.60	Moderately Observed
Affective and Motivational Gains	3.60	Moderately Observed	3.48	Moderately Observed
Overall	3.26	Observed	3.29	Moderately Observed

Table 2 presents students' learning gains after peer teaching. Teachers rated the overall learning gains as observed, while students rated them as moderately observed. Teachers gave the highest rating to affective and motivational gains, while students gave the highest rating to communication and social skills. Both groups gave the lowest rating to conceptual understanding and retention, indicating that peer teaching was more visibly connected to motivation, participation, and communication than to deeper conceptual mastery.

Table 3: Relationship Between Collaborative Learning Practices and Students' Learning Gains

Collaborative Learning Practices	Students' Learning Gains	Correlation	p-value	Interpretation
Structure and Clarity	Improvement of Performance Tasks	0.6927	0.0042	Significant
Structure and Clarity	Conceptual Understanding and Retention	0.5520	0.0329	Significant
Structure and Clarity	Metacognition and Self-Regulatory Skills	0.7609	0.0010	Significant
Structure and Clarity	Communication and Social Skills	0.6381	0.0105	Significant
Structure and Clarity	Affective and Motivational Gains	0.5104	0.0519	Not Significant
Positive Interdependence	Improvement of Performance Tasks	0.4512	0.0914	Not Significant
Positive Interdependence	Conceptual Understanding and Retention	0.3976	0.1422	Not Significant
Positive Interdependence	Metacognition and Self-Regulatory Skills	0.6582	0.0076	Significant

Positive Interdependence	Communication and Social Skills	0.7913	0.0004	Significant
Positive Interdependence	Affective and Motivational Gains	0.8275	0.0001	Significant
Promotive Interaction	Improvement of Performance Tasks	0.4891	0.0643	Not Significant
Promotive Interaction	Conceptual Understanding and Retention	0.5016	0.0568	Not Significant
Promotive Interaction	Metacognition and Self-Regulatory Skills	0.6850	0.0048	Significant
Promotive Interaction	Communication and Social Skills	0.8059	0.0003	Significant
Promotive Interaction	Affective and Motivational Gains	0.8163	0.0002	Significant
Individual and Group Accountability	Improvement of Performance Tasks	0.5517	0.0330	Significant
Individual and Group Accountability	Conceptual Understanding and Retention	0.6035	0.0172	Significant
Individual and Group Accountability	Metacognition and Self-Regulatory Skills	0.7791	0.0006	Significant
Individual and Group Accountability	Communication and Social Skills	0.7441	0.0015	Significant
Individual and Group Accountability	Affective and Motivational Gains	0.7673	0.0008	Significant
Group Processing	Improvement of Performance Tasks	0.3543	0.1951	Not Significant
Group Processing	Conceptual Understanding and Retention	0.5005	0.0574	Not Significant
Group Processing	Metacognition and Self-Regulatory	0.4670	0.0793	Not Significant

	Skills			
Group Processing	Communication and Social Skills	0.3055	0.2682	Not Significant
Group Processing	Affective and Motivational Gains	0.3594	0.1883	Not Significant

Table 3 shows that collaborative learning practices were meaningfully connected to several students' learning gains. Structure and clarity had significant relationships with performance tasks, conceptual understanding and retention, metacognition, and communication skills, but not with affective and motivational gains. Positive interdependence and promotive interaction were significantly related to metacognitive, communication, social, affective, and motivational gains. Individual and group accountability showed significant relationships with all learning gain indicators. The significant correlations ranged from 0.5104 to 0.8275, indicating moderate to strong relationships. Group processing, however, showed no significant relationship with any learning gain indicator.

DISCUSSION

The results suggest that collaborative learning practices were evident in peer teaching, but the practice was not yet consistent in its implementation. Promotive interaction was the most prevalent practice, indicating that teachers provided opportunities for students to discuss, question, clarify, and assist peers during the peer teaching process. This is a good outcome as interaction is one of the key methods by which students learn from each other. The low rating for group processing, however, indicates that teachers may not give post-activity reflection the same attention as the actual group task. Without group processing, students may complete the activity but miss the opportunity to reflect on how their group worked, what challenges they encountered, and how they could improve in the next activity.

Students' learning gains were generally observed, particularly in affective, motivational, communication, and social areas. This suggests that peer teaching may support learners' confidence, participation, and communication with peers. However, conceptual understanding and retention were rated lowest by both teachers and students. This means that peer teaching is not necessarily associated with deeper understanding. It should be well designed, well managed and very well directed by the teacher to enable the accuracy and completeness of the explanations given by the peers.

The strongest pattern was related to individual and group accountability, which significantly correlated with all learning gain indicators. This finding implies that learners benefit more when they understand their own role as well as their teammates' roles. Increased accountability promotes active involvement and enables students to plan, participate, explain, and collaborate with peers. Well-defined tasks, roles and expectations were also relevant to academic and self-regulatory growth as it promoted purposeful participation.

Positive interdependence and promotive interaction also showed strong relationships with metacognition, communication, social, affective, and motivational improvement. It also implies that students might practice peer learning as a social and confidence-raising exercise before its academic learning value starts to be more apparent. The lack of significant relationships involving group processing indicates a need to strengthen reflective evaluation after peer teaching activities. Teachers' support should be structured to allow learners to consider their group work, appreciate individual effort and identify issues including the degree of dependency or lack of active contribution from members, and consider ways to improve future group work.

CONCLUSION

The study revealed that there is a general practice of collaborative learning in peer teaching. Group processing was the lowest area and promotive interaction was the highest area. This was done so that students had chances

for interaction and support, however, after group activities there were still some opportunities for reflection and evaluation which needed improvement.

Most students' learning gains were generally observed by their teachers and moderately observed by students after peer teaching. The highest scores were associated with motivation, confidence, communication and social interaction, and the lowest scores were associated with conceptual understanding and retention. The results indicate that peer teaching has the potential of increasing participation and the socio-affective learning, however, greater understanding will need more effective teacher guidance and follow up.

Several aspects of students' learning gains were related to collaboration learning significantly. Individual and group accountability had the highest number of significant links with all measures of learning gains, and structure and clarity, positive interdependence and promotive interaction were tied to significant academic and socio-affective outcomes. The learning gains were not significantly correlated with group processing, so it is recommended to improve reflective evaluation in the implementation of peer teaching.

RECOMMENDATIONS

Araling Panlipunan teachers are encouraged to use peer teaching while strengthening the structure of the activity through clear directions, assigned roles, guiding questions, and individual and group outputs. Pair mentoring or small group peer explanation in small classes can be used, rotating peer leaders in medium size classes can help maintain participation, and monitoring checklists in large classes can help to manage accountability.

Reflection sheets, exit slips, peer feedback, and brief group evaluations after peer teaching activities may be used to give greater attention to group processing. These tools can aid students to grasp not only what they learned, but how they worked together with others.

Professional development may be offered in schools with a focus on collaborative learning, peer teaching design, assessment, and feedback. Learning Action Cell sessions, peer observation, and peer coaching can help teachers enhance the implementation of peer teaching and address the difficulties they may be encountering, including inconsistent participation, excessive reliance on peer leaders, ambiguous roles, and lack of reflection following sessions.

Peer teaching's long-term effects on academic performance, conceptual recall, motivation, confidence, and communication skills in other academic grades and subjects and other school settings warrant investigation in future research. Further research can also include objective measures, such as pre-test and post-test scores or standardized performance measures, to further enhance the validity of research results related to student achievement.

LIMITATIONS OF THE STUDY

This study was conducted among Araling Panlipunan teachers and Grade 9 students in three public secondary schools in Sta. Josefa District, Agusan del Sur. The findings were based on survey responses and may not fully reflect what was directly observed during all peer teaching activities. The study also relied on teachers' and students' perceptions of learning gains and did not include objective measures such as pre-test and post-test scores, standardized achievement scores, or classroom observation data. Thus, the findings should be interpreted as perceived learning gains rather than direct measures of academic improvement. The study only considered collaborative learning practices, students' learning gains, and their relationship. Despite these limitations, the results may still be useful in strengthening the implementation of peer teaching in Araling Panlipunan 9.

ETHICAL CONSIDERATIONS

The researcher observed ethical standards in the conduct of the study. The data were gathered after obtaining permission from the appropriate offices and school leaders. The respondents were briefed on the purpose of the

study, the voluntary nature of participation, and the confidentiality of their responses. The presentation and interpretation of the findings did not reveal any personal information that could identify the respondents. Sources used in the manuscript were properly referenced, and the findings were interpreted objectively. Artificial intelligence tools were used only for language refinement, organization, and formatting support; the analysis, interpretation, and scholarly responsibility remain with the authors.

Data Availability

The data that support the findings of this study are not publicly available to protect the privacy and confidentiality of the respondents. Aggregated results are presented in the manuscript, and related data may be made available from the corresponding author upon reasonable request, subject to applicable ethical and institutional restrictions.

Conflict of Interest

The authors declare that there is no conflict of interest in the conduct and reporting of this study.

REFERENCES

1. Adl-Amini, K., Vollinger, V. A., & Eckart, A. (2024). Implementation quality of cooperative learning and teacher beliefs: A mixed methods study. *European Journal of Psychology of Education*, 39, 2267-2281. <https://doi.org/10.1007/s10212-023-00769-3>
2. Ain, Q. U., Thurston, A., MacKenzie, A., & Ozkaya, C. (2023). What does previous research tell us about the effects of peer tutoring on metacognition in primary and secondary schools? *International Journal of Educational Research Open*, 4, 100248. <https://doi.org/10.1016/j.ijedro.2023.100248>
3. An, F., & Guo, J. (2024). Does students' perceived peer support facilitate their deeper learning? *Education and Information Technologies*, 29, 9013-9036. <https://doi.org/10.1007/s10639-023-12193-7>
4. Brandmo, C., & Gamlem, S. M. (2025). Students' perceptions and outcome of teacher feedback: A systematic review. *Frontiers in Education*, 10, 1572950. <https://doi.org/10.3389/feduc.2025.1572950>
5. Dosoftei, C. C., & Alexa, L. (2024). Students' perception of peer teaching in engineering education: A mixed-method case study. *Humanities and Social Sciences Communications*, 11, 793. <https://doi.org/10.1057/s41599-024-03349-y>
6. Hidayat, R., & Saad, M. R. M. (2025). A meta-analysis of the effect of peer tutoring in Science, Technology, Engineering and Mathematics (STEM) subjects. *International Journal of Educational Research Open*, 8, 100446. <https://doi.org/10.1016/j.ijedro.2025.100446>
7. Jurkowski, S., Mundelsee, L., & Hanze, M. (2024). Strengthening collaborative learning in secondary school: Development and evaluation of a lesson-integrated training approach for transactive communication. *Learning and Instruction*, 92, 101934. <https://doi.org/10.1016/j.learninstruc.2024.101934>
8. Li, D., Ding, M., & Cai, J. (2022). Teacher learning about collaborative learning: A case study. *ZDM-Mathematics Education*, 54, 721-735. <https://doi.org/10.1007/s11858-022-01350-w>
9. Li, Z., Oon, P.-T. E., & Chai, S. (2024). Examining the impact of teacher scaffolding in the knowledge building environment. *Education and Information Technologies*, 29, 18501-18532. <https://doi.org/10.1007/s10639-024-12535-z>
10. Pierce, B., van de Mortel, T., Allen, J., & Mitchell, C. (2024). The influence of near-peer teaching on undergraduate health professional students' self-efficacy beliefs: A systematic integrative review. *Nurse Education Today*, 139, 106377. <https://doi.org/10.1016/j.nedt.2024.106377>
11. Tai, J., Thompson, J., & Vaz-Serra, P. (2025). Designing effective peer assessment processes in higher education: A systematic review. *Higher Education Research & Development*, 44(2), 335-352. <https://doi.org/10.1080/07294360.2024.2407083>
12. Zhang, C., Liao, M., Goh, S. H., Wu, X. V., & Yoong, S. Q. (2022). Effectiveness of peer teaching in health professions education: A systematic review and meta-analysis. *Nurse Education Today*, 118, 105499. <https://doi.org/10.1016/j.nedt.2022.105499>