

Role of Professional Learning Communities [PLCs] as A Mediator Between Transformational Leadership and Teacher Performance in The District of Aritao

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Publication history: Received: April 11, 2026; Revised: May 21, 2026; Accepted: May 24, 2026

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Abstract

Quality education is widely acknowledged as a crucial element in achieving the Sustainable Development Goal 4 (SDG 4). This study explored the role of Professional Learning Communities (PLCs) as a mediator between transformational leadership and teacher performance in the District of Aritao I. Specifically, the study aimed to understand the effects of transformational leadership on PLCs and teacher performance, as well as the mediating role of PLCs in enhancing teacher performance. This study employed a quantitative descriptive-correlational research design with mediation analysis. A structured questionnaire was used to gather data from 100 public school teachers selected through purposive sampling. Statistical tools such as frequency, percentage, weighted mean, standard deviation, Pearson correlation, regression analysis, and mediation analysis were used to analyze the gathered data. The findings indicated that transformational leadership, PLCs, and teacher performance were rated very highly by the respondents, with overall mean scores of 4.30, 4.31, and 4.28, respectively. The results further suggest that transformational leadership significantly influences PLCs and teacher performance. Similarly, PLCs significantly affected teacher performance and partially mediated the relationship between transformational leadership and teacher performance. These findings imply that effective leadership practices enhance collaboration, shared learning, and professional growth among teachers, leading to improved instructional performance among teachers. The study concluded that transformational leadership and active PLCs are important factors for improving teacher performance and educational quality. Therefore, it is recommended that leadership practices and collaborative professional learning activities be strengthened to enhance teacher effectiveness and support better educational outcomes in schools.

Keywords: Transformational Leadership, Professional Learning Communities, Teacher Performance, Educational Leadership, Professional Development

1. Introduction

Quality education remains a global priority under Sustainable Development Goal 4 (SDG 4), emphasizing equitable access to quality learning opportunities. Teachers play a central role in achieving this goal because their effectiveness directly influences student learning and academic success. However, teachers often experience stress, burnout, heavy workloads, and limited professional support, which negatively affect performance and motivation. Effective school leadership is therefore essential in strengthening teacher effectiveness and improving educational quality. Transformational leadership is recognized for promoting teacher motivation, innovation, professional commitment, and positive school environments. Professional Learning Communities (PLCs) further support collaborative learning, reflective practice, and professional growth among teachers. Existing studies indicate that transformational leadership positively influences PLCs and enhances teacher performance through continuous collaboration and learning (Gao et al., 2024; Roesminingsih & Windasari, 2025). In the Philippine context, challenges related to limited resources, insufficient leadership training, and weak professional collaboration persist, particularly in public schools. This study examined the mediating role of PLCs in the relationship between transformational leadership and teacher performance in the District of Aritao I.

1.1 Transformational Leadership, Professional Learning Communities, and Teacher Performance in Quality Education

Teachers are fundamental to achieving quality education and improving student outcomes. Their performance is influenced by workplace conditions, leadership support, and opportunities for professional growth. Stress, burnout, excessive workloads, and limited institutional support continue to hinder teacher effectiveness. Consequently, school leadership plays a vital role in fostering productive educational environments and sustaining teacher motivation. Transformational leadership is particularly important because it encourages innovation, strengthens commitment, and promotes positive organizational culture within schools. Studies have also shown that mobile learning tools improve student engagement, understanding, and academic performance, especially in physics education (Anselmo et al., 2024). Portable augmented reality (AR) further enhances student engagement and learning experiences in physics (Anselmo et al., 2025).

1.2 Related Literature on Transformational Leadership, Professional Learning Communities, and Teacher Performance

Related literature emphasizes the importance of transformational leadership and collaborative professional practices in improving teacher performance. Transformational leadership fosters teacher inspiration, professional commitment, and innovation, while PLCs provide opportunities for collaborative learning, reflective dialogue, and continuous professional development. Research from various countries demonstrates that transformational leadership positively affects PLCs, which in turn improve teacher performance through sustained collaboration and shared learning experiences (Gao et al., 2024; Roesminingsih & Windasari, 2025). Additionally, educational technologies such as mobile learning and portable AR have been identified as effective tools for increasing student engagement and enhancing learning outcomes (Anselmo et al., 2024; Anselmo et al., 2025).

1.3 Local, National, and Global Context of Transformational Leadership and Professional Learning Communities in Public Schools

Globally, educational systems continue to prioritize teacher quality and effective school leadership to achieve SDG 4. Many countries recognize transformational leadership and PLCs as strategies for improving educational outcomes and sustaining professional growth among teachers. In the Philippines, school leaders significantly influence teacher performance and instructional delivery. However, public schools continue to face challenges related to limited resources, heavy workloads, insufficient leadership preparation, and difficulties in sustaining professional collaboration. In the District of Aritao I, teachers experience similar issues involving collaboration, instructional improvement, and professional development. These conditions underscore the need for leadership practices that strengthen teacher participation in PLCs and improve overall teacher performance.

1.4 Conceptual Basis of Transformational Leadership, Professional Learning Communities, and Teacher Performance

The study is conceptually anchored on transformational leadership and Professional Learning Communities as determinants of teacher performance. Transformational leadership promotes motivation, innovation, and professional commitment among teachers, while PLCs serve as collaborative platforms for reflective dialogue and continuous learning. The study further examined PLCs as a mediating factor linking transformational leadership and teacher performance. This framework suggests that effective leadership strengthens collaborative professional practices, which subsequently enhance teacher effectiveness and instructional quality.

1.5 Research Gaps on the Mediating Role of Professional Learning Communities Between Transformational Leadership and Teacher Performance

Although transformational leadership has been extensively studied, much of the existing literature focuses on Western contexts, with limited attention given to the Philippines and Southeast Asia. Few studies have explored the mediating role of PLCs in the relationship between transformational leadership and teacher performance, particularly in public schools. Moreover, localized studies in the District of Aritao I remain limited. These research gaps justified the conduct of the study to determine how PLCs mediate the relationship between transformational leadership and teacher performance. The findings are expected to provide valuable insights for school leaders, teachers, and policymakers seeking to improve teacher effectiveness and educational outcomes.

1.6 Alignment of Transformational Leadership and Professional Learning Communities with Relevant Sustainable Development Goals (SDGs)

The study aligns primarily with SDG 4 – Quality Education because it focuses on improving teacher performance, professional collaboration, and educational leadership to enhance learning outcomes. It also supports SDG 8 – Decent Work and Economic Growth by promoting supportive leadership practices and professional development that contribute to teacher productivity and workplace well-being. Furthermore, the integration of mobile learning and augmented reality technologies relates to SDG 9 – Industry, Innovation and Infrastructure through the promotion of innovative educational practices and technology-enhanced learning environments.

1.7 Importance of Transformational Leadership and Professional Learning Communities to Multidisciplinary Sustainability

The study contributes to educational sustainability by strengthening teacher development, instructional quality, and collaborative learning practices. It supports socio-economic sustainability through the improvement of teacher effectiveness, which may positively influence educational attainment and workforce readiness. The study also contributes to technological sustainability by recognizing the value of mobile learning and augmented reality in enhancing student engagement and learning experiences. In addition, the findings may support institutional sustainability by guiding school leaders and policymakers in developing leadership practices and professional learning structures that foster continuous teacher improvement and sustainable educational outcomes.

2. Material and methods

2.1 Research Design

This study used a quantitative descriptive-correlational research design with a mediation analysis. This study aimed to determine the relationship between transformational leadership, Professional Learning Communities (PLCs), and teacher performance. This study also examined whether PLCs mediate the relationship between transformational leadership and teacher performance. Survey questionnaires were used to gather data from respondents. Statistical tools were used to analyze the data collected. This design was appropriate because it helped determine the direct and indirect effects of the variables.

2.2 Locale of the Study

This study was conducted in the District of Aritao I, Nueva Vizcaya, Philippines. The district comprises public elementary and secondary schools under the Department of Education. The locale was chosen because it provided suitable respondents for this study. Schools in the district implement programs related to leadership and teacher development. The area was accessible and relevant to the study objectives.

2.3 Respondents of the Study

The respondents of the study were public school teachers in the District of Aritao I. Both elementary and secondary school teachers were included in the study. Teachers with at least one year of teaching experience were selected as the respondents. They were considered capable of providing reliable information on transformational leadership, PLCs, and teacher performance. Participation in the study was voluntary.

2.4 Sample and Sampling Procedure

Purposive sampling was used to select the respondents. Only teachers who met the study criteria were included. The researcher coordinated with the school heads to identify qualified participants. Respondents were selected based on their availability and willingness to participate in the study. This sampling method was appropriate because it focused on teachers directly related to the study variables.

2.5 Research Instrument

The researcher used a structured questionnaire as the main research instrument for this study. The questionnaire consisted of items on transformational leadership, PLCs, and teacher performance. The instrument was adapted from related studies and modified to fit the study context. A Likert scale was used to measure the participants' responses. The questionnaire was validated by experts and tested for reliability prior to distribution.

2.6 Data Gathering Procedure

The researcher first secured permission from the school authorities before conducting the study. After approval, the questionnaires were distributed to the respondents. The purpose of the study was clearly explained to the participants. Respondents were given sufficient time to answer the questionnaire honestly. After retrieval, the responses were checked, organized, and prepared for statistical analyses.

2.7 Data Analysis Techniques

The data gathered were analyzed using various statistical tools. Frequencies and percentages were used to describe the respondents' profiles. The weighted mean and standard deviation were used to determine the levels of transformational leadership, PLCs, and teacher performance. Pearson's correlation was used to determine the relationships among the variables. Regression and mediation analyses were employed to test the effects of the variables.

2.8 Ethical Considerations

Ethical standards were followed throughout the study. Permission was obtained from the concerned authorities before data collection. The participation of respondents was voluntary, and informed consent was obtained. The respondents were assured that their responses would remain confidential. The data gathered were used only for research. Honesty, respect, and confidentiality were maintained throughout the research process.

3. Results and Discussion

3.1 Respondents' Profile

3.1.1 Demographic Characteristics of the Respondents

The findings revealed that most respondents were female, comprising 62% of the total participants, while 38% were male. In terms of teaching experience, the majority had 6–10 years of experience, followed by those with 1–5 years, 11–15 years, and 16 years and above. Regarding educational attainment, most respondents held a bachelor's degree, while others had master's degree units, completed master's degrees, or doctorate units/doctorate degrees. These results indicate that the

respondents possessed adequate professional qualifications and teaching experience. The predominance of female teachers reflects the common composition of the teaching workforce in many educational institutions. The distribution of teaching experience suggests that many respondents had already developed substantial professional exposure to instructional and school-related responsibilities. Furthermore, the respondents' educational attainment demonstrates their commitment to professional growth and continuous learning, which may contribute to improved instructional competence and educational effectiveness.

3.2 Levels of Transformational Leadership, PLCs, and Teacher Performance

3.2.1 Transformational Leadership, PLCs, and Teacher Performance Levels

The results showed very high levels of transformational leadership, Professional Learning Communities (PLCs), and teacher performance, with overall mean ratings indicating strong perceptions across all variables. Among the variables, PLCs obtained the highest mean, followed closely by transformational leadership and teacher performance. These findings suggest that respondents perceived school leadership, collaborative practices, and teacher effectiveness to be highly evident in their schools. The findings indicate that transformational leadership significantly contributes to the development of collaborative professional environments among teachers. Studies have shown that transformational leadership promotes shared goals, reflective dialogue, and collective responsibility within PLCs, thereby improving teacher engagement and professional growth (Gao et al., 2024; Roesminingsih & Windasari, 2025). Likewise, PLCs encourage collaboration and the sharing of instructional practices that enhance teacher effectiveness. Research also emphasizes that transformational leadership positively influences teacher performance directly and indirectly through PLCs, strengthening organizational commitment and educational quality (Saputra et al., 2024). Consequently, the interaction among transformational leadership, PLCs, and teacher performance creates a reinforcing cycle that supports teacher motivation and student achievement (Zhang et al., 2022).

3.3 Mediating Effect of PLCs on Teacher Performance

3.3.1 PLCs as a Mediator Between Transformational Leadership and Teacher Performance

The findings revealed that transformational leadership significantly influenced PLCs and teacher performance. PLCs also significantly predicted teacher performance. When transformational leadership and PLCs were analyzed together, the effect of transformational leadership on teacher performance decreased but remained significant, indicating partial mediation. This means that transformational leadership improves teacher performance both directly and indirectly through PLCs. The results suggest that PLCs play an important role in strengthening the influence of transformational leadership on teacher performance. Transformational leadership encourages teachers to participate in collaborative activities, professional dialogue, and shared problem-solving, which contribute to improved instructional practices and teacher effectiveness (Roesminingsih & Windasari, 2025). Studies further confirm that transformational leadership enhances PLC components such as shared purpose, collaboration, and reflective practices, which are associated with improved teacher satisfaction and performance (Gao et al., 2024; Zhang et al., 2022). These findings imply that school leaders should strengthen both transformational leadership practices and PLCs to sustain professional growth and improve educational outcomes.

3.4 Relationship Between Transformational Leadership, PLCs, and Teacher Performance

3.4.1 Correlation Among the Variables

The results revealed significant positive relationships among transformational leadership, PLCs, and teacher performance. Transformational leadership showed a strong positive relationship with PLCs, indicating that effective leadership promotes collaboration and professional learning among teachers. Likewise, transformational leadership was significantly related to teacher performance, while PLCs also demonstrated a strong positive relationship with teacher performance. These findings indicate that supportive leadership and collaborative learning environments contribute to improved teaching performance. The findings support the idea that transformational leadership enhances both teacher collaboration and instructional effectiveness. Effective school leaders inspire teachers, strengthen professional relationships, and create environments that encourage continuous learning and shared practices. Consistent with previous studies, transformational leadership improves PLCs and teacher performance (Gao et al., 2024), while PLCs enhance collaboration and instructional improvement among teachers (Roesminingsih and Windasari, 2025). These relationships highlight the importance of leadership and collaborative professional learning in achieving better educational outcomes.

3.5 Summary of Mediation Analysis

3.5.1 Direct and Indirect Effects of Transformational Leadership

The mediation analysis showed that PLCs partially mediated the relationship between transformational leadership and teacher performance. The findings indicated that transformational leadership had both direct and indirect effects on teacher performance through PLCs, resulting in a substantial total effect. These results demonstrate that transformational leadership enhances teacher performance while also strengthening collaborative professional learning processes that further improve teacher effectiveness. The results imply that school leaders can improve teacher performance by fostering collaboration, shared learning, and professional development through PLCs. By encouraging teachers to engage in collaborative practices and reflective learning, PLCs help strengthen instructional competence and professional growth. These findings are aligned

with the study of Roesminingsih and Windasari (2025), which emphasized that PLCs strengthen the influence of transformational leadership on teacher performance. Similarly, Zhang et al. (2022) explained that transformational leadership improves PLC practices, resulting in better teacher performance and satisfaction.

4. Conclusion & Recommendations

The study concluded that transformational leadership, Professional Learning Communities (PLCs), and teacher performance were all rated very highly by the respondents. The findings revealed that transformational leadership significantly influenced PLCs and teacher performance by promoting collaboration, shared learning, and professional growth among teachers. Overall, the study emphasized the importance of effective school leadership and active PLCs in enhancing teacher performance in the District of Aritao I.

Based on the findings, school administrators are encouraged to continue practicing transformational leadership to motivate and support teachers. Schools should strengthen PLC activities by promoting collaboration, sharing of ideas, and reflective learning among teachers. Teachers are also encouraged to actively participate in PLCs to improve their instructional practices and professional growth. Future researchers may conduct similar studies in other schools and include additional variables related to teacher performance to further expand the findings.

This study was limited to public school teachers in the District of Aritao I, which may affect the generalizability of the findings. The study relied on survey questionnaires that depended on the honesty and perceptions of the respondents. In addition, the study focused only on transformational leadership, PLCs, and teacher performance, excluding other possible factors that may influence teacher performance. Future studies may use larger samples and different research methods to obtain more comprehensive results.

Compliance with ethical standards

The researcher strictly adhered to ethical standards throughout the study. Permission to conduct the research was obtained from the concerned school authorities prior to data gathering. Participation of the respondents was entirely voluntary, and informed consent was secured before the administration of the survey questionnaires. The respondents were informed about the purpose and objectives of the study and were assured that their responses would be treated with utmost confidentiality and used solely for academic and research purposes. No personal information that could identify the respondents was disclosed in any part of the study. The researcher ensured that honesty, respect, and integrity were maintained throughout the research process. This study complied with the institutional ethical guidelines and standards for conducting educational research. The author declares that there are no conflicts of interest in the conduct and publication of this study. All individuals who contributed significantly to the completion of this study were properly acknowledged. Furthermore, the manuscript is an original work of the author, and all cited references were properly credited in accordance with intellectual property and copyright regulations.

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