
Professional learning community as a human resource management strategy for developing teacher competencies

NURUL SWANDARI^{1*}, BAHARUDDIN BAHARUDDIN², AND AFFAN HASNAN MUBAROK³

Abstract

Teacher competence is a critical factor in educational quality, yet its development requires continuous, strategic support. This study examines the professional learning community (PLC) as a human resource management strategy for developing teacher competencies at MTsN 3 Jombang and MTsN 17 Jombang (state Islamic junior high schools). Using a qualitative multisite case study, data were collected from 10 informants through semistructured interviews, nonparticipant observation, and document analysis, and were analyzed through pattern matching, explanation building, and cross-site synthesis. The findings show that PLC developed through three interconnected dimensions: construction, implementation, and contribution. MTsN 3 Jombang exemplified an institutionalized, professional culture-based PLC, whereas MTsN 17 Jombang exemplified a collegial culture-based PLC. At the micro, meso, and macro levels, PLC strengthened teachers' pedagogical, professional, social, and personal competencies, as well as professional communities and madrasah learning capacity. PLC is most effective when a strong professional culture is supported by institutional structures.

Keywords

Human resource management, learning organization, professional development, professional learning community, teacher competency

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^{1*}Universitas KH Abdul Chalim Mojokerto, Jawa Timur, Indonesia, Corresponding author: nurulswandarimanngan@gmail.com

^{2,3}Universitas KH Abdul Chalim Mojokerto, Jawa Timur, Indonesia

Introduction

The quality of education is strongly influenced by the capacity of teachers as the primary actors responsible for designing and implementing meaningful learning experiences. In contemporary educational systems, teachers are expected not only to possess subject knowledge but also to demonstrate pedagogical competence, professional responsibility, social skills, and personal integrity. These competencies require continuous development because educational demands, curriculum changes, technological advancement, and diverse student needs continue to evolve. Therefore, teacher development should not be viewed as an individual responsibility alone but as part of a strategic human resource management process within educational organizations (Armstrong & Taylor, 2023).

In educational institutions, human resource management plays an important role in ensuring that teachers receive continuous opportunities for professional growth. Effective teacher development requires systematic approaches that integrate learning, collaboration, performance improvement, and organizational goals. Traditional professional development models, such as short-term training and workshops, often provide limited impact because they are separated from teachers' daily practices and classroom realities. Research emphasizes that sustainable teacher professional development requires continuous, collaborative, and practice-based learning environments where teachers can reflect on their experiences and construct knowledge collectively (Darling-Hammond et al., 2017).

One approach that has gained increasing attention is the professional learning community (PLC). PLC represents a shift from individual professional development toward collective learning among educators. Through PLC, teachers engage in collaborative inquiry, knowledge sharing, reflective dialogue, and continuous improvement of teaching practices. The framework of DuFour et al. (2010) highlights that effective PLCs are built upon shared values and vision, collective responsibility for student learning, collaborative professional practices, and continuous evaluation based on learning outcomes. Research indicates that PLC implementation can enhance teacher collaboration, improve instructional practices, and support school improvement processes (Stoll et al., 2006; Vescio et al., 2008).

Although PLC has been widely studied in relation to teacher professionalism and school improvement, previous research has primarily examined PLC as a professional development approach rather than as an integrated human resource management strategy. This limitation is particularly evident in madrasah contexts, where teacher development is influenced not only by professional demands but also by institutional culture, leadership practices, and Islamic educational values.

Madrasahs represent a unique educational context because they combine academic development with religious and moral formation. Therefore, teacher competency development requires an approach that integrates professional capacity, organizational learning, and institutional values. In this context, PLC has the potential not only as a collaborative learning mechanism but also as a strategic approach to managing human resources by strengthening teacher capacity, professional communities, and organizational learning culture. However, empirical studies exploring how PLC functions as a human resource management strategy within madrasahs remain limited.

Existing studies have shown that PLC implementation is influenced by several organizational factors, including leadership support, collaborative culture, structural facilitation, and continuous evaluation mechanisms (Hairon & Dimmock, 2012). However, less attention has been given to differences in PLC development between educational institutions with different levels of organizational maturity. Some schools may develop PLC through formal structures, policies, and institutional support, while others may develop through informal collegial relationships and teacher initiatives. Understanding these variations is important for developing a more comprehensive model of PLC implementation.

Therefore, this study aims to examine the professional learning community (PLC) as a human resource management strategy for developing teacher competencies at Madrasah Tsanawiyah Negeri (MTsN, state Islamic junior high school) 3 Jombang and MTsN 17 Jombang. Specifically, this study explores three dimensions: (1) how PLC is constructed as a human resource management strategy, (2) how PLC is implemented within madrasah contexts, and (3) how PLC contributes to teacher competency development and organizational learning. Through a multisite qualitative case study approach, this research seeks to provide a deeper understanding of how PLC operates within madrasahs and to contribute to the broader discussion on sustainable teacher professional development and educational human resource management.

Literature Review

Professional learning community as a framework for teacher professional development

PLC has emerged as an important approach to improving teacher professionalism by shifting professional development from individual activities toward collective learning processes. Unlike conventional professional development programs that are often limited to short-term training, PLC emphasizes continuous collaboration, shared reflection, knowledge exchange, and improvement of teaching practices within the school environment. Through PLC, teachers are positioned as active learners who construct professional knowledge through interaction with colleagues and analysis of their teaching experiences (DuFour et al., 2010).

The effectiveness of PLC is based on several fundamental principles, including shared vision and values, collective responsibility for student learning, collaborative inquiry, reflective dialogue, and continuous improvement. These principles encourage teachers to identify learning problems, develop solutions collaboratively, and evaluate the impact of instructional practices using evidence from student learning outcomes. Research indicates that PLC contributes to strengthening teacher collaboration, improving instructional quality, and developing professional commitment when supported by effective leadership and organizational structures (Hairon & Dimmock, 2012; Stoll et al., 2006).

Moreover, PLC should not be understood merely as a formal meeting or teacher discussion forum. Instead, it represents a transformation of professional culture where learning becomes a collective responsibility. Schools that successfully implement PLC tend to develop stronger collaborative cultures, greater teacher engagement, and improved capacity for continuous improvement (Vescio et al., 2008).

Professional learning community as a human resource management strategy

From a human resource management perspective, educational institutions require systematic strategies to develop teacher capacity as organizational assets. Human resource management emphasizes aligning employee development with organizational goals through continuous learning, performance improvement, and professional engagement (Armstrong & Taylor, 2023). In schools, teachers represent strategic human capital because their knowledge, skills, and professional commitment directly influence educational quality.

PLC is closely connected with human resource management because it integrates professional development with daily work practices. Instead of separating teacher development from organizational activities, PLC embeds learning within teachers' professional responsibilities through collaboration, reflection, and problem-solving. This approach supports competency-based development by allowing teachers to improve their abilities based on authentic classroom challenges.

The connection between PLC and human resource management is also supported by the resource-based view (RBV), which explains that organizational advantages are created through valuable, unique, and difficult-to-replicate resources (Barney, 1991). In educational organizations, teacher competency and professional communities represent important resources that contribute to institutional improvement. Therefore, PLC can function as a strategic mechanism for developing human capital by strengthening individual competence while simultaneously building organizational learning capacity. Research highlights that leadership support, organizational commitment, and supportive structures are important factors determining whether PLC can develop into a sustainable human resource development strategy (Hairon & Dimmock, 2012; Prastiko et al., 2024).

Teacher competency development through continuous professional learning

Teacher competency development is a continuous process that requires more than knowledge acquisition. Teachers are expected to develop pedagogical competence, professional competence, social competence, and personal competence through lifelong learning and reflective practice. Sustainable teacher development requires an environment that enables teachers to learn from experience, collaborate with colleagues, and continuously improve their instructional practices (Darling-Hammond et al., 2017).

In the context of educational organizations, competency development should be integrated into institutional systems rather than treated as an individual responsibility. When professional learning activities are connected with classroom practices, student needs, and school improvement goals, they become more meaningful. PLC provides such an environment by facilitating collaborative planning, peer feedback, reflection, and evidence-based decision-making.

Previous studies suggest that participation in PLC can improve teachers' professional knowledge, instructional strategies, and confidence in addressing classroom challenges. Furthermore, collaborative professional learning encourages teachers to develop stronger professional identities and collective responsibility toward student achievement (Muspiroh et al., 2024; Vescio et al., 2008).

In madrasah contexts, teacher competency development also involves moral and ethical dimensions. Teachers are expected not only to demonstrate academic and pedagogical abilities but also to serve as role models who exemplify integrity, responsibility, and professional commitment. Therefore, competency development in madrasahs requires an approach that integrates professional improvement with institutional values and educational missions.

Professional learning community in the madrasah

Madrasahs have unique characteristics because they combine academic objectives with religious values and character development. Consequently, teacher professional development in madrasahs requires an approach that considers both professional competence and organizational culture. PLC provides a relevant framework because it emphasizes collective learning, shared responsibility, and continuous improvement, which are consistent with the principles of learning organizations.

As an organizational learning approach, PLC enables madrasahs to transform individual teacher knowledge into collective institutional capacity. Through collaboration, reflection, and knowledge sharing, teachers contribute to the development of professional communities that support school improvement. However, PLC implementation may differ depending on leadership practices, institutional structures, available resources, and existing professional cultures.

Previous studies indicate that PLC development is influenced by the extent to which schools provide supportive leadership, clear structures, collaborative opportunities, and mechanisms for evaluation (Hairon & Dimmock, 2012; Hord, 1997). Some institutions develop PLC through formal systems and policies, while others rely more on informal collegial relationships among teachers. Understanding these differences is important because PLC effectiveness depends not only on the existence of collaborative activities but also on how these activities become embedded in the organizational culture.

Based on this perspective, this study examines PLC as a human resource management strategy at MTsN 3 Jombang and MTsN 17 Jombang by analyzing its construction, implementation, and contribution to teacher competency development. This approach can reveal how PLC operates within madrasah organizations and how professional learning communities can strengthen individual, professional, and institutional capacities.

Methodology

Research design

This study employed a qualitative approach using a multisite case study design to examine the construction, implementation, and contribution of PLC as a human resource management strategy for developing teacher competencies at MTsN 3 Jombang and MTsN 17 Jombang. A qualitative approach was selected because the study focused on understanding processes, experiences, meanings, and organizational practices developed by school members within their natural settings.

The multisite case study design was chosen because it enabled an in-depth investigation of PLC practices across two different madrasah contexts. The two research sites were selected purposively based on their involvement in developing teacher professional learning activities

through PLC, while also representing different institutional characteristics. This design allowed the researcher to identify similarities, differences, and contextual variations between cases through *literal replication* and *theoretical replication* strategies (Yin, 2018). The purpose of the study was not statistical generalization but analytical understanding of how PLC is constructed and developed as an organizational strategy for teacher competency improvement.

Research sites and participants

The research was conducted at MTsN 3 Jombang and MTsN 17 Jombang. These two madrasahs were selected because both institutions have implemented professional learning activities involving teacher collaboration, reflection, and competency development. However, each site demonstrates different characteristics in terms of organizational culture, leadership practices, and the degree of PLC institutionalization.

Participants were selected using purposive sampling based on their knowledge, experience, and direct involvement in PLC implementation. The 10 participants included madrasah principals, vice principals responsible for curriculum affairs, Kelompok Kerja Guru (KKG, teacher working group) coordinators, and teachers actively involved in professional learning activities. These participants were selected because they possessed relevant information regarding PLC construction, implementation mechanisms, leadership support, and PLC's contribution to teacher competency development.

In addition to interview data, the study also utilized institutional and PLC-related documents, including school programs, teacher development activities, meeting records, and other relevant materials. The combination of participants and documentary sources provided a comprehensive understanding of PLC practices within each research site.

Data collection

Data were collected through three main techniques: semistructured interviews, nonparticipant observation, and document analysis. The use of multiple data sources followed the principle of multiple sources of evidence in case study research, allowing the researcher to examine the phenomenon from different perspectives and strengthen the credibility of the findings (Yin, 2018).

Semistructured interviews were conducted with principals, curriculum coordinators, KKG coordinators, and teachers to explore their understanding of PLC, the processes involved in its implementation, leadership roles, challenges encountered, and perceived contributions to teacher competency development. The semistructured format provided flexibility for participants to explain their experiences while allowing the researcher to maintain focus on the research objectives.

Nonparticipant observation was conducted to examine professional interactions, collaborative activities, teacher discussions, reflection processes, and other PLC-related practices within the madrasah environment. Observation helped capture actual practices beyond participants' verbal explanations.

Document analysis was conducted to support and verify information obtained from interviews and observations. Documents examined included madrasah development programs, teacher competency development activities, meeting documentation, curriculum-related documents, and records of professional learning activities. All collected evidence was

organized into a case study database to maintain systematic documentation and ensure traceability throughout the research process (Yin, 2018).

Data analysis

Data analysis was conducted through several stages based on the principles of qualitative case study analysis proposed by Yin (2018). The first stage involved organizing and preparing all collected evidence from interviews, observations, and documents. Interview transcripts were reviewed, coded, and categorized according to the main research dimensions: PLC construction, PLC implementation, and PLC contribution to teacher competency development.

The second stage involved pattern matching by comparing empirical findings with theoretical concepts related to PLC, human resource management, and organizational learning. The researcher identified recurring patterns, relationships, and differences within each case. The third stage involved explanation building to develop interpretations regarding how PLC functions as a human resource management strategy in different madrasah contexts.

After analyzing each case individually, a cross-site analysis was conducted to identify similarities, differences, and unique characteristics between MTsN 3 Jombang and MTsN 17 Jombang. The final stage involved cross-site synthesis to develop conceptual models explaining the construction, implementation, and contribution of PLC across both sites.

Trustworthiness and ethical considerations

The trustworthiness of the research findings was maintained through several strategies, including construct validity, internal validity, external validity, and reliability procedures appropriate for case study research (Yin, 2018). Construct validity was strengthened through the use of multiple sources of evidence, including interviews, observations, and documents. Data triangulation was conducted by comparing information obtained from different participants and research techniques.

Internal validity was supported through pattern matching and explanation building, which enabled the researcher to connect empirical findings with existing theoretical perspectives. External validity was addressed through analytical generalization by developing conceptual explanations that may provide insights for understanding PLC implementation in similar educational contexts. Research reliability was maintained through the use of a case study protocol and systematic documentation of the research process through a case study database.

Ethical principles were applied throughout the research process. Participants were informed about the purpose of the study and provided voluntary consent before data collection. Confidentiality and anonymity were maintained by protecting participants' identities and using their professional roles only when necessary for analysis. The researcher also ensured that collected data were used solely for academic purposes.

Through this methodological approach, the study provides an in-depth understanding of how PLC is constructed, implemented, and contributes to teacher competency development as a human resource management strategy within madrasah organizations.

Findings

Professional learning community construction across two madrasahs

The findings from MTsN 3 Jombang and MTsN 17 Jombang indicate that PLC developed through three interconnected dimensions: construction, implementation, and contribution. At the construction level, both madrasahs established PLC based on a collective learning culture, professional collaboration, reflective practices, student learning orientation, institutional support, and facilitative-participative leadership. Teachers in both settings perceived PLC not merely as an administrative requirement but as a professional need to improve teaching practices and develop their competencies.

Despite these similarities, differences emerged in the degree of institutionalization. At MTsN 3 Jombang, PLC was developed through a more structured and systematic approach. Professional learning activities were integrated into madrasah policies, supported by leadership decisions, scheduled programs, documentation systems, and organizational mechanisms. PLC became part of the madrasah's management system and professional culture. Based on these characteristics, PLC at MTsN 3 Jombang can be categorized as an institutionalized professional culture-based PLC, where professional learning is embedded within organizational structures and supported by formal systems.

In contrast, PLC at MTsN 17 Jombang developed more organically through collegial relationships, teacher initiatives, and practical needs arising from classroom experiences. Professional learning activities emerged through daily interactions, shared experiences, peer support, and collaborative problem-solving among teachers. Although institutional structures such as internal Musyawarah Guru Mata Pelajaran (MGMP, subject teacher forum) and supervision activities supported PLC development, the process was less formally organized compared with MTsN 3 Jombang. Therefore, PLC at MTsN 17 Jombang represents a collegial culture-based PLC, characterized by strong professional relationships and teacher-driven learning practices.

Implementation of professional learning community practices

The implementation of PLC in both madrasahs occurred through several interconnected practices, including professional discussions, collaborative lesson planning, peer observation, reflective activities, utilization of student learning data, and continuous monitoring and evaluation. These practices demonstrate that PLC functioned as an ongoing professional learning process rather than a single development program.

At MTsN 3 Jombang, PLC implementation followed a more organized and continuous cycle. Professional activities were conducted through scheduled discussions, collaborative preparation of teaching materials, lesson study activities, reflection based on classroom experiences, analysis of student learning outcomes, follow-up actions, and evaluation. The availability of institutional support enabled PLC activities to become more consistent, documented, and integrated into madrasah improvement programs. The process reflected a structured professional learning cycle in which teachers collaboratively identified problems, developed solutions, implemented changes, and evaluated outcomes.

Meanwhile, PLC implementation at MTsN 17 Jombang was more flexible and responsive to teachers' immediate needs. Professional discussions, sharing of teaching experiences, exchange of learning materials, and peer consultation occurred naturally among teachers. Reflection and feedback contributed to improvements in instructional practices, although lesson study activities, collective data analysis, and documentation systems were not yet fully developed. Thus, PLC at MTsN 17 Jombang demonstrated strong professional interaction and collaborative culture, although further institutional strengthening is required to develop a more systematic learning cycle.

Although the two madrasahs differed in their level of formalization, both demonstrated similar patterns of professional learning. PLC practices connected collaboration, reflection, classroom improvement, evidence-based decision-making, and continuous development. This finding indicates that PLC can develop through different organizational pathways depending on leadership support, institutional structures, and existing professional cultures.

Contribution of PLC to teacher competency and organizational development

The contribution of PLC was identified across three interconnected levels: micro, meso, and macro. At the micro level, PLC influenced individual teacher development by encouraging changes in instructional practices, improvement of teaching materials, professional reflection, openness to peer feedback, and the use of student learning data for instructional improvement. These processes primarily strengthened teachers' pedagogical and professional competencies while also supporting social and personal competencies through collaboration, communication, and reflective engagement.

At the meso level, PLC strengthened professional communities within the madrasahs, particularly through internal KKG and MGMP activities. These communities functioned as spaces for discussing teaching problems, sharing good practices, developing learning materials, analyzing student outcomes, and planning collective improvements. Through these activities, teachers moved beyond individual problem-solving toward collaborative professional learning.

At the macro level, PLC contributed to the development of madrasah capacity as a learning organization. The implementation of PLC supported the development of a quality-oriented culture, academic management practices, data-informed decision-making, leadership support, and institutional learning capacity. However, differences were observed between the two sites. At MTsN 3 Jombang, PLC contributions were more strongly integrated into institutional policies and management systems. Meanwhile, at MTsN 17 Jombang, PLC contributions were more visible through professional culture, teacher collaboration, and daily learning practices.

Cross-site synthesis of PLC development models

The cross-site analysis reveals that the main difference between MTsN 3 Jombang and MTsN 17 Jombang was not the existence of PLC itself but the degree of formalization, systematization, and institutionalization. Both madrasahs demonstrated the essential characteristics of PLC, including collaboration, reflection, collective responsibility, and continuous improvement. However, the pathways through which PLC developed were influenced by different organizational conditions.

MTsN 3 Jombang represents a more institutionalized PLC model, where professional learning is supported by formal structures, leadership policies, scheduled activities, and documentation mechanisms. Meanwhile, MTsN 17 Jombang represents a collegial PLC model, where professional learning develops primarily through teacher interaction, shared experiences, and professional commitment.

The findings suggest that PLC should not be viewed merely as a forum for teacher meetings but as an organizational learning system that connects professional culture, leadership, human resource development, collaborative practices, and continuous improvement. The relationship between construction, implementation, and contribution demonstrates that strong PLC development requires both cultural foundations and organizational support. Therefore, PLC functions as a strategic human resource management approach that transforms individual teacher learning into collective professional capacity and institutional improvement.

Discussion

The findings of this study demonstrate that PLC develops through different organizational pathways depending on the institutional context, although both madrasahs share similar fundamental principles. In both MTsN 3 Jombang and MTsN 17 Jombang, PLC was built upon collective learning, professional interaction, reflection, and shared responsibility for improving teaching practices. However, the difference between the two sites lies in how these practices are embedded within the organizational system. This finding suggests that PLC development is not determined only by the presence of collaborative activities but also by the extent to which collaboration becomes part of the institutional culture and management system.

The more structured development of PLC at MTsN 3 Jombang indicates that organizational support plays an important role in transforming professional collaboration into a sustainable human resource development strategy. The existence of policies, scheduled activities, documentation, and leadership support allowed PLC practices to move beyond informal teacher interaction and become part of the madrasah's improvement mechanism. This finding supports previous research emphasizing that PLC sustainability requires not only teacher willingness but also supportive leadership, organizational structures, and clear professional learning systems (Hairon & Dimmock, 2012). In this context, leadership functions not only as a facilitator of activities but also as a builder of professional culture that enables continuous learning.

Meanwhile, the development of PLC at MTsN 17 Jombang shows that professional learning communities can also emerge through informal and collegial processes. The existence of mutual support, teacher discussions, knowledge sharing, and collaborative problem-solving demonstrates that professional culture can become an important foundation for PLC development. Although the implementation was not fully formalized, the strong interpersonal relationships among teachers enabled continuous professional interaction. This finding expands the understanding of PLC by showing that institutional formalization is not the only pathway for developing professional communities. In some contexts, PLC may initially grow from teachers' practical needs and gradually develop into a stronger organizational system.

The differences between the two madrasahs indicate that PLC implementation should be understood as a developmental process rather than a fixed model that must be applied

identically across institutions. Some schools may develop PLC through formal structures and institutional policies, while others may begin through teacher initiatives and collegial relationships. Therefore, successful PLC implementation requires alignment between organizational capacity, leadership approach, and existing professional culture. This perspective is consistent with the concept of learning organizations, where institutional learning develops through interactions between individual learning, collective knowledge creation, and organizational support (Senge, 1990).

The findings also show that PLC contributes to teacher competency development through continuous professional learning processes. The improvement of pedagogical and professional competencies occurred through collaborative lesson planning, reflection, discussion of learning problems, and the use of student learning evidence. Meanwhile, social and personal competencies developed through communication, openness to feedback, professional responsibility, and commitment to collective improvement. These findings reinforce previous research indicating that PLC supports teacher growth by connecting professional learning with daily teaching practices rather than separating development activities from classroom realities (Darling-Hammond et al., 2017; Meesuk et al., 2020).

Furthermore, the contribution of PLC at the micro, meso, and macro levels demonstrates that teacher professional development cannot be separated from organizational development. At the micro (individual) level, PLC changes how teachers reflect on and improve their practices. At the meso (professional community) level, PLC strengthens collaboration and collective problem-solving. At the macro (institutional) level, PLC contributes to the development of a learning-oriented organizational culture. This finding supports the human resource management perspective that employee development becomes more effective when it is integrated with organizational goals, performance improvement, and continuous learning systems (Armstrong & Taylor, 2023).

From a human resource management perspective, this study highlights that PLC functions beyond a professional discussion forum. PLC operates as a strategic mechanism for developing human capital by transforming individual teacher knowledge into collective organizational capacity. Through collaboration, reflection, and shared learning, teachers not only improve their own competencies but also contribute to the development of institutional knowledge and improvement practices. Therefore, PLC represents a strategic approach that connects teacher development, organizational learning, and educational quality improvement.

The cross-site synthesis further reveals that the effectiveness of PLC is influenced by the balance between cultural and structural dimensions. A strong professional culture provides the foundation for collaboration, while institutional systems provide continuity and sustainability. MTsN 3 Jombang illustrates how PLC can become embedded within formal organizational mechanisms, whereas MTsN 17 Jombang demonstrates the importance of collegial relationships as an initial driver of professional learning. These findings contribute to the PLC literature by showing that different organizational conditions may produce different forms of PLC development while maintaining the same core principles of collaboration, reflection, and continuous improvement.

Overall, this study proposes that PLC should be viewed as a dynamic human resource management strategy rather than merely a teacher collaboration program. The development of PLC follows a process from construction, through implementation, to contribution, where professional culture, leadership support, and organizational systems interact to strengthen teacher competencies and madrasah capacity. The findings provide practical implications for

educational leaders by showing that sustainable PLC development requires both formal institutional support and genuine professional commitment from teachers.

Conclusion

This study concludes that PLC functions as a strategic human resource management approach for developing teacher competencies and strengthening madrasah capacity. PLC operates not only as a space for teacher collaboration but also as an organizational learning system that connects professional culture, leadership support, institutional structures, reflection, and continuous improvement practices. The findings demonstrate that PLC development involves three interconnected processes: construction, implementation, and contribution, which collectively transform individual teacher learning into collective professional capacity.

In terms of construction, both MTsN 3 Jombang and MTsN 17 Jombang developed PLC based on similar foundations, including collaborative learning culture, professional reflection, shared responsibility, and commitment to improving student learning. However, the two sites differed in their level of institutionalization. MTsN 3 Jombang represents an institutionalized professional culture-based PLC, where PLC is supported by formal policies, structured programs, documentation, leadership support, and integration into madrasah management systems. Meanwhile, MTsN 17 Jombang represents a collegial culture-based PLC, where professional learning develops through teacher interaction, collegial relationships, shared experiences, and practical classroom needs. These findings indicate that PLC may develop through different pathways depending on organizational conditions and professional culture.

Regarding implementation, PLC in both madrasahs followed a professional learning cycle involving collaboration, instructional practice, reflection, data utilization, and improvement. Although MTsN 3 Jombang demonstrated a more systematic and documented implementation through a structured professional learning cycle, MTsN 17 Jombang showed a more flexible and developmental process. This suggests that effective PLC implementation does not necessarily depend on a single model but requires alignment between leadership, organizational support, and existing professional practices.

The contribution of PLC was identified across three levels. At the micro (individual) level, PLC strengthened teachers' pedagogical, professional, social, and personal competencies through reflective practice, collaboration, feedback, and continuous learning. At the meso (professional community) level, PLC strengthened KKG/MGMP as platforms for knowledge sharing, problem-solving, and collective improvement. At the macro (institutional) level, PLC contributed to the development of a learning-oriented madrasah culture through improved academic management, data-informed decision-making, and organizational capacity building.

The cross-site synthesis confirms that PLC is not merely a teacher meeting activity but a strategic mechanism for managing and developing human resources in educational organizations. The effectiveness of PLC depends on the interaction between professional culture and institutional support. Therefore, madrasahs seeking to develop sustainable PLC should strengthen both cultural dimensions, such as trust, collaboration, and teacher commitment, and structural dimensions, such as leadership policies, monitoring systems, documentation, and professional development programs. This study contributes to the understanding of PLC by demonstrating how professional learning communities can function

as a bridge between teacher competency development and organizational transformation within the madrasah context.

Disclosure Statement

No potential conflict of interest was reported by the authors.

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