

INTRODUCTION

Teachers play a nexus role in quality of instructional processes and educational outcomes. The professionalism of the teacher extends far beyond and moves away from mere mastery of a subject aspect into its fruition in continuous professional development, reflective practice and responses to changing curricular needs and societal demands. This has thus made the strengthening of sustainable teacher professional development a central reform agenda within education systems across the globe and nationally. It is therefore not surprising that contemporary scholarship increasingly recognises Professional Learning Communities (PLCs) as one of the most effective mechanisms for developing collaborative professionalism, and thereby improving instructional quality and student learning outcomes . (Lay, 2024; Muhid et al., 2020; Nguyen et al., 2024; Rizqi & Syafika, 2024; Ying, 2026).

Professional Learning Communities are defined as organized groups of educators who work in a collaborative, reflective, data-based process to improve teaching and learning. There is empirical evidence that holds true about the difference of PLC participation and its association with greater instructional coherence, enhanced collective responsibility, and increased teacher self-efficacy. (Karaiskos et al., 2024; Preusse-Burr et al., 2024; Steyn, 2017). Additionally, distributed leadership within professional learning communities (PLCs) strengthens teacher agency and the formation of their identity as professionals by enabling them to be active agents of institutional improvement rather than passive recipients of reform initiatives. (Adusei & Nyanihorba Ayamba, 2025; Tay et al., 2021; Tinoca et al., 2025).

Notwithstanding this strong evidence base, structural and contextual dynamics persist. The effectiveness of a PLC that it's sustained over time is based on leadership support, policy alignment, available collaboration time and institutional infrastructure. (Masson & Zajontz, 2022; Ningsih & Karlimah, 2024; Rizqi & Syafika, 2024). PLC structures devoid of coherent reinforcement risk proceduralizing their application. (Belay & Melesse, 2024; Carney et al., 2019). The differences in

cultural, policy, and resource contexts then also add to variations in implementation outcomes where direct generalization across settings is constrained. (Nguyen et al., 2024; Zulu & Mukeredzi, 2021).

For Indonesian context, the teacher professional development issues still at be priority particularly for the case of Islamic Senior High Schools (*Madrasah Aliyah*). At such institutions, teachers are expected to do more than demonstrate mastery of the subject matter; they are also expected to draw on pedagogical innovations and contextual responsiveness that align with Islamic educational teachings. But inequities in access to ongoing professional learning and uneven mastery of instructional innovation remain. The implementation of professional competency reinforcement is targeted for all teachers in an Islamic Senior High School with a total of 93 schools, inclusive of 1860 teachers and 11441 students based on the institutional data dispersal. In Indonesia there are still many less than ideal indicators that can be formulated through statistical data, as in Pandeglang Regency which has not yet been fully able to transform an educational paradigm done professionally.

In Indonesia, PLC is institutionally represented in the forum of Subject Teachers (*Musyawarah Guru Mata Pelajaran-MGMP*), a formal meeting place for teachers to meet and learn collaboratively. MGMP-based PLCs are expected to allow teachers to jointly analyze and diagnose any instructional problems, as well as collaborate in creating teaching resources, deepening subject-matter content knowledge, and refining pedagogical knowledge. However, practical realization has still an administrative character and does not sufficiently aim to enhance professional competence. Teacher involvement is inconsistent, and PLC activity does not always align systematically with the actual instructional needs in their fields.

Within this context the need for a re-validation of PLC structures as a potential and data-based model for continuous professional development is critical. Therefore, this study intends to describe quantitatively the impact of empowering Professional Learning Communities on the professional competence teachers Islamic Senior High School in Pandeglang Regency. By framing it in evidence-based collaborative professional development theory

and community-of-practice paradigms. (Eryilmaz & Dikilitaş, 2023; Littlejohn et al., 2019; Mukherjee, 2024; Sabtu et al., 2025; Tynjälä et al., 2019), this study examines how the systemised empowerment of PLCs feeds into teacher professionalism with empirical data. It is hoped that the findings will provide insights to policymakers and educational stakeholders alike in taking a more effective, contextual and sustainable approach to designing and implementing teacher development strategies based on the principles of collaborative learning.

LITERATURE REVIEW

Theoretical Foundations of Professional Learning Communities.

Professional Learning Communities (PLCs) derive from the theory of communities of practice, which postulates that professional learning is a socially situated and collaborative process that is negotiated through shared inquiry and identity construction. In the past decade, the meaning of PLCs has increasingly turned to systemic and policy-linked models in which PLCs are accordingly implemented as institutional infrastructures for sustainable professional learning. (Nguyen et al., 2024; Rizqi & Syafika, 2024). In the Indonesian context, PLC represented institutionally can be a Subject Teachers' Forum (Musyawarah Guru Mata Pelajaran - MGMP) which is a formal platform for teachers at the same level to collaborate with peers in solving instructional issues. Recent scholarship shows that professional forums emerge with efficacy in developing teacher competence as they are based on collaborative, context-based practice. (Muzakkir et al., 2025; Pajar et al., 2023). In contrast to episodic, top-down training, localized and collaborative teacher working groups have proven objectively more impactful for sustained professional development. (Firmadani, 2022). In the context of Islamic educational setting PLCs also functions as a means to bridge religious values and modern pedagogy (Syaputra, 2025).

Collaborative Professional Development and Teacher Competence

The construct of teacher professional competence is a multi-dimensional one that includes pedagogical

knowledge, mastery of the subject content, adaptive expertise and reflectiveness. The notion of Pedagogical Content Knowledge (PCK) continues playing a pivotal role, where teachers must blend profound content knowledge with effective pedagogical approaches. (Tripathi, 2025). In the last 10 years, researchers have added degrees of technology adaptability. (Nafisah et al., 2025; Widyanto & Viententia, 2022). Research evidence indicates that collaborative forms of professional development have positive effects on all three dimensions, while isolated training models reinforce limited practice. (Karaiskos et al., 2024; Preusse-Burr et al., 2024; Steyn, 2017). Professional competence for teachers in Islamic Senior High Schools (*Madrasah Aliyah*) has two dimensions: the academic dimension and the integration of moral and Islamic values in teaching practice (Ritonga, 2023).

Leadership, Policy Alignment, and Institutional Support

For PLC to be effective long term, it leans heavily on structural and leadership support. Studies indicate that leadership alignment, time allocation for collaboration, and a coherent institutional policy are fundamental facilitators of meaningful professional communities. (Ningsih & Karlimah, 2024; Rizqi & Syafika, 2024; Zulu & Mukeredzi, 2021). In the absence of these conditions, PLCs run the risk of serving as administrative routines rather than transformative professional spaces. (Belay & Melesse, 2024; Carney et al., 2019). System-level models show that embedding PLCs into larger designs of education reform strengthens scalability and institutional coherence. (Hanafi, 2020; Lay, 2024; Omar et al., 2020). In Islamic school environments professional development must be based upon institutional values, which is why the leadership commitment in these contexts is critically important. (Syaputra, 2025).

PLC Empowerment and the Identified Research Gap

Recent empirical research has continuously shown a positive association between involvement in active PLC and development of teaching competence. Susmiatun et al. (2021) found that the intensity of participation and achievement motivation in teacher working groups greatly influences professional competence in

planning and implementing instruction. (Susmiatun et al., 2020). Similarly, Handayani et al. (2025), after its reintegration and empowerment of PLCs, reported measurable improvements in the evaluation of SMART-based learning. (Handayani et al., 2025). However, a comprehensive synthesis of the existing literature indicates an enduring absence. Most existing research considers types of activity in general public schools. So far, still little empirical quantitative evidence study which investigated the comprehensive empowerment of PLCs on teacher professional competence within Islamic Senior High Schools (*Madrasah Aliyah*) both planning and structured activities to reach sustainable impact through institutional support and sustainability mechanisms. By focusing on how empowering PLCs promote teacher professionalism, this study seeks to fill that gap by presenting contextually and empirically-grounded quantitative evidence in faith-based secondary teaching and education settings.

RESEARCH QUESTIONS/OBJECTIVES

This study aims to conduct an empirical test of the influence between empowering Professional Learning Communities (PLCs), in this study locally institutionalized as Subject Teachers Forum (*Musyawarah Guru Mata Pelajaran - MGMP*) on teacher professional competence at Islamic Senior High Schools (*Madrasah Aliyah*) in Pandeglang Regency.

This study aims to contribute quantitative evidence of how structured and sustainable PLC empowerment enhances teacher professionalism in a faith-based secondary education context. So to be in line with that goal, this research aims at addressing the below questions:

1. How is the PLC empowerment of Islamic Senior High School teachers in Pandeglang Regency so far?
2. How is the professional competence of Islamic Senior High School teachers in Pandeglang Regency?
3. How significant the effect of PLC empowerment on the professional competence of Islamic Senior High School teacher?

These questions are designed in a way to include both the descriptive states of PLC implementation and

teacher competence, as well as test for an inferential relationship between both variables.

Participants

The study population consisted of all Islamic Senior High School (*Madrasah Aliyah*) teachers who participated in discipline-based Professional Learning Communities (MGMP) in Pandeglang Regency, Banten Province, Indonesia. According to the official 2025 Institutional data, a population of 543 teachers were sampled from public and private madrasahs.

This study performed proportional random sampling to guarantee representation and equal distribution among the subject areas. We computationally applied a 30% sampling fraction of the total population, resulting in a final sample size of 163 teachers. Subjects were divided into four groups according to M, adaptive capability and coping strategy, and participants for each subject group was sampled proportionally.

A nationally representative sampling was required to allow for sufficient statistical power in the quantitative analyses and an accurate reflection of the diversity present across subject specializations and institutional backgrounds of teachers in the wider population.

METHODOLOGY

Research Design

This research utilized a quantitative research method with a cross-sectional survey design. The choice of this design was based on the goal of the study to measure variables in an objective manner and explore a causal relationship between Empowerment of Professional Learning Communities (PLCs) and teachers' professional competence. The quantitative approach is suitable as it allows for the systematic measurement of observable indicators and the statistical testing of hypothesized relationships within a defined population, in this case Alghofur Islamic Senior High School (*Madrasah Aliyah*) teachers.

The research framework assumed that PLC empowerment was the independent variable, and teacher professional competence was the dependent variable propositioned. This design was implemented to capture quantitative evidence on the strength and

significance of this association in the context of the specified region.

Instruments

An exploratory quantitative study conducted, a structured, closed-ended questionnaire used for data collection based on relevant theoretical constructs of PLC empowerment and teacher professional competence. The instrument used a five-point Likert scale from strongly disagree (1) to strongly agree (5).

The questionnaire used a 60 item scale focusing on the two constructs of professional learning community in relation to PLC empowerment (independent variable) and teacher professionalism competence (dependent variable). It was the empowerment dimension of the PLC which constituted collaborative and participative planning; institutional support, facilitation by leadership positions, sustainability of activities in terms of participation of teachers and professional engagement. The construct of professional competence included pedagogical competence, mastery of subject matter, instructional innovation, evaluation practices, and the integration of contextual and value-based dimensions relevant to *Madrasah Aliyah*.

Validity and reliability testing was performed for the instrument before full-scale data collection. Pearson product-moment correlations were performed to test construct validity, and all of the items correlated significantly ($p < 0.05$) positively with each other, indicating acceptable construct validity. The reliability analysis using Cronbach's Alpha showed that the internal consistency in this study was at a high level, with coefficients of 0.957 for PLC empowerment variable, and 0.922 for professional competence variable which indicated good quality data

Procedures and Data Collection

The validated questionnaires were distributed directly to the 163 selected teacher respondents for collecting primary data. Data were collected during scheduled PLC (MGMP) meetings to facilitate accessibility and optimal response rates. Participants were made aware of the study's aim, and in line with proper research ethics, they were assured confidentiality and that they could take part on a voluntary basis.

Besides the original survey data, secondary data were collected through document reviews. Specifically PLC organizational structures, annual work programs, teacher demographic profiles, and official professional development policies issued by the Ministry of Religious Affairs in Pandeglang Regency. Quantitative findings were contextualized through the use of secondary data and descriptive statistics to illustrate any institutional characteristics pertaining to PLC implementation.

Data Analysis

SPSS statistical software was used to perform data analysis in several systematic stages.

The data were initially analyzed for descriptive statistics, i.e. the central tendency of each variable as well as its mean. The levels of PLC empowerment and teacher professional competence were described by means and percentages as well as categorical interpretations.

Then, prerequisite tests were performed to verify that the data met assumptions for inferential analysis. Kolmogorov-Smirnov test was used to check the normality, complemented by visual inspection of Normal P-P plots. The linearity testing was done to confirm the presence of a linear relationship between independent and dependent variables.

Inferential statistical analysis was performed through a simple linear regression to investigate the empowerment of PLC on teacher professional competence. All types of hypothesis testing were done at a 0.05 significance level. A regression model assessed the direction and strength of the relationship, and the percentage of variance in teacher professional competence predicted by PLC empowerment.

FINDINGS AND DISCUSSION

The Current Level of PLC Empowerment

Descriptive statistical analysis was used to answer the first research objective, aiming to assess Professional Learning Communities (PLC) empowerment for Islamic Senior High School (*Madrasah Aliyah*) teachers in Pandeglang Regency. The findings are summarized in Table 1.

Table 1: Descriptive Statistics for PLC Empowerment (N = 163)

Variable	N	Min	Max	M	SD	Category
PLC Empowerment	163	2.20	4.90	3.79	0.48	Moderate

Note. Scale range: 1 (Strongly Disagree) to 5 (Strongly Agree).

PLC empowerment was found to be at moderate levels ($M = 3.79$, $SD = 0.48$). This indicates that the PLC (MGMP) structure operates; however, the strategic potential has not been effective. The results describe regular meetings, discussion of instruction and group development of teaching tools; however, qualitative patterns in the responses show limited depth for innovation or sustainability planning beyond what is driven through top-down leadership reinforcement.

This trend mirrors the finding from Firmadani (2022) that localized teacher forums tend to function procedurally as opposed to transformative spaces for professional learning hubs. (Firmadani, 2022). Similarly, Pajar et al. (2023) provide a detailed account of how subject-based forums treat teachers as professionals only when they organize discourse about their subjects, including teaching within them to focus on systematic professional inquiry rather than bureaucratic compliance. (Pajar et al., 2023).

Rizqi and Syafika (2024) argue that PLC effectiveness hinges on institutional support and policy coherence, while Lay (2024) warns of the danger for PLCs to lose substantive value by becoming little more than ostensive platforms without structured empowerment strategies. The moderate category recognized in this study thus demonstrates partial, rather than full, institutionalization.

With regard to Islamic schools, syaputra (2024) argues that PLCs have unique potential in integrating pedagogic innovation with value systems rooted in religiosity. Yet the moderate results indicate that this integration is seldom practiced.

The Current Level of Teachers' Professional Competence

Descriptive statistics were also calculated for the professional competence of educators in order to

address the second research aim. The results are shown in Table 2.

Table 2: Descriptive Statistics for Teachers' Professional Competence (N = 163)

Variable	N	Min	Max	M	SD	Category
Professional Competence	163	3.20	5.10	3.83	0.31	Moderate-High

The data shows that teachers' professional competence is classified as moderate to high ($M = 3.83$, $SD = 0.31$). Overall, teachers showed adequate mastery of subject matter and instructional planning. But beyond that, we see less development in the advanced dimensions such as adaptive innovation and integration consistency in learning outcomes with classroom practice, reflective pedagogical experimentation.

This pattern echoes Nafisah et al. (2025) argues, 21st-century professionalism no longer relies simply on knowing content. (Nafisah et al., 2025). ut instead adaptive expertise. Tripathi(2025) also emphasizes that the essence of professional competence lies in Pedagogical Content Knowledge (PCK), which needs to be honed continuously within collaborative inquiry. (Tripathi, 2025).

Widiyanto et al. (2022) also emphasize that proficiency in contemporary education can only embed technological adaptation and curriculum responsiveness. For *Madrasah Aliyah* teachers, Ritonga (2024) highlights that dual competence is mandated namely, academic mastery and the ability to integrate Islamic values. Moderate-high level indicates a degree of foundational competence and that systematic, structured collaborative empowerment must continue in order to make continued progress.

The Effect of PLC Empowerment on Teachers' Professional Competence

For the third research objective, simple linear regression analysis was employed. Before inferential testing, normality and linearity assumptions were met (Kolmogorov-Smirnov $p > .05$; linearity $p < .001$). Table 3 shows the results of the regressions.

As illustrated in Table 1, the analysis indicates

Table 3: Simple Linear Regression Analysis of PLC Empowerment on Professional Competence (N = 163)

Model	B	SE	β	t	p	R	R ²
Constant	2.654	0.173		15.319	< .001	0.475	0.226
PLC Empowerment	0.310	0.045	0.475	6.858	< .001		

Note. Dependent Variable: Teachers' Professional Competence.

a statistically significant effect of PLC empowerment on professional competence ($B = .475$, $p < .001$). There was a positive moderate correlation ($R = 0.475$) between the monthly energy and The individual monthly value of the HIV rate in GHA units per month. PLC empowerment accounts for 22.6% of the variance in teachers' professional competence ($R^2 = 0.226$).

The unstandardized coefficient ($B = 0.310$) shows that the increase of one unit in PLC empowerment, gives an increase of 0.310 unit in professional competence. The qualitative and quantitative evidence presented in the literature review supports that structured and empowered collaborative communities are significant contributors to developing effective teachers.

These results agree with Susmiatun et al. (2021), who showed better construction of pedagogical plans that guide classroom practices when teacher working groups are actively involved[4]. Handayani et al. (2025) also found tangible gains in capacity to evaluate after investing in PLC reintegration efforts.

Globally, Belay and Melesse (2024) show that PLC engagement is highly correlated with motivation for lifelong professional development. (Steyn 2017; Karaiskos et al. (2024) further reinforces that inquiry-based, collaborative professional development promotes teacher self-efficacy and reflective capacity.

Theoretical Implications: Aligning with Shulman's PCK framework rearticulated by Tripathi(2025), bargaining competent underpinning of pedagogical reflection and constructing knowledge around collaborative tenets of learning. Additionally, Tay et al. (2021) describe the roles of distributed leadership within PLCs as a means to further empower professionals.

Critical Discussion: Strengths, Gaps, and Implications

This study has identified a moderate positive relationship, reinforcing the fact that PLC empowerment is indeed a strategic but tactical

contributor to teacher competence. But with an R^2 value of 0.226, suggests that more than three-fourths (77.4%) of the variance in professional competence is evidently explained by variables yet unexplained or not included in the model.

This gap is theoretically significant. Key factors would likely include leadership support (Ningsih & Karlimah, 2024), institutional alignment (Rizqi & Syafika, 2024; Belay & Melesse, 2024), motivational dimensions . (Jin et al., 2024; Thirumalai & Sarangapani, 2025) are likely contributing variables. Inclusive pedagogical practices (Uribe-Zarain et al., 2025) and culturally responsive integration (Ciampa & Reisboard, 2024) may also mediate the relationship between PLC participation and competence development. Inclusive pedagogical practices (Uribe-Zarain et al., 2025) and culturally responsive inclusion could also mediate the connection between PLC participation-competence development

The primary contribution of this study is its quantitative, context-specific measurement of PLC empowerment in Islamic Senior High Schools that has been can hardly found in empirical literatures. Most previous analyses are set in general public school contexts, or take a qualitative approach. By turning PLC empowerment into a measurable construct, this research provides empirically precise contribution to the area.

However, the cross-sectional design limits temporal causation inference. Next research could use longitudinal designs or structural equation modeling to understand mediating variables like leadership, organizational culture, intrinsic motivation and digital literacy.

Implications for Practice and Policy

These findings indicate a need for policy makers to move beyond mandates requiring participation in PLCs towards actively cultivating the qualities of PLC that empower people. Structured approach,

leaderships facilitation, monitoring mechanism and digitization are key.

PLC empowerment for Islamic Senior High Schools should purposefully integrate value-based instructional design and pedagogical innovation (Syaputra, 2024; Ritonga, 2024).

Theoretically, this study further combines communities of practice theory with contemporary collaborative professional development models by verifying that professional improvement is propelled not by one's presence but rather the systematic needs of empowerment.

Implications

The results of this study have considerable implications for teacher education systems, institutional leadership, and classroom-level teaching practices especially in Islamic Senior High Schools (*Madrasah Aliyah*).

Implications for Teacher Education Policy

Whereas the results in favour of an association between PLC empowerment and teacher professional competence were supported by a statistically significant relationship between constructs, empirical research suggests that CPD systems should transition away from episodic, top-down training models toward structured professional learning communities. The moderate effect size associated with PLC empowerment ($R^2 = 0.226$) also confirms that PLCs are by no means the exclusive driver of competence, but rather represent a significant and strategic contributor to professional growth.

For policymakers especially within the Ministry of Religious Affairs (Kementerian Agama), it reflects where PLCs (MGMP) should be transformed, from an administrative compliance-based mechanism for teacher professional learning into a formalized quasicreate embedding infrastructure. Institutional reinforcement should include:

1. Directs funding toward international PLC programming.
2. Realistic operational guidelines coinciding with specific competence measures.
3. Development of principals as leaders of collaborative professional inquiry

4. Systems to monitor and evaluate PLC quality not just participation rates.

PLC empowerment embedded in national teacher education policy frameworks can help to build coherence between institutional mandates and classroom practice. Furthermore, including culturally relevant and values-based pedagogical elements in the professional development of learning communities can ensure alignment between academic rigor and Islamic educational principles.

Implications for Teacher Professional Practice

At the instructional level, findings show that teachers participating in empowered PLCs were more pedagogically refined and more willing to innovate. This collaborative engagement allows teachers to riff on lesson structure, assessment techniques and classroom problems that deepens their understanding of Pedagogical Content Knowledge (PCK) through talking, writing and continually revising.

These findings indicate that in *Madrasah Aliyah*, the use of PLC empowerment is an implementation medium for habitually putting together a systematic academic standard with Islam as its approach. Sustained conversation allows teachers to collaboratively develop contextualized learning objects, equate moral and religious frameworks with pedagogical processes, and critically assess classroom processes.

Moreover, enhanced PLC structures encourage the development of professional identity and help eliminate instructional isolation. The collaborative environment fosters reflective practice, peer accountability, and adaptable responses to curriculum change and integration of technology into the learning experience.

Broader Educational Implications

The results also indicate that PLC empowerment must form part of a wider strategy of institutional reform. Given that PLC empowerment only explains some of the variance in professional competence, it would be appropriate for teacher development programs to incorporate complementary strategies such as instructional leadership development,

digital literacy enhancement and motivational reinforcement.

The PLC empowerment model will not only lay the foundation for a feedback-rich climate but also serve as an affordable strategy for professional development over the long run in financially limited school systems. Structuring collaborative time in schools can create increased internal professional expertise rather than depending exclusively on external training providers.

Empowering PLCs is an investment in your teachers, instruction, and ultimately student growth. Empowerment in a variety of activities, including developing time management and teaching to be more creative reflects the educational improvement that should be improved by Islamic Senior High Schools not only their pedagogical competence but also to strengthen educational excellence integrated with faith-based values as one of holistic model for teacher development.

CONCLUSION

This study seeks to empirically analyze the impact of empowering three professional learning communities (PLCs) locally institutionalized as *Musyawah Guru Mata Pelajaran (MGMP)* towards the professional competence of Islamic Senior High School (*Madrasah Aliyah*) teachers in Pandeglang Regency, Indonesia. The results reveal a statistically significant moderate positive impact of PLC empowerment on teachers' professional competence based upon a quantitative survey design and regression analysis, explaining 22.6% of the variance in their professional competency scores.

The findings provide evidence of a positive relationship between high-quality, ongoing collaborative professional learning and improved pedagogical qualities, subject knowledge, instructional planning and reflective professional disposition. Empowered beyond procedural routines, PLCs serve as strategic platforms for PCK advancement and professional identity reinforcing instructional practice rooted in value within contexts of Islamic institutions.¹

We hope that this study adds to the growing body of empirical knowledge in the field by providing context-specific quantitative evidence from *Madrasah*

Aliyah, which has attracted little attention relative to its numbers. The study contributes to the growing debate around sustainable, community-based models of continuous professional development in faith-based secondary education by proposing PLC empowerment as a measurable construct and positioning it as a precursor to teacher competence.

However, there are several limitations that should be noted. The study is geographically limited to a single regency, restricting wider generalizability. Moreover, PLC empowerment contributed 22.6% to the explained variance in professional competence while 77.4% of variance remained unexplained by present model. Varying from this dominant approach, we contend that teacher competence is undoubtedly a product of many interrelated factors such as instructional leadership, organizational culture, intrinsic motivation, coherence with institutional policies, and digital literacy capacity.

This indicates that future studies should be broadened with both methodological and conceptual scope. Mixed-methods approaches that combine quantitative modeling with qualitative inquiry would generate richer knowledge about how PLC processes transition into classroom transformation. Models with additional predictor variables like principal instructional leadership, school climate, teachers' intrinsic achievement motivation, digital transformation readiness and culturally responsive pedagogical integration will provide more comprehensive explanations. Longitudinal designs are also best able to capture developmental trajectories over time as opposed to cross-sectional associations.

It was found that the empowerment of PLCs is a scientifically based and systematic approach to strengthening teacher professionalism in Islamic Senior High Schools. Sustainable improvement, however, involves multifaceted reform approaches that combine collaborative power with leadership development, institutional alignment and technological progress.

REFERENCES

1. Adusei, O., & Nyanihorba Ayamba, B. B. (2025). Transformation to Inclusive Teaching and Learning Through Professional Learning Communi-

- ties. In *Sustainable Development Goals Series: Vol. Part F1175* (pp. 207-223). https://doi.org/10.1007/978-3-032-05453-1_15
2. Belay, S., & Melesse, S. (2024). Exploring the Link Between Teachers' Motivation for Continuous Professional Development and Professional Learning Communities: A Structural Equation Modeling Approach. *Sage Open*, 14(3). <https://doi.org/10.1177/21582440241281855>
 3. Carney, J., Chu, M., Green, J., Nutting, W., Donnelly, S., Clancy, A., Buly, M. R., & Carroll, D. (2019). Creating synergies for change. *Teachers College Record*, 121(12). <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090588357&partnerID=40&md5=86ceaab3552b388127283d56a3f2bd20>
 4. Ciampa, K., & Reisboard, D. (2024). Empowering Teacher Educators: Advancing Culturally Responsive Practices Through Professional Development. *Action in Teacher Education*, 46(4), 350-371. <https://doi.org/10.1080/01626620.2024.2357088>
 5. Eryilmaz, R., & Dikilitaş, K. (2023). Identity Tensions of in-Service Teacher Educators: A Narrative Inquiry. *Language Teaching Research*, 29(8), 3448-3466. <https://doi.org/10.1177/13621688231216816>
 6. Firmadani, F. (2022). Strategi Pengembangan Kompetensi Profesional Guru Sekolah Menengah Atas. *Jurnal Manajemen Pendidikan Jurnal Ilmiah Administrasi Manajemen Dan Kepemimpinan Pendidikan*, 3(2), 192-207. <https://doi.org/10.21831/jump.v3i2.48045>
 7. Hanafi, Y. (2020). The Changing of Islamic education curriculum Paradigm in Public Universities. *Al-Ta Lim Journal*, 26(3), 243-253. <https://doi.org/10.15548/jt.v26i3.552>
 8. Handayani, S., Annisya, A., Prasastianta, D. E., Amalina, E. N., & Kurniawan, R. A. D. (2025). Re-integrasi MGMP Dan Peningkatan Kompetensi Guru Dalam Merancang Evaluasi Pembelajaran Berdiferensiasi Berbasis SMART Di Era Merdeka Belajar. *Dedication: Jurnal Pengabdian Masyarakat*, 9(1), 161-172.
 9. Jin, F., Song, Z., Cheung, W. M., Lin, C.-H., & Liu, T. (2024). Technological affordances in teachers' online professional learning communities: A systematic review. *Journal of Computer Assisted Learning*, 40(3), 1019-1039. <https://doi.org/10.1111/jcal.12935>
 10. Karaiskos, L., Sotiras, M.-I. N., Antonopoulou, P., & Gdonteli, K. (2024). The impact of training and professional development on physical education teacher self-efficacy. *Journal of Physical Education and Sport*, 24(11), 2022-2033. <https://doi.org/10.7752/jpes.2024.11300>
 11. Lay, M. M. M. (2024). Professional Learning Communities Supporting Professional Development of Teacher Educators in Myanmar Education Colleges. *Pedagógusképzés*, 23(1), 35-54. <https://doi.org/10.37205/tel-hun.2024.1.02>
 12. Littlejohn, A., Jaldemark, J., Vrieling-Teunter, E., & Nijland, F. (2019). *Networked Professional Learning: An Introduction*. https://doi.org/10.1007/978-3-030-18030-0_1
 13. Masson, S., & Zajontz, T. (2022). Community-Based Professional Development of Higher Education Teachers in Times of Transformation. In *Higher Education: Linking Research, Policy and Practice* (Vol. 3, pp. 240-257). https://doi.org/10.1163/9789004520912_013
 14. Muhid, A., Dewi, Y. A. S., Aziz, I. N., Labib Al Halim, M., & Wajdi, M. B. N. (2020). Improving islamic elementary students' reading comprehension skill through survey, question, read, recite, review (SQ3R) strategy. *International Journal of Psychosocial Rehabilitation*, 24(7), 9589-9598. <https://doi.org/10.37200/IJPR/V24I7/PR270961>
 15. Mukherjee, K. (2024). Investigating an ELT Community of Practice in India. *Elt Journal*, 79(2), 239-251. <https://doi.org/10.1093/elt/ccae062>
 16. Muzakkir, M., Malli, R., & Sumiati, S. (2025). Peran *Musyawah Guru Mata Pelajaran (MGMP)* Pendidikan Agama Islam (PAI) Sekolah Menengah Kejuruan (SMK) Dalam Meningkatkan Kompetensi Profesional Guru di Kabupaten Jeneponto. *DIMAR: Jurnal Pendidikan Islam*, 7(1), 146-154.
 17. Nafisah, R. M., Rahmawati, Z., & Ummah, L. A. (2025). LANGKAH STRATEGIS MENJADI GURU PROFESIONAL DI ERA PENDIDIKAN ABAD 21. *Al Afa: Jurnal Pendidikan Dan Kajian Keislaman*, 7(01), 59-74.
 18. Nguyen, T. T. H., Duong, N. T., & Dang, T. T. P. (2024). A Comprehensive Analysis of Teacher Pro-

- Professional Learning Communities: A Scopus Based Review (2019-2024). *International Journal of Learning Teaching and Educational Research*, 23(8), 158-179. <https://doi.org/10.26803/ijlter.23.8.9>
19. Ningsih, S. P. A., & Karlimah, K. (2024). The Strategy of Driving School Principals as Transformational Leaders in Improving Teacher Professionalism and the Quality of Education in Elementary Schools. *Naturalistic Jurnal Kajian Penelitian Pendidikan Dan Pembelajaran*, 9(1), 496-503. <https://doi.org/10.35568/naturalistic.v9i1.4771>
20. Omar, S. F., Nawati, H. S. A., Shahdan, T. S. T., Mee, R. W. M., Pek, L. S., & Yob, F. S. C. (2020). Interactive Language Learning Activities for Learners' Communicative Ability. *International Journal of Evaluation and Research in Education (Ijere)*, 9(4), 1010. <https://doi.org/10.11591/ijere.v9i4.20605>
21. Pajar, A. M., Andra, V., & Satrioso, H. (2023). The Role of MGMP in Developing Professional Competence of Indonesian Language Teachers. *Jadila: Journal of Development and Innovation in Language and Literature Education*, 3(2), 159-170.
22. Preusse-Burr, B., Staudt, B., & Brink, G. (2024). Amplifying Teacher Impact and Leveraging Collective Expertise through Professional Learning Communities. *International Conference "The Future of Education."* <https://www.scopus.com/inward/record.uri?eid=2-s2.0-105029718822&partnerID=40&md5=4fb5e203d6f29b01ded64bbe1b4920b2>
23. Ritonga, M. (2023). Human Resource Management in Islamic Educational Institutions to Improve Competitiveness in Society 5.0 Era. *International Journal of Sustainable Development and Planning*, 18(2), 611-619. <https://doi.org/10.18280/ijstdp.180231>
24. Rizqi, P. U., & Syafika, W. (2024). Strengthening Professional Learning Communities Through Policy and Institutional Support in Diverse Educational Contexts. *Education*, 2(3), 141-156. <https://doi.org/10.61194/education.v2i3.587>
25. Sabtu, R., Mamat, S., Ladin, C. A., & Narasid, S. N. K. H. (2025). Challenges in Implementing Student Problem-Based Learning at the Malaysian Institute of Teacher Education: A Narrative Highlight. *International Journal of Education Psychology and Counseling*, 10(58), 594-608. <https://doi.org/10.35631/ijepc.1058039>
26. Steyn, G. M. (2017). Fostering teachers' professional development through collaboration in professional learning communities. In *Teacher Empowerment Toward Professional Development and Practices: Perspectives Across Borders* (pp. 241-253). https://doi.org/10.1007/978-981-10-4151-8_16
27. Susmiatun, A., Yuliejantiningih, Y., & Abdullah, G. (2020). Pengaruh Motivasi Berprestasi dan Partisipasi Guru dalam MGMP Terhadap Kompetensi Profesional Guru Bahasa Inggris SMP di Kabupaten Kendal. *Jurnal Manajemen Pendidikan (JMP)*, 9(3).
28. Syaputra, R. (2025). Peran MGMP dalam Meningkatkan Kompetensi Profesional Guru. *Journal Islamic Education*, 2(1), 1-9.
29. Tay, L. Y., Ramachandran, K., Ong, W. L. M., & Towndrow, P. A. (2021). Empowerment through distributed leadership in reconciling tensions and dilemmas in teacher professional development. *Teacher Development*, 25(5), 647-668. <https://doi.org/10.1080/13664530.2021.1939133>
30. Thirumalai, B. R., & Sarangapani, P. M. (2025). Teacher Professional Development at Scale: Mathematics Teachers' Community of Practice Action Research Study. *Contemporary Education Dialogue*, 22(2), 267-305. <https://doi.org/10.1177/09731849251330685>
31. Tinoca, L., Santos, S., & Piedade, J. (2025). Teacher Professional Development in Learning Communities: Pathways to Inclusive Education. *Revista Lusofona de Educacao*, 66(66), 121-154. <https://doi.org/10.24140/issn.1645-7250.rle66.dt07>
32. Tripathi, C. (2025). *Pedagogy and Prescribed Capabilities: Redefining Quality of Education in India*. Routledge India.
33. Tynjälä, P., Pennanen, M., Markkanen, I., & Heikkinen, H. L. T. (2019). Finnish Model of Peer-group Mentoring: Review of Research. *Annals of the New York Academy of Sciences*, 1483(1), 208-223. <https://doi.org/10.1111/nyas.14296>
34. Uribe-Zarain, X., Hellman, A. B., & Bell, A. B. (2025). Transforming teacher attitudes and practices: The efficacy of sustained professional devel-

- opment in culturally responsive education. *TESOL Journal*, 16(1). <https://doi.org/10.1002/tesj.896>
35. Widyanto, I. P., & Vienlentina, R. (2022). *Peningkatan Kemampuan Berpikir Kritis dan Hasil Belajar Peserta Didik menggunakan Student Centered Learning*. State University of Malang.
36. Ying, S. N. L. R. H. Y. H. S. H. M. B. N. W. L. (2026). Transforming Fiqh Instruction Through the Cyber Scientific Approach: Enhancing Critical Thinking in Islamic Education. *Jurnal Ilmiah Peuradeun*, 14(1), 299-322. <https://doi.org/https://doi.org/10.26811/peuradeun.v14i1.2198>
37. Zulu, F.-Q. B., & Mukeredzi, T. G. (2021). A Case Study of Two Teacher Learning Communities in KwaZulu-Natal, South Africa. *South African Journal of Education*, 41(3), 1-15. <https://doi.org/10.15700/saje.v41n3a1877>