

CONTINUOUS PROFESSIONAL DEVELOPMENT BASED ON PARTICIPATORY ACTION RESEARCH: A MODEL FOR IMPROVING THE QUALITY OF ACTIVE, REFLECTIVE AND COLLABORATIVE TEACHERS

DESENVOLVIMENTO PROFISSIONAL CONTÍNUO BASEADO NA PESQUISA-AÇÃO PARTICIPATIVA: UM MODELO PARA MELHORAR A QUALIDADE DE PROFESSORES ATIVOS, REFLEXIVOS E COLABORATIVOS

Article received on: 10/9/2025

Article accepted on: 1/9/2026

Mardi*

*Accounting Education Program, Faculty of Economics and Business, Universitas Negeri, Jakarta, Indonesia

Orcid: <https://orcid.org/0000-0003-1322-0881>

mardi@unj.ac.id

Sri Widi Lestari*

*Accounting Education Program, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

Orcid: <https://orcid.org/0009-0009-5022-0830>

sriwidi.lestari@unj.ac.id

Wahyu Lestari*

*Accounting Education Program, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

Orcid: <https://orcid.org/0000-0001-5993-1019>

wahyu.lestari@unj.ac.id

Khansha Sindra Irfani*

*Accounting Education Program, Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia

Orcid: <https://orcid.org/0009-0008-7887-6332>

khanshasindra@unj.ac.id

The authors declare that there is no conflict of interest

Abstract

This study aims to analyse the factors that influence the level of activity, reflectivity, and collaboration of teachers in continuous professional development based on Participatory Action Research (PAR); evaluate the impact of the PAR model on the quality of learning in schools; and identify the challenges and solutions faced by teachers in its implementation. A qualitative research method with a thematic analysis approach was used to explore the experiences of six teachers, one head teacher, one supervisor, and one external facilitator. The results showed that teacher activity was influenced by the relevance of training, structural support, and intrinsic motivation. Teachers' reflectivity is generally still individual and sporadic, while collaboration occurs more informally. The application of the PTP model has been proven to increase professional awareness, encourage evidence-based learning, and strengthen peer collaboration through reflective forums and professional learning communities. The main challenges include time constraints,

Resumo

Este estudo tem como objetivo analisar os fatores que influenciam o nível de atividade, reflexividade e colaboração dos professores no desenvolvimento profissional contínuo com base na Investigação-Ação Participativa (IAP); avaliar o impacto do modelo IAP na qualidade da aprendizagem nas escolas; e identificar os desafios e soluções enfrentados pelos professores na sua implementação. Foi utilizado um método de investigação qualitativa com uma abordagem de análise temática para explorar as experiências de seis professores, um diretor, um supervisor e um facilitador externo. Os resultados mostraram que a atividade dos professores foi influenciada pela relevância da formação, pelo apoio estrutural e pela motivação intrínseca. A reflexividade dos professores ainda é, em geral, individual e esporádica, enquanto a colaboração ocorre de forma mais informal. A aplicação do modelo PTP provou aumentar a consciência profissional, incentivar a aprendizagem baseada em evidências e fortalecer a



administrative burdens, and a lack of institutional support. Strategic solutions include providing dedicated time for reflection, simplifying administrative tasks, practice-based training, and transformational leadership by school principals.

Keywords: Sustainable Professional Development. Participatory Action Research. Teacher Reflectivity. Teacher Collaboration. Professional Learning Community.

colaboração entre pares por meio de fóruns reflexivos e comunidades de aprendizagem profissional. Os principais desafios incluem restrições de tempo, encargos administrativos e falta de apoio institucional. As soluções estratégicas incluem a disponibilização de tempo dedicado à reflexão, a simplificação das tarefas administrativas, a formação baseada na prática e a liderança transformacional por parte dos diretores escolares.

Palavras-chave: Desenvolvimento Profissional Sustentável. Investigação-ação Participativa. Reflexão do Professor. Colaboração entre Professores. Comunidade de Aprendizagem Profissional.

1 INTRODUCTION

Enhancing educational quality is fundamental to addressing global challenges and building internationally competitive human resources (Abels et al., 2021). This requires an educational paradigm shift that moves beyond academic achievement to include holistic character development, skills, and lifelong learning (Ma'dan et al., 2020; Shen & Luo, 2022). To meet contemporary demands, education must develop critical and creative skills applicable in real-world contexts (Ohlssen & Krempecki, 2020; Onyeso et al., 2020). This entails adopting a holistic, relevant curriculum that emphasizes practical knowledge application over theoretical instruction. Such a curriculum integrates classroom learning with field experiences, problem-based projects, and meaningful community engagement (Gbollie & Gong, 2018).

The Programme for International Student Assessment (PISA), conducted by the OECD since 2000, evaluates the reading, mathematics, and science competencies of 15-year-old students as an indicator of a country's educational quality (Enchikova et al., 2021). The 2022 PISA results ranked Indonesia 69th out of 80 participating countries, with a total score of 1,108. Although this reflects a modest improvement compared to the 2018 results, Indonesia's performance remains relatively low both at the global level and within the ASEAN region. The persistently low scores, particularly in reading literacy, highlight an urgent need to enhance the quality of national education through curriculum

reform, more targeted and needs-based teacher training, and the provision of equitable access to quality educational resources (Nasir et al., 2022).

Teachers' professional effectiveness can be strengthened through sustained involvement in continuous professional development initiatives that foster the development of updated knowledge, professional dispositions, and practical competencies (Nurcahyani et al., 2022). Participation in such programmes plays a crucial role in improving the quality of teaching practice (Yasin & Yaqin, 2024), both through direct instructional enhancement and indirect influences on classroom performance (Borg, 2015; Day, 2002). Although teachers may adopt different approaches to deliberate and ongoing learning through continuous professional development (CPD), these efforts share a common objective: the improvement of student learning outcomes (Borg, 2015; Dhanavel, 2022).

There is broad believe on the value of teacher professional development for its wide-ranging benefits. As Opfer and Pedder (2010) outline, these benefits include direct improvements for students and school practices, indirect professional gains for teachers, and enhanced institutional outcomes for schools. However, effectiveness varies. To be impactful, professional development must be contextual, practice-oriented, sustained, and critically collaborative (Somantri & Iskandar, 2021). This underscores the importance of teacher-led learning communities and collegial activities within schools as hallmarks of effective CPD (Mercer et al., 2022)

Despite the shift to online teaching during challenging periods, many educators received little to no training for effective distance instruction (Hodges et al., 2020). As teaching becomes increasingly high-pressure (Sokal et al., 2020), supporting isolated teachers through collaborative structures is essential (Reimers & Schleicher, 2020). In this context, professional development models that foster collaboration are crucial. Participatory Action Research (PAR) meets this need by enabling teachers to collaboratively address community and classroom challenges (Creswell, 2015; Saldaña & Omasta, 2016). Unlike traditional methods, PAR emphasizes teamwork, collective responsibility, and shared ownership of the inquiry process, making it a fitting model for effective CPD.

Participatory Action Research focuses on creating a culture of continuous improvement by encouraging educators to not only act as recipients of policy, but also as

agents of change who are directly involved in the planning and implementation of solutions. In the context of education, this approach enables teachers to work closely with students, understand their challenges, and design teaching strategies that are more responsive to the real needs of students (Finefter-Rosenbluh et al., 2023).

As a specific form of action research (AR), Participatory Action Research (PAR) engages researchers as active participants throughout the research process, which is collaboratively designed and implemented by all involved (Morales, 2016). Consequently, PAR appears particularly well-suited to supporting teachers during challenging circumstances. The approach addresses the contextual needs of both teachers and students, fosters collective problem-solving, promotes active learning and teacher inquiry, and emphasises collaboration and sustainability (Borko et al., 2010). Furthermore, PAR provides a framework for tackling issues of shared concern and addressing common challenges within the educational community (Kemmis et al., 2014).

Unlike conventional action research (AR), Participatory Action Research (PAR) is a professional development practice conducted with participants, rather than for or about them (Chevalier, 2019). In PAR, teachers actively engage in “planning, implementing, and applying the results” of their own research (Morales, 2016), making it particularly effective in addressing teachers’ contextual needs, fostering critical thinking and reflective practice, and promoting collaboration (Ayaya et al., 2020; Chevalier, 2019).

Several studies have examined the relationship between PAR and teacher professional development, highlighting its potential benefits. PAR has been shown to help teachers confront challenges (Parrello et al., 2019) and support their professional growth (Laudonia & Eilks, 2018). Through PAR, teachers can adopt a more critical and systematic approach to teaching, respond more effectively to students’ needs, and cultivate autonomous and professional learning practices (Lambirth et al., 2021). Moreover, PAR can enhance teachers’ perceptions of professional development (Miedijensky & Sasson, 2022) and provide opportunities to explore topics of interest in depth and collaboratively (Nugent, 2020). Finally, participation in PAR has been associated with improvements in teachers’ behaviours, attitudes, and professional competencies (Pineda et al., 2022). Despite its potential, research employing PAR in the Turkish context remains limited (Ordem, 2023; Uztosun et al., 2014).

In Indonesia, Participatory Action Research (PAR) offers a promising model for teacher development by integrating community empowerment with adaptive learning. This collaborative approach, which engages educators, policymakers, and local communities, enhances educational relevance and quality, supporting Sustainable Development Goal 4 (Quality Education). Empirical evidence highlights its effectiveness. For instance, Ridha et al. (2024) illustrate how a PAR-based initiative in Samarinda empowered a community through health training, while Purnomo et al. (2024) emphasize that local leadership and social capital are cornerstones of the PAR framework are vital for sustaining such participatory projects.

In the context of education, programmes such as Teacher Professional Education (PPG) have had a significant impact on improving teacher competence through active learning approaches, although challenges such as a lack of collaboration and participation in action research remain obstacles (Rokhman et al., 2024). Syahchari and Van Zanten (2024) highlighting the role of leadership in promoting sustainable practices in the educational environment as a key element in the success of development initiatives. However, challenges related to inadequate community involvement and limited resource allocation remain obstacles to maximising the potential of PAR.

The novelty of this research lies in the exploration and integration of PAR as a strategic approach in continuing professional development in Indonesia. By overcoming existing obstacles, PAR can be an innovative solution that not only improves teacher competence but also empowers local communities to contribute to the achievement of inclusive and sustainable educational development goals.

2 RESEARCH METHOD

The research method used was qualitative research with a participatory action research (PAR) approach. This approach aims to develop a deep understanding of continuous professional development based on participatory action that actively involves teachers in the process of reflection and collaboration to improve the quality of their teaching.

The approach is Qualitative with a Participatory approach, which emphasises the involvement of teachers in the process of reflection and joint action to improve the quality

of education. The data produced will be in the form of insights and in-depth experiences from teachers regarding the process of improving their professionalism.

The data analysis technique used is thematic analysis or inductive data analysis, which involves organising and classifying data into specific themes. Data obtained from interviews, observations, and documents will be analysed to identify key patterns that describe the process of continuous professional development based on a participatory approach.

Data were collected through a combination of qualitative methods: in-depth interviews with teachers and stakeholders to understand their experiences with PAR-based professional development; participant observation to directly witness collaborative engagement in the process; and analysis of documents such as lesson plans, teaching materials, reflective notes, and group discussion records generated during the activities.

3 DISCUSSION

3.1 Research result

This study included nine purposively selected respondents involved in Participatory Action Research (PAR)-based professional development. The cohort consisted of six teachers (R1–R6) from primary to high school levels, aged 31–45 with 8–20 years of experience, all holding Bachelor of Education degrees and engaged in lesson study, reflective forums, and professional learning communities.

The sample also included a 48-year-old school headmaster (R7) with a Master of Education and 25 years of experience, who provided structural and logistical support; a 51-year-old school supervisor (R8) with over 28 years in education management, offering policy oversight; and a 39-year-old external facilitator (R9) with a Master of International Education and 14 years of experience in mentoring and community development.

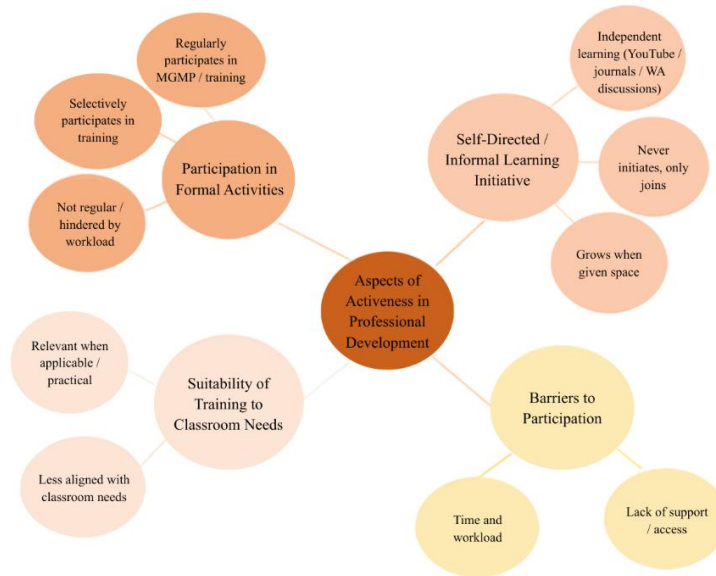
Figure 1*Thematic Map of Active Aspects in Professional Development*

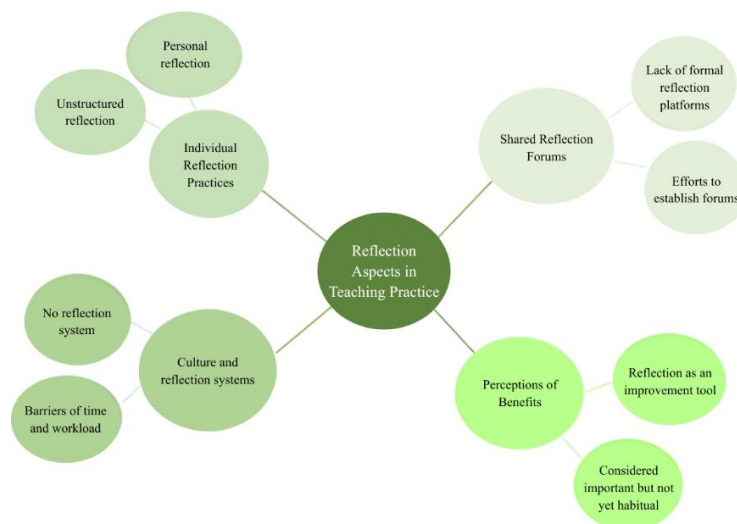
Figure 1 presents a thematic map categorizing the dynamics of teacher professional development into five key areas: (1) Participation in Formal Activities, (2) Independent Learning, (3) Training Relevance to Classroom Needs, (4) Barriers to Participation, and (5) Supporting Aspects. This framework illustrates that teacher involvement is not an isolated phenomenon but the result of complex interactions between individual motivation, institutional support, workload, and the practical relevance of training (Desimone & Garet, 2015; Krille, 2020). Significant barriers include demanding schedules and limited support, which restrict teachers' capacity to engage in development activities.

The success of professional development therefore hinges not only on personal motivation but also on organizational support systems, such as leadership and a collaborative culture (Opfer & Pedder, 2011). A systemic approach which encompassing policy reform, workload management, and needs-based training is essential for sustainable impact. Further, the practice of reflective teaching, a core component of continuous development, remains largely informal and unstructured. While some teachers engage in personal reflection, schools generally lack a systematic framework for collective, documented reflection. Cultivating this professional culture requires dedicated guidance, time, and structured forums for collaboration. Likewise, the results of thematic

analysis of interview data show four main themes related to this aspect, namely: personal or independent reflection, unstructured reflection, the absence of a collective reflection system in schools, and reflection that has not become a professional culture.

Figure 2

Thematic Map of Reflection Aspects in Learning Practices



Teacher reflection in practice remains largely individualistic and intuitive, typically taking the form of personal journals or informal notes. While this demonstrates a foundational awareness of reflective practice, its unstructured and subjective nature prevents it from being a robust driver of continuous pedagogical improvement.

A key limitation of this approach is its tendency to remain isolated. As Shah (2022) argues, individual reflection can become overly cognitive and insular, constraining teachers' ability to gain diverse perspectives on complex classroom dynamics. Hence, a deliberate shift from individual to collaborative reflection is widely advocated as a more effective strategy for fostering the deep, socially-engaged learning necessary for meaningful teacher development.

Collective reflection integrates critical thinking, peer dialogue, and diverse perspectives, moving beyond personal analysis to include shared experiences and constructive feedback. While individual reflection remains valuable for self-awareness, embedding collective reflection into professional development is essential. This approach

enriches pedagogical insight and fosters a collaborative, reflective culture, making it a strategic priority for enhancing educational quality.

However, this shift requires supportive structures that are often absent. Schools typically lack routine, structured systems for reflection, indicating a weak institutional reflective culture. Systemic barriers, such as insufficient time, training, and guidelines will prevent reflection from becoming embedded in teachers' professional routines.

Furthermore, effective reflection must engage with cultural dimensions. As Durden and Truscott (2010) note, a lack of cultural understanding between teachers and students can lead to homogenous, "colour-blind" teaching approaches that overlook student diversity and cultural capital. Without this awareness, reflective practices risk being superficial and disconnected from classroom realities.

These challenges are compounded in low-income or conflict-affected environments, where structural issues like resource scarcity, social trauma, and emotional strain severely limit opportunities for the social-emotional learning that underpins a reflective culture.

Beyond previous barriers, a universal and frequently cited obstacle is time. Educators report that administrative pressures, such as standardized testing and packed curricula which force a constant "implementation mode," leaving little room for critical pedagogical reflection. This highlights a systemic failure: without institutional policies that intentionally allocate time and space for reflection, it remains an unrealized ideal rather than an embedded practice.

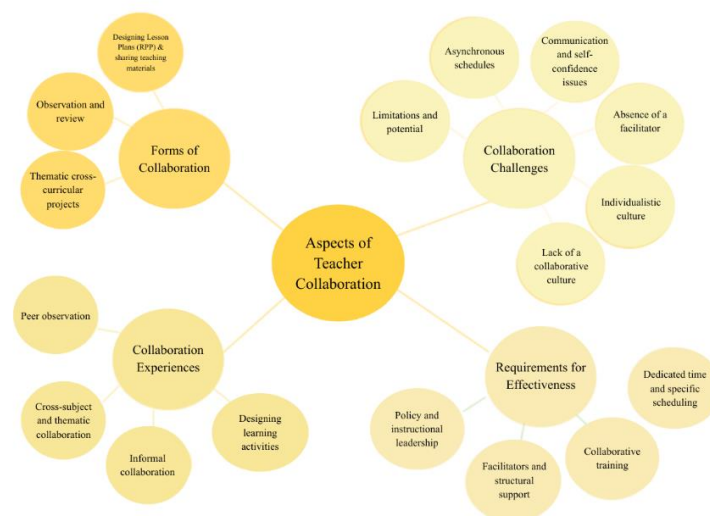
Notably, teachers generally perceive reflection positively, understanding its value as a cognitive and affective tool for evaluating instruction, student engagement, and learning outcomes. Yet, a significant gap persists between this conceptual appreciation and daily practice. Barriers like time constraints, a lack of clear reflective models, and insufficient structural support prevent reflection from becoming an internalized professional habit.

Therefore, strengthening reflective practice requires systematic, multi-level intervention. Cultivating a reflective culture must begin with professional development that builds critical and collaborative reflection skills, supported by regularly facilitated forums for dialogue. Institutionally, this demands structural commitments: dedicated time within the schedule, systems for documenting reflective processes, and incentives that

ensure its long-term sustainability. Through these measures, reflection can evolve from a peripheral activity into an integral, cyclical component of ongoing teaching improvement. The following Thematic Map illustrates the interconnected themes and sub-themes within Teacher Collaboration, mapping how experiences, challenges, and needs collectively shape effective collaborative practices in education.

Figure 3

Thematic Map of Aspects of Collaboration Among Teachers



Teacher collaboration is a vital element in building professional learning communities and enhancing educational quality (Azmi, 2025). In practice, it manifests in various forms—from joint lesson planning and resource sharing to implementing cross-curricular thematic projects. The growing emphasis on interdisciplinary, student-centered learning signals a positive shift, and practices like peer observation serve as foundational steps toward reflective professional growth.

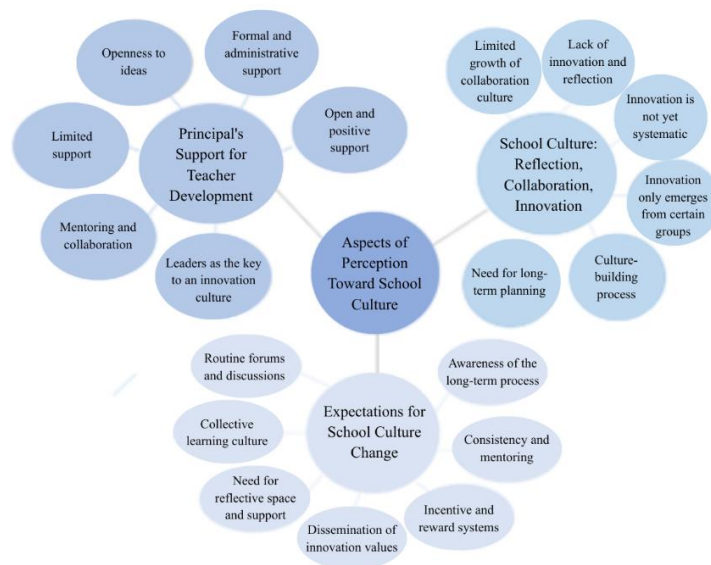
However, existing collaboration remains largely informal and unsystematic. While teachers frequently share materials, integrated and reflective co-design of instruction is less common. This indicates that collaboration has not yet become an embedded cultural norm. As Kelchtermans (2006) notes, informal collaboration holds potential but is often constrained without institutional structure and support.

The path to stronger collaboration faces structural and cultural challenges, including mismatched schedules, varying pedagogical beliefs, and communication barriers. The absence of facilitation and a persistent individualistic school culture further inhibit consistent collaborative practice. These findings align with research by Vangrieken et al. (2015), highlighting that effective collaboration depends heavily on organizational conditions, leadership, and structural support.

Thus, strengthening teacher collaboration requires an integrated strategy addressing structural, cultural, and personal dimensions. A holistic approach is essential to transform collaboration from an optional activity into an integral component of a reflective and cooperative school culture.

Figure 4

Thematic Map of Perceptions of School Culture

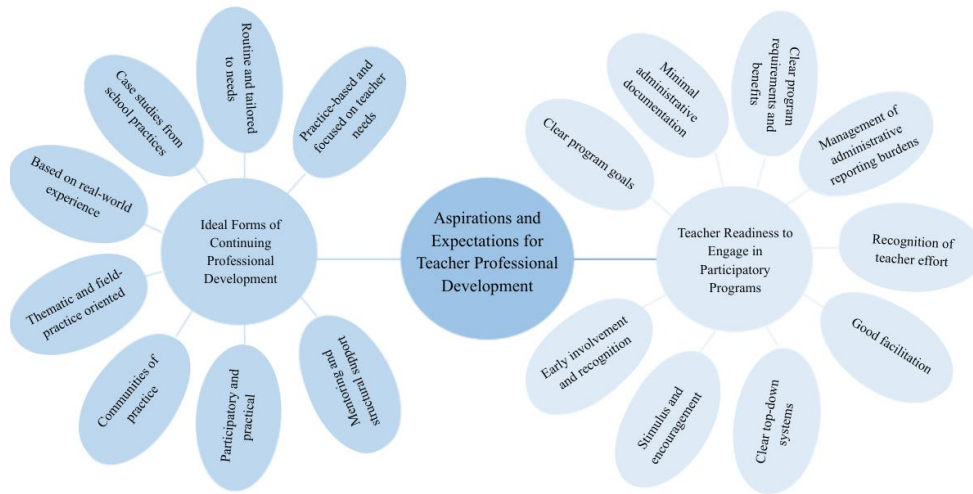


This study found that principal support is a crucial element in creating an environment conducive to teacher professional development. While principals often demonstrate openness to capacity building such as accepting teacher ideas and encouraging participation—this support frequently lacks systematic structural facilitation. It tends to remain at an administrative or procedural level, without translating into dedicated time, planned mentorship, or deeper reinforcement of reflective and

collaborative practices. Consequently, support often falls short of addressing the complex and dynamic professional needs of teachers.

In terms of school culture, it was found that reflection and collaboration are not yet an integral part of teachers' daily practices. Collaborative practices generally still take place informally and are limited to small groups, while reflection tends to be done individually without systematic guidance or support from the school. An innovative culture has not yet developed evenly, and new learning initiatives tend to be driven by certain individuals or groups only. This condition shows that schools have not yet succeeded in building a cultural structure that supports comprehensive professional development.

In addition, teachers show strong aspirations for a change in school culture that is more supportive of professional learning. There are high expectations for more regular discussion forums, incentive systems for innovation, and continuous and consistent coaching. Teachers realise that cultural change cannot happen instantly, but requires a long process and multi-layered support from the head teacher, colleagues, and policy structures at the school level. Teachers' understanding of the importance of a long-term process in school cultural change reflects a high level of professional awareness, which in the literature is referred to as teacher agency, namely the capacity of teachers to act consciously, reflectively, and collectively in creating a better learning environment. Overall, the findings of this study show that although there is great potential among teachers to grow and develop professionally, institutional support and school culture still need to be strengthened.

Figure 5*Thematic Map of Aspirations and Expectations for Teacher Professional Development*

The findings of this study reveal that teachers hold a clear, concrete vision for ideal continuing professional development (CPD). They advocate for a model that is contextual, practical, and directly relevant to their classroom challenges. This vision is fundamentally needs-based, positioning teachers not as passive recipients but as active participants whose contextual knowledge and experiences shape the learning process. This perspective aligns with research (Desimone & Garet, 2015) emphasising that effective professional development should be job-embedded, responsive, and sustained.

Furthermore, teachers stressed the necessity for CPD to be regular and systematic, moving beyond one-off events or administrative checkboxes toward a framework of ongoing, structured support. Regarding methodology, teachers expressed a preference for thematic, field-based training that addresses specific pedagogical issues such as active learning or differentiated instruction within an applicable context. They also highlighted the critical importance of professional learning communities to facilitate peer interaction through discussion, collective reflection, and shared practice.

Furthermore, active teacher involvement in planning and implementing development programs is a critical indicator of their success (Eliza et al., 2023). Teachers advocate for a participatory, practice-based model where they serve not merely as recipients but as contributors, reflecting the efficacy of a bottom-up approach in

educational policy and program implementation. Within this framework, a structured mentoring system and robust institutional support are essential.

Teachers demonstrate a positive readiness for participation, contingent on several prerequisites. First, the program's benefits and objectives must be clear; teachers are enthusiastic about relevant programs with direct classroom impact. Second, administrative demands should not be burdensome, as complex reporting reduces motivation for active involvement. Third, tangible rewards and recognition, whether symbolic appreciation, decision-making roles, or publication opportunities which significantly enhance motivation. Finally, systemic support from school leadership and local government is a decisive factor in teacher engagement.

In summary, the ideal professional development model is contextual, collaborative, and practice-based, systematically structured to facilitate teacher agency with strong institutional backing. Teacher readiness hinges on program clarity, minimal bureaucracy, and adequate recognition. These findings imply a necessary policy shift away from top-down, instructional training models.

3.2 Discussion

3.2.1 Factors influencing teachers' activity, reflectivity, and collaboration levels in continuous professional development based on Participatory Action Research

Teacher participation in professional development (e.g., MGMP, workshops) depends on perceived relevance and practical benefits. When training is seen as applicable to classroom challenges, engagement increases which aligning with findings that meaningfulness drives participation (Opfer & Pedder, 2011). Effective training must therefore be contextual and bridge theory with practice.

In addition, time and workload support are significant structural constraints. Heavy administrative and teaching loads limit consistent involvement, a challenge noted by Hogg (2012). Supportive policies, such as dedicated time and equitable workload distribution, are essential to enable participation. Nevertheless, teachers show strong personal initiative, using online resources, messaging groups, and personal reflection for self-development. This intrinsic motivation and reflective capacity are key to effective

professional growth (Avalos, 2011) which provides a foundation for more structured, participatory, and reflective approaches to Continuing Professional Development (CPD).

Teacher reflection remains primarily individual and incidental, confined to personal journals or informal post-lesson notes. The absence of a formal system for collective reflection indicates that a reflective culture is not yet integral to the school ecosystem. Since reflection is central to professional growth (Stoll et al., 2006), the lack of structured support ensures these practices remain sporadic and isolated.

This gap also reflects weak institutional support. While school leaders may offer moral encouragement, they rarely establish dedicated spaces or policies for collaborative reflection. In the PAR framework, such reflection is essential, it should form a continuous cycle of critical, shared inquiry that informs actionable improvements.

Similarly, teacher collaboration tends to be informal, limited to ad-hoc discussions or sharing materials, and seldom progresses to formal co-planning or joint projects. This stems from a predominantly individualistic work culture and a lack of facilitation. Effective collaboration requires intentional structures, shared objectives, and distributive leadership to foster genuine community learning (Stoll et al., 2006).

Building meaningful collaboration necessitates developing collective capacity, for instance, by training internal facilitators, ensuring equitable task delegation, and cultivating practice-based communities. When properly supported, collaboration can deepen pedagogical insight, strengthen reflective practice, and generate innovative, context-responsive teaching strategies.

3.2.2 The impact of implementing a continuous professional development model based on Participatory Action Research on improving the quality of learning in schools

The Participatory Action Research (PAR)-based CPD model demonstrates strong potential for improving instructional quality. While adoption varies, teachers who consistently engage in its cycles of reflection and collaboration show significant shifts in practice. They become more adept at evaluating and adaptively redesigning their teaching to better meet student needs, aligning with the view that collaborative inquiry builds teachers' capacity for problem-solving (Cochran-Smith & Lytle, 2015).

Structured personal reflection is central to this process, fostering professional awareness that allows teachers to identify ineffective patterns and seek evidence-based alternatives. For instance, participating teachers report adopting more project-based learning, integrating technology purposefully, and designing meaningful formative assessments. This reflective practice underpins evidence-based teaching, directly enhancing instructional decision-making (Timperley et al., 2007).

Collaboration, a core component of the PAR model, moves beyond material sharing to include data-driven dialogue, peer observation, and joint planning. This approach mirrors professional learning communities (PLCs), which foster a school-wide culture of continuous learning (Vescio et al., 2008). Teachers engaged in such collaborative practices typically demonstrate a stronger commitment to refining their pedagogy and a greater openness to experimenting with innovative instructional methods.

However, the successful implementation of PTP is not only determined by the individual motivation of teachers, but also depends heavily on structural support from schools and education agencies. This support includes providing dedicated time for reflection and collaboration, relevant and ongoing training, and facilitating access to learning resources. Study by Desimone (2009) emphasises that effective professional development must be long-term, focus on relevant content, and create a collaborative space that allows teachers to learn from one another. Without adequate institutional support, the implementation of the PTP model risks remaining at the individual level and not becoming institutionalised in the school culture.

Based on the evaluation, the PAR-based CPD model has a positive impact on learning quality when implemented systematically. Teachers become more reflective, collaborative, and innovative, developing greater sensitivity to student needs and designing adaptive strategies based on learning data. Ultimately, PAR serves as a strategic mechanism to bridge theory and practice, fostering more meaningful and effective teaching.

3.2.3 Challenges and solutions faced by teachers in implementing the participatory action research-based continuous professional development model

Implementing a Participatory Action Research (PAR)-based CPD model faces challenges rooted in structural, cultural, and individual factors. Key obstacles include significant time constraints due to high administrative workloads, a lack of structured reflective forums, insufficient practice-based training, and a weak collaborative culture with limited teacher motivation for self-development.

Among these, time constraints emerge as the most prominent challenge. Teachers struggle to allocate time for reflection and collaboration due to demanding administrative duties, such as report-writing and lesson preparation. This lack of time limits opportunities to critically reflect on and innovate teaching practices, which is a fundamental requirement for effective professional development (Guskey, 2002).

Furthermore, teachers tend to engage in reflection individually and sporadically. This is due to the lack of a formal system or forum in schools that supports structured collective reflection. In fact, meaningful reflection should be carried out in an open, dialogical, and collaborative atmosphere in order to produce a deeper understanding and improvement of teaching practices (Zeichner & Liston, 2013). In this context, the lack of shared reflection space hinders the realisation of a continuous learning cycle, which is at the core of the PTP approach.

Another challenge identified is the lack of contextual and practice-based training. Much of the training provided is general in nature and does not address the issues faced by teachers in the field. As a result, the training is considered to be impractical and has no significant impact on improving teaching quality. Avalos (2011) emphasizing that effective teacher training needs to be designed based on real needs and real conditions in the classroom, so that teachers can internalise the knowledge and skills acquired in a more meaningful way.

In addition to structural aspects, motivational factors also pose obstacles to the implementation of PTP. Some teachers display passive attitudes and lack enthusiasm in participating in professional development programmes, especially when these activities do not receive support from the school environment. This low level of motivation is also related to the lack of a culture of collaboration among teachers. An individualistic work

culture hinders the formation of a dynamic learning community. As explained by Stoll et al. (2006), a collaborative culture is an important prerequisite for the creation of a professional learning community that can drive positive change in learning practices.

To address these challenges, key strategic solutions are proposed. First, schools should establish structured Professional Learning Communities (PLCs) to serve as regular forums for teacher reflection and collaboration, supporting sustained professional growth and school improvement (Hord, 2004). Second, integrating reflective and collaborative activities into formal school policy rather than treating them as optional which ensures these practices become a sustainable part of the school culture and routine (Darling-Hammond et al., 2017).

Third, workload adjustment and dedicated time allocation are essential. Simplifying administrative tasks and carving out specific time for professional development respects the principles of adult learning, which emphasize autonomy and flexibility (Knowles et al., 2005). Fourth, teacher training must be practice-based and context-specific. Models such as lesson study and peer coaching, which engage teachers in analyzing real classroom problems, align with the action-reflection cycle central to participatory research (Kemmis & McTaggart, 2014).

Finally, supportive leadership from headteachers is critical. Transformational leaders foster a school climate conducive to collaboration and innovation, providing the policy support and recognition needed to motivate and sustain teacher engagement in professional development (Fullan, 2007).

By identifying challenges and formulating comprehensive solutions, the application of the Continuous Professional Development model based on Participatory Action Research can be an effective approach to continuously improve teacher competence and have a direct impact on improving the quality of learning in schools.

4 CONCLUSION

Based on the analysis results, it can be concluded that the development of teachers' continuous professional development based on Participatory Action Research (PAR) is influenced by perceptions of the relevance of training, intrinsic motivation, institutional support, and a conducive school culture; where activity is more triggered by classroom

needs, reflectivity is not yet structured due to the lack of collective forums, and collaboration is still informal due to weak systemic support. The application of the PTA model has been proven to improve the quality of learning through the role of teachers who are more reflective, innovative, and collaborative in designing evidence-based teaching strategies, but still faces challenges in the form of administrative workload, limited contextual training, and a weak culture of reflection and collaboration. Hence, it is recommended that schools form formal professional learning communities (PLCs), provide practice-based training, simplify administrative burdens, and introduce transformational leadership by school principals to create a sustainable reflective-collaborative culture, as well as encourage broader further studies and the development of comprehensive PTP evaluation instruments.

ACKNOWLEDGMENT

The author extends sincere thanks to the Institute for Research and Community Service of Jakarta State University for its support and guidance, enabling the completion and publication of this work.

REFERENCES

- Abels, P., Nguyen, H. D. M., Kawamura, H., & Chikada, M. (2021). Is Global Quality Assurance System of Higher Education in United States, Vietnam and Japan Possible? Japan Foundation Japan Studies through Collaboration. *European Journal of Educational Sciences*, 8(3), 63–80. <https://doi.org/10.19044/ejes.v8no3a63>
- Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education*, 27(1), 10–20. <https://doi.org/10.1016/j.tate.2010.08.007>
- Ayaya, G., Makoelle, T. M., & Van Der Merwe, M. (2020). Participatory action research: A tool for enhancing inclusive teaching practices among teachers in South African full-service schools. *Sage Open*, 10(4), 2158244020963576. <https://doi.org/10.1177/2158244020963576>
- Azmi, I. (2025). Teachers' Contributions in Child-Friendly Schools at State Elementary School 106796 through Anti-Bullying Activities for the 2023/2024 Academic Year. *Multidisciplinary Journal of Social Sciences and Humanities*, 1(2), 73–88.
- Borg, S. (2015). Overview-Beyond the workshop: CPD for English language teachers.

Professional Development for English Language Teachers: Perspectives from Higher Education in Turkey, 5–12.

- Borko, H., Jacobs, J., & Koellner, K. (2010). Contemporary approaches to teacher professional development. *International Encyclopedia of Education*, 7(2), 548–556. <https://doi.org/10.1016/b978-0-08-044894-7.00654-0>
- Chevalier, J. M. (2019). *Participatory action research: Theory and methods for engaged inquiry*. Routledge.
- Cochran-Smith, M., & Lytle, S. L. (2015). *Inquiry as stance: Practitioner research for the next generation*. Teachers College Press.
- Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson Education.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective Teacher Professional Development. In *Learning policy institute*. ERIC. <https://doi.org/10.54300/122.311>
- Day, C. (2002). *Developing teachers: The challenges of lifelong learning*. Routledge.
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181–199. <https://doi.org/10.3102/0013189X08331140>
- Desimone, L. M., & Garet, M. S. (2015). Best practices in teacher's professional development in the United States. *Psychology, Society and Education*, 7(3), 252–263.
- Dhanavel, S. P. (2022). *Continuing professional development of English language teachers*. Springer. <https://doi.org/10.1007/978-981-19-5069-8>
- Durden, T. R., & Truscott, D. M. (2010). Reflective journeys toward culturally relevant pedagogy. *Forum Pedagogiczne*, 8(2), 17–32. <https://doi.org/10.21697/FP.2018.2.02>
- Eliza, E., Zulaihati, S., & Mardi, M. (2023). Peran Motivasi Belajar Sebagai Moderasi Antara Gaya Mengajar Guru Dan Fasilitas Belajar Terhadap Hasil Belajar Komputer Akuntansi Di SMK Swasta Kecamatan Pulogadung Jakarta Timur. *Jurnal Riset Pendidikan Dan Pengajaran*, 2(2), 322–337. <https://doi.org/10.55047/jrpp.v2i2.545>
- Enchikova, E., Toledo, C., Neves, T., & Nata, G. (2021). Does PISA Help Fighting for Social Equity? *European Proceedings of Educational Sciences*, 3, 80–89. <https://doi.org/10.15405/epes.22043.8>
- Finefter-Rosenbluh, I., Berry, A., & Ryan, T. (2023). Acting upon student voice-based teaching assessment initiatives: An account of participatory action research for teacher professional learning. *Journal of Teacher Education*, 74(5), 508–521. <https://doi.org/10.1177/00224871231200278>

- Fullan, M. (2007). *Leading in a culture of change*. John Wiley & Sons.
- Gbollie, C., & Gong, S. (2018). Enhancing Pre-K-12 Student Learning Outcomes: The Need for Synergies of Policy-Makers, School Administrators and Parents. *Educational Research and Reviews*, 13(8), 270–280. <https://doi.org/10.5897/err2018.3497>
- Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching*, 8(3), 381–391. <https://doi.org/10.1080/135406002100000512>
- Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020). *The difference between emergency remote teaching and online learning*. Educause.
- Hogg, M. A. (2012). Uncertainty-identity theory. In *Handbook of theories of social psychology*, Vol. 2 (pp. 62–80). Sage Publications Ltd. <https://doi.org/10.4135/9781446249222.n29>
- Hord, S. M. (2004). *Learning together, leading together: Changing schools through professional learning communities*. Teachers College Press.
- Kelchtermans, G. (2006). Teacher collaboration and collegiality as workplace conditions. A review. *Zeitschrift Für Pädagogik*, 52(2), 220–237. <https://doi.org/10.25656/01:4454>
- Kemmis, S., McTaggart, R., & Nixon, R. (2014). *The action research planner: Doing critical participatory action research*. Springer.
- Knowles, M. S., Holton, E., & Swanson, R. (2005). *The adult learner: the definitive classic in adult education and human resource development* (6th). Burlington, MA: Elsevier.
- Krille, C. (2020). Barriers to participation in professional development. In *Teachers' Participation in Professional Development: A Systematic Review* (pp. 27–39). Springer. https://doi.org/10.1007/978-3-030-38844-7_4
- Lambirth, A., Cabral, A., McDonald, R., Philpott, C., Brett, A., & Magaji, A. (2021). Teacher-led professional development through a model of action research, collaboration and facilitation. *Professional Development in Education*, 47(5), 815–833. <https://doi.org/10.1080/19415257.2019.1685565>
- Laudonia, I., & Eilks, I. (2018). Reflections on a three-year-long teacher-centered, participatory action research experience on teaching chemical bonding in a Swiss vocational school. *Education Sciences*, 8(3), 141. <https://doi.org/10.3390/educsci8030141>
- Ma'dan, M., Ismail, M. T., & Daud, S. (2020). Strategies to enhance graduate employability: insights from Malaysian public university policy-makers. *Malaysian Journal of Learning and Instruction*, 17(2), 137–165. <https://doi.org/10.32890/mjli2020.17.2.5>

- Mercer, S., Farrell, C., & Freeman, D. (2022). *Self-directed professional development in ELT*. Oxford University Press.
- Miedijensky, S., & Sasson, I. (2022). Participatory action research as a way to innovate mathematics and science teaching, teachers' professional development perceptions and performances. *Educational Action Research*, 30(1), 39–60. <https://doi.org/10.1080/09650792.2020.1802320>
- Morales, M. P. E. (2016). Participatory action research (PAR) cum action research (AR) in teacher professional development: a literature review. *International Journal of Research in Education and Science*, 2(1), 156–165. <https://doi.org/10.21890/ijres.01395>
- Nasir, R., Gaol, M. L., Siahaan, U. M. J., & Kertiyani, N. M. I. (2022). Pendampingan Penyusunan Desain Pembelajaran berorientasi pada AKM dan PISA untuk Guru. *Jubaedah: Jurnal Pengabdian Dan Edukasi Sekolah (Indonesian Journal of Community Services and School Education)*, 2(1), 89–96. <https://doi.org/10.46306/jub.v2i1.67>
- Nugent, K. L. (2020). Exploring the teaching of culture in the foreign language classroom within the context of collaborative professional development: A critical participatory action research study. *Educational Action Research*, 28(3), 497–517. <https://doi.org/10.1080/09650792.2019.1577148>
- Nurchayani, S. R., Saptono, A., & Pratama, A. (2022). Does Teaching Practice Experience Affect Interest in Becoming a Teacher? The Role of Self-Efficacy as an Intervening Variable. *Review of Multidisciplinary Education, Culture and Pedagogy*, 1(4), 1–16. <https://doi.org/10.55047/romeo.v1i4.333>
- Ohlssen, M., & Krempecki, L. (2020). Developing and Sustaining High Quality Special Education Infrastructures. *National Center for Special Education in Charter Schools*.
- Onyeso, O. K., Umunnah, J. O., Ezema, C. I., Balogun, J. A., Uchenwoke, C. I., Nwankwo, M. J., Oke, K. I., Bello, B., Nwosu, I. B., & Adje, M. E. (2020). An evaluation of the nature and level of musculoskeletal imaging training in physiotherapy educational programmes in Nigeria. *BMC Medical Education*, 20, 1–10. <https://doi.org/10.1186/s12909-020-02183-5>
- Opfer, V. D., & Pedder, D. (2010). Benefits, status and effectiveness of continuous professional development for teachers in England. *The Curriculum Journal*, 21(4), 413–431. <https://doi.org/10.1080/09585176.2010.529651>
- Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research*, 81(3), 376–407. <https://doi.org/10.3102/0034654311413609>
- Ordem, E. (2023). Participatory action research in a listening-speaking class in second language teaching: towards a critical syllabus. *Educational Action Research*, 31(1),

4–20. <https://doi.org/10.1080/09650792.2021.1898431>

- Parrello, S., Iorio, I., Carillo, F., & Moreno, C. (2019). Teaching in the Suburbs: participatory action research against educational wastage. *Frontiers in Psychology, 10*, 2308. <https://doi.org/10.3389/fpsyg.2019.02308>
- Pineda, H., Lorca, A., Cortes, S., Gador, S., Mangompit, R. M., Pacaldo, F. J., & Lorca, E. (2022). Development and Evaluation of a Professional Development Program on Designing Participatory Action Research Projects for Basic Education Teachers. *Advanced Education, 21*, 161–184. <https://doi.org/10.20535/2410-8286.266663>
- Purnomo, H., Puspitaloka, D., Okarda, B., Andrianto, A., Qomar, N., Sutikno, S., Muhammad, A., Basuki, I., Jalil, A., & Prasetyo, P. (2024). Community-based fire prevention and peatland restoration in Indonesia: A participatory action research approach. *Environmental Development, 50*, 100971. <https://doi.org/10.1016/j.envdev.2024.100971>
- Reimers, F. M., & Schleicher, A. (2020). A framework to guide an education response to the COVID-19 Pandemic of 2020. *OECD. Retrieved April, 14(2020)*, 2004–2020.
- Ridha, M. R., Yudhastuti, R., Juhairiyah, J., Garjito, T. A., Aisyah, S., Nisa, K., & Agustina, N. (2024). Participatory action research for dengue control in Samarinda, Indonesia. *International Journal of Public Health Science, 13(4)*, 1738–1748. <https://doi.org/10.11591/ijphs.v13i4.24556>
- Rokhman, F., Purnomo, A., Yuwono, A., Saputro, I. H., Plangsorn, B., & Habibi, A. F. (2024). Sustainable ecosystem for professional teachers in Indonesia: The role of teacher professional education programs in achieving the SDGs. *E3S Web of Conferences, 568*, 4033. <https://doi.org/10.1051/e3sconf/202456804033>
- Saldaña, J., & Omasta, M. (2016). *Qualitative research: Analyzing life*. Sage Publications.
- Shah, M. A. (2022). Teachers as reflective practitioners: From individualism to Vygotskian social constructivism. *Alberta Journal of Educational Research, 68(3)*, 297–307. <https://doi.org/10.55016/ojs/ajer.v68i3.68598>
- Shen, J., & Luo, Q. (2022). The construction and application of regional education quality monitoring databases: A case study of Suzhou's education quality monitoring. *Best Evidence in Chinese Education, 12(2)*, 1613–1628. <https://doi.org/10.15354/bece.22.re031>
- Sokal, L. J., Eblie Trudel, L. G., & Babb, J. C. (2020). Supporting teachers in times of change: The job demands-resources model and teacher burnout during the COVID-19 pandemic. *International Journal of Contemporary Education, 3(2)*, 67. <https://doi.org/10.11114/ijce.v3i2.4931>
- Somantri, C., & Iskandar, H. (2021). The Impact of CPD in Teaching, and the Role of Principal in Promoting CPD. *4th International Conference on Research of*

Educational Administration and Management (ICREAM 2020), 336–343.
<https://doi.org/10.2991/assehr.k.210212.074>

Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7(4), 221–258. <https://doi.org/10.1007/s10833-006-0001-8>

Syahchari, D. H., & Van Zanten, E. (2024). The Role of Leadership and Community Involvement in Sustainable Development. *Binus Business Review*, 15(2), 157–168. <https://doi.org/10.21512/bbr.v15i2.10354>

Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher Professional Learning and Development: Best Evidence Synthesis iteration (BES)*. Ministry of Education. <https://www.educationcounts.govt.nz/publications/series/2515/15341>

Uztosun, M. S., Skinner, N., & Cadorath, J. (2014). An action research study designed to implement student negotiation to improve speaking classroom practice in Turkey. *Educational Action Research*, 22(4), 488–504. <https://doi.org/10.1080/09650792.2014.904238>

Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A systematic review. *Educational Research Review*, 15, 17–40. <https://doi.org/10.1016/j.edurev.2015.04.002>

Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education*, 24(1), 80–91. <https://doi.org/10.1016/j.tate.2007.01.004>

Yasin, N. A., & Yaqin, M. N. (2024). Teacher Performance Assessment Through Self-Evaluation (EVADIR) at The Kalipuro-Banyuwangi Sub-District KKGPAI. *International Journal of Pedagogical, Humanities and Social Studies*, 1(1), 1–7.

Zeichner, K. M., & Liston, D. P. (2013). *Reflective teaching: An introduction*. Routledge.

Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

How to cite this article (APA)

Mardi, Lestari, S. W., Lestari, W., & Irfani, K. S. (2026). CONTINUOUS PROFESSIONAL DEVELOPMENT BASED ON PARTICIPATORY ACTION RESEARCH: A MODEL FOR IMPROVING THE QUALITY OF ACTIVE, REFLECTIVE AND COLLABORATIVE TEACHERS. *Veredas Do Direito*, 23(4), e234745. <https://doi.org/10.18623/rvd.v23.n4.4745>