

# Implementation of Collaborative Learning through Learning Communities to Improve Teacher Professional Competence

**Hylida Nadia<sup>1</sup>**

Universitas Muhammadiyah Metro, Indonesia  
[author@email.ac.id](mailto:author@email.ac.id)

**Muhammad Ihsan Dacholfany<sup>2</sup>**

Universitas Muhammadiyah Metro, Indonesia  
[muhammadihsandacholfany@gmail.com](mailto:muhammadihsandacholfany@gmail.com)

**Sutrisni Andayani<sup>3</sup>**

Universitas Muhammadiyah Metro, Indonesia  
[trisnimath.andy@gmail.com](mailto:trisnimath.andy@gmail.com)

## Abstract

This study aims to describe the implementation of collaborative learning through learning communities in an effort to improve teacher professional competence at SDN 76 Krui, West Pesisir Regency Lampung. The background of this research is based on the challenges faced by teachers in mastering teaching materials and developing relevant and effective learning strategies, especially in teaching science in elementary schools. Collaborative learning through learning communities is seen as a strategic approach to strengthen teachers' professional capacity through interaction, reflection and sharing experiences among teachers. This research used a descriptive qualitative approach with a case study method. The research subjects consisted of teachers and principals who were actively involved in the learning community. Data were collected through in-depth interviews, participatory observation, documentation and field notes. The data analysis technique used thematic analysis model to identify the main themes related to the implementation of collaborative learning and its impact on teachers' professional competence. The results showed that collaborative learning implemented through learning communities encouraged teachers' active involvement in designing, implementing and evaluating learning. There is an increase in teacher professional competence indicators such as active involvement in learning communities, knowledge exchange, innovation in teaching approaches, and utilization of educational technology. Supporting factors for the success of this program include teacher commitment, principal support, availability of resources and mastery of technology. The obstacles faced include time constraints, different levels of teacher motivation, and inadequate infrastructure. This study recommends strengthening the collaborative culture in schools, increasing technology facilitation, and sustainable managerial support so that the learning community program can continue to develop optimally.

**Keywords:** collaborative learning; learning community; teachers' professional competence; elementary school

## INTRODUCTION

Education is the main pillar that supports the progress and development of a country. Education is one of the important aspects in the development of quality human resources. Quality education is one of the main keys to creating a smart and competitive generation. One of the factors that influence the quality of education is the ability and professional competence of teachers in managing and delivering learning materials. At the primary school level, effective teaching relies heavily on the quality of teachers' competence in designing, implementing and evaluating learning. Teachers who have good professional competence will be able to deliver material more effectively and interestingly, and facilitate students in understanding complex concepts.

Based on the Regulation of the Minister of National Education (Permendiknas) No. 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies, it states that teacher professional competence refers to the teacher's ability to master learning materials in depth, develop effective teaching strategies, and utilize appropriate learning technologies and methods.

A professional teacher is required to have various competencies that support success in the teaching and learning process. According to the opinion of (Channa et al., 2024) One of the main aspects that must be possessed is a deep mastery of teaching material. This is important so that teachers are able to deliver material systematically, clearly, and relevant to the needs of students, making it easier for them to understand each concept taught. In addition, according to (Sari et al., 2024), teachers must also have superior pedagogical abilities, namely skills in designing and implementing learning with a varied approach. This approach is designed to create learning experiences that are effective, interesting, and able to motivate students to develop their potential optimally.

In facing the challenges of the digital era, mastery of educational technology is a must for a teacher. Teachers need to integrate technology creatively and innovatively into the learning process, so as to create learning experiences that are more relevant and in accordance with the times. In line with the opinion of (Sari et al., 2024) This not only increases the effectiveness of learning but also helps students develop the digital literacy they will need in the future This competence reflects the professionalism of a teacher who continues to adapt to the dynamics of modern education.

From the opinions of the experts above, it can be concluded that teacher professional competence is a combination of knowledge, skills and attitudes that complement each other. Mastery of all these components is essential to creating meaningful learning experiences for students and ensuring quality education. This study aims to describe how the learning community implementation process is carried out, the obstacles faced, and its impact on improving teachers' professional competence in terms of engagement, reflection, innovation, and technological literacy

## METHOD

This research used a descriptive qualitative approach with a case study method. This approach was chosen because it allows researchers to describe in depth and thoroughly the

implementation of collaborative learning through learning communities in improving teachers' professional competencies. The research was conducted at SDN 76 Krui, West Pesisir Regency Lampung, as a location that has developed learning community practices in an elementary school environment. This approach was used to describe complex and contextual phenomena, namely how interactions between teachers, managerial support, and the use of technology contribute to improving educators' professionalism.

The research subjects consisted of teachers who are actively involved in the learning community as well as the principal who acts as the main driver of the program. Subjects were selected purposively, based on certain criteria relevant to the research objectives, such as the level of participation in learning community activities, teaching experience, and involvement in professional development. The researcher played a direct role as the main instrument in the data collection and interpretation process.

Data collection was conducted through four main techniques: in-depth interviews, participatory observation, documentation and field notes. Semi-structured interviews were conducted with teachers and principals to explore their experiences in participating in learning communities, including perceptions of benefits, challenges and perceived changes. Observations were made directly on learning community activities and classroom learning activities to see the application of collaboration results in real practice. Documentation collected included joint learning plans, meeting minutes, reflection notes, and presentation materials used in the community forum. Meanwhile, field notes were used by researchers to record additional information that emerged during interactions with participants, including discussion dynamics and social interactions.

The instruments in this study were organized based on two main variables. The first variable is collaborative learning through learning communities, which consists of indicators of teacher commitment and readiness, managerial support from the principal, availability of resources, and mastery of educational technology. The second variable is teachers' professional competence, which includes indicators of active involvement in learning communities, exchange of knowledge and experience, innovation in teaching approaches, and utilization of educational technology. This instrument was used as a guide in interviews and observations, and as a framework in analyzing the data.

Data analysis was conducted using thematic analysis techniques as developed by Braun and Clarke. The stages of analysis included transcribing interview and observation data, initial coding, identifying and exploring themes, and compiling a narrative of the findings. This process was carried out iteratively to ensure that the themes that emerged truly reflected the reality that occurred in the field. The findings were studied in depth by linking them to relevant theories and previous research results.

To ensure data validity, researchers applied source triangulation, member checking, and peer debriefing techniques. Triangulation was done by comparing results from various data collection techniques. Member checking was done by asking for confirmation from participants on the results of interviews, while peer debriefing was done by discussing interim findings with fellow researchers or education experts to obtain validation of interpretations. The entire research process was carried out with due regard to ethical principles, including maintaining the confidentiality of participants' identities, obtaining voluntary informed consent, and ensuring no harm was experienced by participants.

With this approach and method, the research is expected to be able to provide a complete picture of how collaborative learning in learning communities can contribute to improving teachers' professional competence, and become the basis for developing a more contextual and sustainable teacher training model.

## RESULT AND DISCUSSION

The implementation of collaborative learning through learning communities at SDN 76 Krui is part of the school's strategy to improve teachers' professional competence in a sustainable manner. Based on the research results, learning community activities have been active and involve teacher participation in various forms, both as facilitators, material presenters, and discussion participants. This activity is not only carried out formally through face-to-face meetings, but also takes place informally through digital media such as WhatsApp groups, Google Drive and Zoom. The learning community is an important place for teachers to share learning practices, develop teaching tools together, and discuss learning challenges and solutions in the classroom.

Teachers at SDN 76 Krui show commitment and openness in participating in learning community activities, despite facing various limitations. They actively contribute ideas, learn from peers and try to apply the results of discussions in classroom learning activities. This shows that collaborative learning has been implemented quite effectively and has an impact on improving teachers' professional competence, especially in terms of pedagogical skills, technology utilization, and teaching strategy innovation. In practice, the learning community acts as a catalyst for change that encourages teachers to adapt new ideas into the learning process. The implementation of approaches such as project-based learning, the use of digital media such as Canva and YouTube, and reflective formative assessment are concrete examples of the results of meaningful interactions between teachers.

The implementation of collaborative learning is in line with Lie's (2002) view that collaborative learning is an approach that allows teachers to develop through active interaction in a professional community. The learning community provides a space for shared reflection, strengthens professional networks, and encourages the development of more contextualized learning strategies. This finding also supports the results of Sulaiman's research (2021) which emphasizes that the existence of a teacher community plays an important role in improving the quality of pedagogical practices and strengthening overall professional competence.

Teachers' commitment and readiness is one of the main indicators of successful implementation of learning communities. Interview results show that most teachers show active involvement, both as presenters of material and active participants in discussions. Some teachers who are still building their confidence still show participation through regular attendance and contributions in informal forums. This supports the view of Trianto (2019) who emphasizes that teacher commitment is the main condition for the formation of an effective learning community. In addition, this community also functions as a space for shared reflection, where each teacher becomes a learner as well as a resource person, as described by Lie (2007).

Principal support is also a key factor in the success of learning communities. The principal at SDN 76 Krui not only supports administratively, but also attends directly, provides space and time, and brings in external resource persons to enrich the discussion material. This participatory attitude is in line with Mulyasa's (2013) opinion that principals as instructional leaders play an important role in creating a collaborative and professional working climate. Access to resources remains a challenge in implementing learning communities. Although the school does not routinely provide teaching materials or a dedicated space, teachers are able to get around this by sharing personal materials and training results. Several times the school also organized in-house training (IHT) as a form of additional support. This finding reinforces Saragih and Samosir's (2021) study which emphasizes the importance of providing facilities and teaching materials in supporting the sustainability of learning communities. However, the collaborative culture and spirit of mutual assistance among teachers are the main strengths in overcoming limited resources.

In addition, mastery of educational technology is an important indicator in implementing collaborative learning. Most teachers at SDN 76 Krui have utilized various digital applications such as Google Docs, Google Meet, Canva and Wordwall in learning and internal collaboration. However, some teachers still face technical obstacles, especially related to limited devices and internet networks. The learning community plays a role in bridging this gap through peer mentoring and informal training. In line with Huda's (2020) opinion, the success of technology integration in learning communities is highly dependent on the collective support and readiness of the teachers themselves.

Based on these four indicators-teacher commitment, principal support, access to resources and mastery of technology-it can be concluded that the implementation of collaborative learning through learning communities at SDN 76 Krui has been actively taking place and shows sustainability. Although still faced with various challenges, the strength of the community lies in the spirit of mutual support, the desire to continue learning, and the willingness to share and grow together. The learning community is not just a meeting room, but a mechanism for professional transformation that has proven effective in improving teacher competencies in a contextual and sustainable manner.

The implementation of collaborative learning through learning communities at SDN 76 Krui has contributed significantly to improving teachers' professional competence. This community activity facilitates teachers to share experiences, discuss and develop teaching tools collaboratively, both through in-person meetings and online media. Teachers show active involvement, from discussions to the implementation of learning outcomes in classroom teaching. This has resulted in various learning innovations such as the use of Canva, project-based learning, science simulations, and participatory approaches such as group discussions and gallery walks.

In addition to encouraging innovation, learning communities also shape teachers' reflective attitudes towards their teaching practices. Through discussion and feedback, teachers become more open to criticism, conduct self-evaluation and improve their learning approaches on an ongoing basis. Mastery of educational technology has also improved, as teachers begin to utilize digital applications such as Google Docs, Zoom and Wordwall in teaching and learning

activities. Although there are still technical constraints and limited facilities, the technology learning process takes place collectively and informally among teachers.

The results of this study also show that teachers' involvement in learning communities strengthens professional attitudes such as self-confidence, courage to try new things, and willingness to continue learning. The process of exchanging ideas and experiences between teachers creates a collegial, reflective and innovative working environment. This strengthens the role of learning communities as professional learning spaces that encourage the transformation of pedagogy, technology and attitudes.

This finding is in line with the theory of Dufour & Eaker (1998) and reinforced by the research results of Wibowo et al. (2021), Rahmawati & Kusumaningrum (2022), and Fitriani (2023) who confirmed that teacher involvement in learning communities significantly contributes to improving teaching skills, adapting to curriculum changes, and strengthening technological literacy. This view is also corroborated by Lieberman and Miller (2020) who state that learning communities provide an equal and dialogic space for teachers' professional growth. Overall, collaborative learning through learning communities at SDN 76 Krui has improved teachers' professional competencies in four main aspects: active engagement, knowledge exchange, innovation in teaching approaches and use of technology. With the support of the principal, collaborative spirit and ongoing commitment, learning communities have the potential to be an effective and relevant model of teacher professional development to be widely implemented in primary schools.

The implementation of collaborative learning through learning communities at SDN 76 Krui has a positive impact on improving teachers' professional competence, although it faces various challenges. The obstacles faced come from internal factors such as time constraints and variations in teacher participation, as well as external factors such as limited infrastructure and low mastery of technology. Nevertheless, teachers show a commitment to continue collaborating and adapting collectively.

One of the main obstacles is teachers' limited time to be actively involved in the learning community. Administrative burdens and conflicting schedules of school activities often hinder the consistency of teacher attendance in discussions. To overcome this, schools are expected to set a regular learning community schedule and protect it from other agenda clashes. Limited facilities are also a dominant issue, such as limited discussion space, unavailability of structured learning modules, and lack of support for devices and internet access. Teachers also have to take the initiative to bring their own teaching materials or share them independently. The proposed solutions are the provision of a special room, training from external resource persons, and budget allocation to support community activities.

In terms of technology mastery, not all teachers have the same ability. Some teachers face technical constraints, such as limited devices and lack of digital literacy. For this reason, practice-based training and mentoring between teachers are strategic steps in improving the technological skills needed in collaborative activities. In addition, varying levels of teacher participation and confidence are also a challenge. Some teachers are still passive or reluctant to speak in forums, even though they follow the activities carefully. A more inclusive approach and peer mentoring strategies are considered to be able to build a climate that supports the

participation of all teachers. Giving appreciation can also be a stimulus to increase motivation and confidence.

Overall, despite a number of obstacles in implementing the learning community, teachers at SDN 76 Krui showed a positive attitude and readiness to adaptively overcome them. With the support of the principal, digital capacity building, and proper management of time and resources, learning communities have the potential to continue to develop as part of a productive and sustainable professional culture in primary schools.

## CONCLUSION

Based on the results of the research and discussion, it can be concluded that the implementation of collaborative learning through learning communities has a positive impact on improving the professional competence of teachers at SDN 76 Krui. This conclusion can be detailed as follows: Teachers showed high commitment and readiness in participating in the learning community. This is shown through their active involvement in experience sharing activities, preparation of teaching tools, and joint reflection on learning practices that have been carried out. Teachers' motivation to participate in the learning community grows from an intrinsic awareness of the importance of professional capacity building, especially in the midst of evolving curriculum demands and 21st century education challenges. The principal plays an important role as an instructional leader by providing policy support, time allocation, space, and appreciation to teachers who actively contribute. This supportive leadership creates an ecosystem conducive to the growth of a collaborative culture. The availability of resources and the utilization of educational technology also support the success of the learning community. Teachers are able to access and utilize simple technologies such as Google Docs, Canva, and other digital platforms in developing teaching materials, conducting assessments, and supporting remote collaboration. Collaborative learning through learning communities is not just a discussion forum, but a space for professional transformation. This community encourages teachers to continue learning, sharing, reflecting and innovating in their daily learning practices. The real impact includes an increase in mastery of teaching materials that are more contextualized, more innovative pedagogical skills, and the growth of reflective skills and the ability to utilize educational technology more effectively and collaboratively. By optimizing collaborative learning through learning communities, primary schools can create a learning environment that is professional, sustainable and adaptive to the challenges of modern education.

Thus, learning communities play an important role in shaping teachers who are not only academically and pedagogically competent, but also have an open, reflective and collaborative professional attitude in building better quality education.

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