



## Role of LMS-Based Learning Communities on the Independent Teaching Platform in Enhancing Teachers' Basic Competencies

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### Abstract

This study aims to analyze the role of the Learning Community on the Independent Teaching Platform LMS in improving teacher basic competencies and its impact on teacher performance and student learning outcomes. The study used mixed methods with a sequential exploratory model. The qualitative phase was conducted through interviews, focus group discussions (FGDs), observation, and documentation, while the quantitative phase used questionnaires for 55 elementary, junior high, and high school teachers in Wonosobo Regency. Qualitative data analysis was assisted by NVivo 12 software, and quantitative data were analyzed descriptively. The results showed that the Learning Community improved teachers' pedagogical competency with an average score of 3.0 (good category), professional competency of 3.27 (good), personality competency of 3.23 (good), and social competency of 2.77 (fairly good). As many as 67% of teachers participate in Learning Communities due to mandatory requirements and performance assessments, which has shifted the function of learning communities. Learning Communities should serve as a forum for collaboration, reflection, sharing of best practices, and strengthening technological literacy, all of which positively impact teacher professionalism, teaching quality, and student learning outcomes. However, extrinsic motivations are more predominant, focusing more on administrative fulfillment than professional development. The results of this study provide encouragement for learning communities to provide more internal motivation in teacher professional development.

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## INTRODUCTION

The role of teachers is crucial for transforming student learning. This transformation is demonstrated by shifting the learning process from teacher-centered to student-centered through discussions, projects, and problem-solving (Aulia & Yuliani, 2023; Rismawati et al., 2019; Susilowati et al., 2025). Teachers also utilize digital technologies such as Google Classroom and interactive quiz applications to support more engaging

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learning evaluations (Chananil et al., 2025; Giang et al., 2026; Imran & Mardhiah, 2023; Maryuni et al., 2024; Salimi & Fauziah, 2023). In this process, teachers act as facilitators who guide students to think critically, collaborate, and demonstrate their understanding through various forms of assessment, such as projects, presentations, and portfolios.

Acceleration of learning transformation can occur if teachers and educational staff enjoy and regularly learn to improve their competencies. This can be achieved through various approaches, such as training, mentoring, coaching, and learning communities (Prasetyo et al., 2024; Riandari, 2022). Learning communities are groups of teachers who collaborate regularly with clear goals to improve the quality of learning and student outcomes (Mulyasa, 2021; Muttaqien et al., 2023; Setiariny, 2023). Learning communities are expected to encourage a culture of learning and sharing among teachers and other educational staff. Learning communities encourage a culture of learning and collaboration among teachers. Learning communities provide a forum for teachers to learn and participate in their own development, thereby increasing their competency. For this reason, research was conducted to assess the extent of the role of the teacher community in improving teachers' basic competencies in managing learning.

Teachers must have pedagogical, personality, social, and professional competencies (Bashori, 2015; Istiyono et al., 2021; Triyono et al., 2020). Among these, pedagogical competence is fundamental, including the ability to plan, implement, and evaluate learning, as well as develop instructional media. However, not all teachers have mastered these competencies. In addition, teachers are required to integrate technology into learning, while challenges related to access and digital literacy remain (Caena & Redecker, 2019; Djami, 2022; Ng & Fergusson, 2019; Spencer, 2024; Spencer, 2025; Triplett, 2023). Access to technology has not been felt directly in every educational unit, and digital literacy is mostly mastered by young teachers, leaving older teachers often behind.

Based on the 2015 UKG score, the national average for pedagogical competency was 48.94, below the minimum standard. This indicates that teacher competency still needs improvement (Caena & Redecker, 2019; Fernández-Batanero et al., 2022; Giarti & Astuti, 2016). Along with the implementation of the curriculum, the government has made various efforts to help improve teacher competency holistically. One such effort is the creation of the Independent Teaching Platform to facilitate teachers in implementing the curriculum and government policies (Hanifah & Sangadah, 2023; Uluwiyah et al., 2024). Access and utilization of the Independent Teaching Platform can provide a reference for teachers to understand the nature of student-centered learning (Sari et al., 2022). Teachers as educators in schools have the responsibility to prepare a young generation that is creative, innovative, communicative, collaborative, critical, competitive, and self-confident (Jumini, 2016; Parmin et al., 2017). This platform also facilitates collaboration through Learning Community forums, where educators share experiences and best practices (Anwar & Utami, 2023).

Learning Communities are expected to serve as an effective medium for teacher professional development. Through these communities, teachers can exchange ideas, solve instructional problems, and adapt to policy changes (Moreland, 2019). They also support the development of 21<sup>st</sup>-century skills, including critical thinking, collaboration, communication, and technological literacy (Boeriswati et al., 2023; Hasani et al., 2020; Jumini et al., 2022; Parmin & Fibriana, 2019; Rahimi & Oh, 2024; Rohmawati et al., 2026; Varas et al., 2023). However, in practice, participation in learning communities is not always optimal, and some teachers perceive these activities as administrative obligations rather than meaningful professional development.

Although Learning Communities have been widely implemented and supported by policy, there is still limited research examining their role in improving teacher

competencies. Previous studies have primarily focused on student outcomes rather than teacher development (Giyanto et al., 2023; Shandilia et al., 2023). In addition, teachers' motivations and levels of engagement in these communities vary, and their actual impact on teaching performance remains unclear.

Therefore, this study aims to analyze the role of Learning Communities within the Independent Teaching Platform in improving teachers' basic competencies and its impact on teacher performance and student learning outcomes. In addition, this study explores teachers' motivations for participating in Learning Communities and examines how these motivations influence their engagement and professional development. This study contributes to the existing literature in three ways. First, it extends research on learning communities by examining teacher participation within a digital learning platform from a socio-technological perspective. Second, it highlights the tension between intrinsic and extrinsic motivation in teacher participation. Third, it provides insights into the opportunities and challenges of large-scale digital teacher development programs in the Global South.

## METHOD

The research method used was a mixed methods design with a sequential exploratory model. This study involved two phases: qualitative and quantitative. The qualitative phase was implemented initially through focus group discussions, interviews, observations, and documentation to obtain detailed and in-depth understanding of teachers' perceptions of the interests, goals, and impacts of the learning communities they participate in, both at school, outside of school, and through the online Merdeka Teach platform (Bungin, 2021; Jumini et al., 2024). This was followed by a quantitative phase to obtain data on the impact of learning communities on improving teacher competency and student learning outcomes through a questionnaire. This quantitative data was used to strengthen the data obtained through observations and interviews with principals and supervisors as elements that assess teacher competency (Daruhadi & Sopiati, 2024; Moleong, 2014).

In the qualitative phase, a quasi-qualitative approach with a phenomenological design was used to focus on individual perceptions. With a phenomenological approach, researchers sought to understand the meaning of participants' experiences, perspectives, or viewpoints (Guillen, 2019; Giyanto et al., 2023; Neubauer et al., 2019). This study focused on: (1) perception, defined as the perspective, opinion, or viewpoint known, thought, felt, said, or intended by teachers regarding the role of learning communities in improving teacher competency; and (2) its impact on improving student achievement and education in general.

Participants in the qualitative research phase were school teachers in elementary schools, junior high schools, and senior high schools in Wonosobo Regency who were members of learning communities both in schools, outside of schools, and webinars at PMM. In the quantitative phase, the selection of research subjects was based on probability sampling with a proportionate stratified random sampling technique, namely, the research sample was taken randomly based on the strata of Elementary School, Junior High School, and Senior High School (Ferayanti et al., 2023; Oribhabor & Anyanwu, 2019; Rahman et al., 2022), totaling 55 samples. Then, 55 respondents were given an open questionnaire about experiences and activities in the community, benefits and impacts, obstacles and challenges, collaboration and knowledge sharing, professional development of technology and learning innovation, institutional support, evaluation and improvement, and hopes for the future, and FGDs were conducted to collect data directly. Data collection in the qualitative phase used semi-structured interviews with school principals and supervisors to find out how the teacher assessment process works through the PMM. Then, finally, in



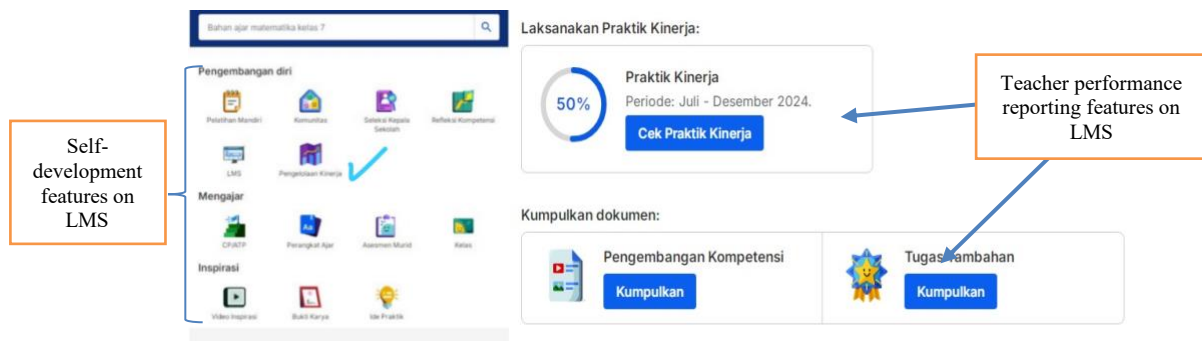
Next, the Text Search Query feature was applied to understand the meaning of the words in the word cloud in Figure 1. In this study, the words "community and learning" are among the dominant terms and serve as keywords. The results of this search show information that the concept of a learning community for participants is a vehicle for teachers to collaborate and discuss learning developments. Learning communities related to improving teacher competencies are considered to support student learning and improve teacher competencies. The results of interviews and open questionnaires stated that the Learning Community is a form of learning transformation that provides a forum for teachers and education personnel to grow together in optimizing student learning outcomes (Ichwan, 2024; Purwowododo & Zaini, 2023; Situmorang & Nurdiansyah, 2024). Through learning communities, collaboration and shared commitment occur between teachers who focus on learning and are oriented towards student learning outcomes.

The teacher learning process largely occurs within learning communities within educational units and other forms of teacher competency improvement within schools. In learning communities within schools, teachers learn together, solve problems encountered in class, and can directly apply what they have learned in the classroom according to the context. Furthermore, teacher learning occurs within interschool communities as teachers observe and receive feedback on their observations, and through formal learning (through training/courses, seminars, and workshops). The groups formed within learning communities aim to enable teachers to learn from each other and collaborate in creating lesson plans and shared teaching materials, evaluating and reflecting on learning, and discussing various issues encountered in their classrooms (Seco & Cendana, 2022; Sukarni, 2023).

Learning communities registered in PMM are synchronized with E-Performance. Teachers' E-Performance must achieve a minimum good score of 32 to receive an Additional Income Allowance. This has an impact on teacher motivation in participating in PMM activities, according to the results of an interview with a teacher: "The obligation to provide 32 points: not always attending training just to drop 32 points, but sometimes really attending training to improve self-quality, especially with interesting themes, sorting out the types of training ". Meanwhile, the disbursement of the Teacher Professional Allowance (TPG), each teacher has 3 real actions, Figure 2. This ultimately makes some teachers look busy to meet the minimum good score. Interview results with a high school teacher:

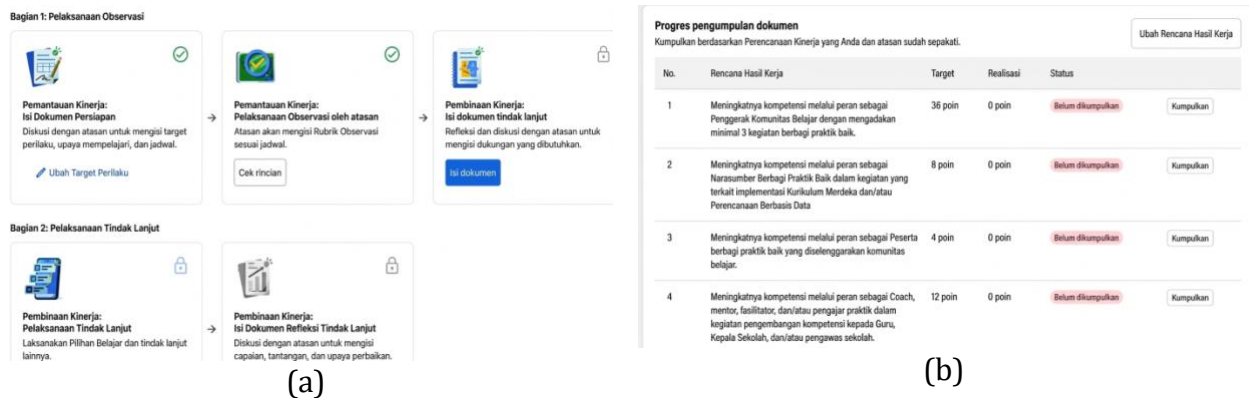
*"Negative impacts: 32-hour lesson requirements, teachers are busy with activities, and not all of them have been implemented. Some are willing to miss classes to participate in bold activities. Elementary school hours are 12:00, junior high school hours are 1:00, and high school hours are 4:00. Examples of concrete actions in the PMM (E-Kin) program, E-Kin validation, and validation need to be completed. For TPG disbursement, a minimum of 3 concrete actions are required in PMM. TPG: Sergur, Kakadin, GTK Dapodik information. TTP (Additional Income Allowance): SKP. Requirements include a good E-Kin score and attendance."*

Teachers, in managing their performance, must conduct performance practices, upload these to PMM, then develop competencies, and complete additional assignments. Due to the busy schedule, these additional assignments are ultimately done during effective teaching hours. One teacher perceived this as inappropriate. Teachers who should be teaching in class would be busy meeting the TPG and TPP requirements. A score below the good category would result in a 50% reduction in TPP. "E-performance assessments below the good category, TPP will be reduced by 50%, starting January 2024 (Interview with School Supervisor).



**Figure 2.** Teacher Performance Management on the Independent Teaching Platform

Academic supervision conducted by the Principal for teachers, and the Principal by the Education Office through supervisors, is carried out in 5 stages, starting from pre-observation, observation, and follow-up, for the development of a minimum of 32 points of competency, Figure 3. Teachers who have not participated in the learning community are given special warnings and are provided with mentoring to be able to adapt to existing technological developments. Principals whose educational units still have many teachers who have not maximized the learning community are accompanied and provided with coaches both from within the region and from the Center for Teacher Leaders, according to need. Performance assessment through the learning community in the Independent Teaching Platform system makes it easier for Principals and Supervisors to conduct assessments. Assessments with the system can be carried out more objectively, and avoid face-to-face meetings so that practices outside of what is expected do not occur. Time is also more effective and efficient.



**Figure 3.** Teacher Academic Supervision via Independent Teaching Platform LMS (a) Teacher Performance Assessment Features (b) Teacher Performance Assessment Results.

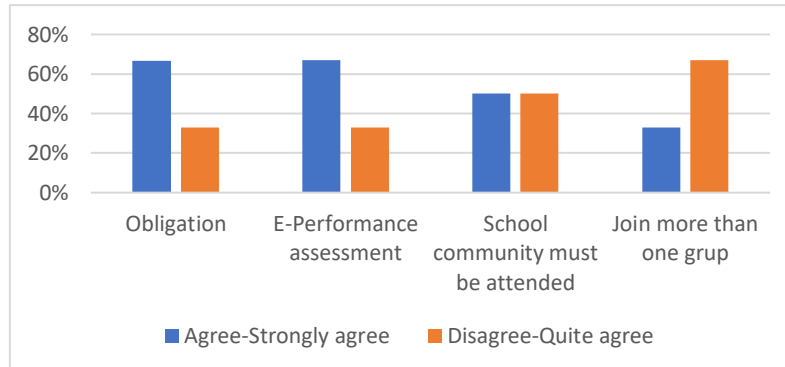
Learning communities facilitate teachers to reflect on the learning (Ferayanti et al., 2023; Nursalam et al., 2023), and also to avoid distortion of training materials because in the learning communities in the Independent Teaching Platform, teachers can learn directly independently. Teachers access materials, study, and do post-tests, continue with real actions, certificates, and fill out reflections. This is different from training, workshops, and seminars that have been carried out so far. The material from the resource person may not be fully conveyed to the next audience. Interpretations can also be different. Learning communities, whether registered with the Independent Teaching Platform or not, allow all teachers at all levels to be reached. Teachers become more familiar with technology, more



## Teacher Motivation to Join Learning Communities

Teachers' motivation to participate in learning communities can be either intrinsic or extrinsic (Rahimi & Oh, 2024). Intrinsic motivation stems from several factors: 1) the need to improve competency; 2) teachers gain diverse knowledge according to their needs, with flexible timeframes; 3) teachers need a space to share good practices; and 4) the need to gather information to generate ideas for educational content and to serve as resource persons (Caena & Redecker, 2019). Extrinsic motivations include: 1) the obligation to participate in a community, both from the government and the school; 2) participation in a learning community influences e-performance assessments and impacts professional allowances; and 3) intra-school communities are mandatory in each school, indirectly compelling teachers to participate in learning communities. Interviews revealed that extrinsic motivation plays a greater role in increasing teacher participation in learning communities. Obligations related to regulations, department policies, and allowances are strong reasons that can compel teachers to participate in learning communities.

Intrinsic motivation plays a significant role in increasing teacher participation, including the idealism that emerges within teachers to be valued by the community and their colleagues. This idealism can manifest in teachers' desire to become resource persons or content creators. Learning communities are used as a means to gather various materials, thus providing benefits when teachers become resource persons or content creators. Some teachers view participation in learning communities as an obligation that can also be used as an opportunity to earn additional income. Others join learning communities citing the need to improve competency or the need for a space to share good practices. The results of the questionnaire on teachers' motivation to participate in learning communities are shown in Figure 5.



**Figure 5.** Teacher Motivation to Join Learning Communities

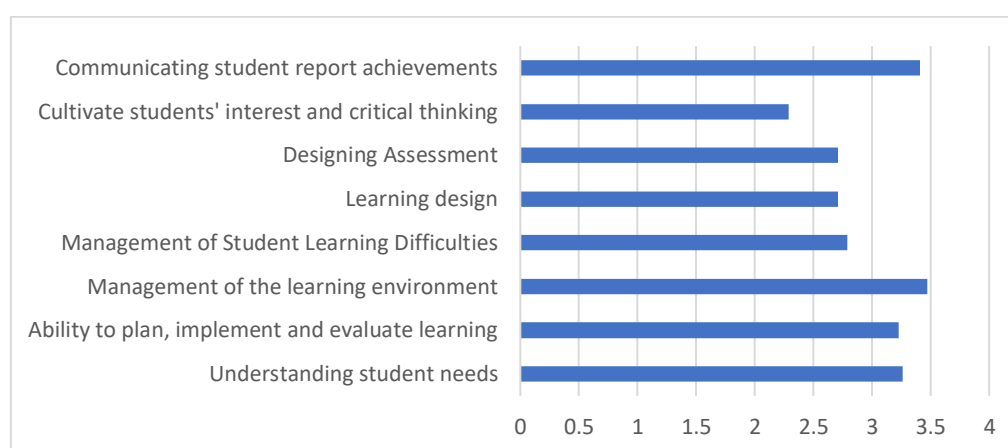
The data in Figure 5 indicate that the learning communities created through the LMS have a dual function: supporting teacher professional development and reinforcing compliance-oriented participation. On one hand, teachers have developed pedagogical, professional, personality, and social competencies. This indicates that the learning communities provide teachers with opportunities to develop professionally. This is in line with the concept of Communities of Practice, which suggests that learning occurs through social interaction and practice.

On the other hand, this research reveals a critical paradox. The majority of teachers (67%) participate in the learning communities due to external requirements, such as performance evaluation and professional allowances. This indicates that teachers' participation in the learning communities is not internally motivated but rather driven by the institutional pressures embedded in the LMS.

### Improving Teacher Competence through Learning Communities

The existence of learning communities is considered a means for teachers to develop their competencies (Khusna & Priyanti, 2023; Sukarni, 2023;). Teacher competencies can be acquired not only through formal education but also through non-formal education, such as training, webinars, and learning reflections, both online and offline (Prasetyo et al., 2024; Riandari, 2022). Joining a learning community, whether registered with the Independent Teaching Platform or not, makes it easier for teachers to participate in webinars or training sessions as needed (Sari et al., 2022; Uluwiyah et al., 2024). Time is more effective and efficient, and teachers can access the full material without worrying about material distortion. Learning anything is easily achieved by any teacher; it's simply a matter of willingness. Reflections on learning conducted by teachers in learning communities, both offline and online, provide significant benefits for teachers themselves, enabling them to identify their strengths and weaknesses in managing learning, leading to further improvement. Concrete actions taken by teachers after learning are a form of follow-up to the learning process (Muslimin, 2020). To validate these concrete actions, observations by the principal or a team assigned by the principal are necessary.

Teacher competency measurement encompasses four competencies: pedagogical, personality, social, and professional. The research found 125 learning communities in the PMM Learning Management System (LMS) with 814 members. Questionnaires were administered randomly through supervisors and principals to assess the impact of the community on teacher competencies, including pedagogical, professional, personality, and social competencies. A summary of the questionnaire results on the role of the learning community in the Learning Management System (LMS) shows that the learning community can influence four teacher competencies. The improvement in pedagogical competency falls into the good category, with a score of 3.0, as shown in Figure 6. The pedagogical skills that showed significant improvement include learning activities related to managing the student learning environment and core teaching skills such as planning, implementing, and evaluating learning. This indicates that the learning community in the LMS has a significant impact on improving pedagogical competency.



**Figure 6.** Improving Pedagogical Competence

Pedagogical competence is a teacher's ability to teach effectively. Teachers with pedagogical competence actively and creatively organize the teaching and learning process communicatively and contextually. They can control the class effectively, provide examples to help students understand the material, and give feedback to evaluate and improve student abilities. This is in line with research Verniati et al. (2023) that the improvement of pedagogical competence is seen by the creation of an active, creative, effective, innovative,

and enjoyable learning atmosphere. Pedagogical competence undoubtedly has an impact on learning, so that student learning achievement increases.

In the "good professional competency" category, which has a score of 3.27 (Figure 7), it was found that teachers are capable of understanding students' backgrounds well, comprehending student development and learning needs, and student learning strategies. This supports the interview results that in the learning community, teachers can share student problems and find solutions. In this community, experienced teachers share best practices, resulting in strategic solutions that understand student development and needs so they can provide appropriate learning strategies.

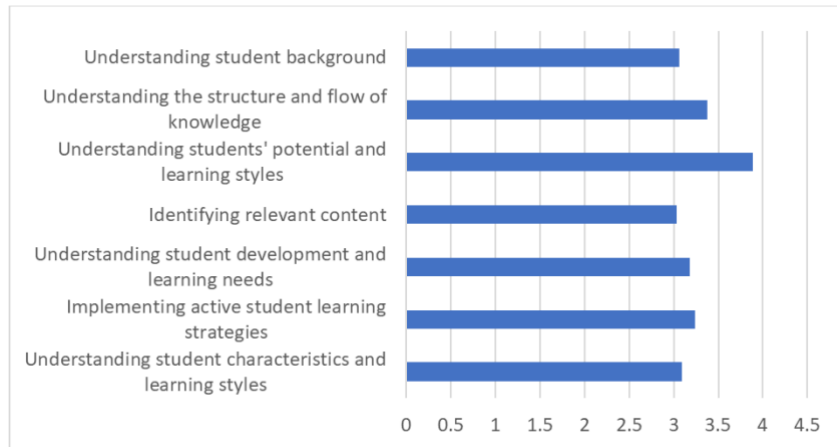


Figure 7. Improving Professional Competence

In terms of improving personality competency in the good category on a scale of 3.23, Figure 8 shows that the learning community has a positive impact on a mature and wise personality, solid, stable, and noble. Through sharing within the learning community, teachers gain perceptions from different perspectives about the learning problems they face, allowing them to act wisely and prudently in solving issues. Teachers also become more confident and assured in carrying out learning, because of what is done. Teachers are also more confident in carrying out learning, because what is done is based on an agreement from the results of discussions that have been carried out in the learning community. However, teachers cannot be full role models because one reason is that they are too busy handling administrative tasks, which aligns with the results of interviews with teachers and supervisors.

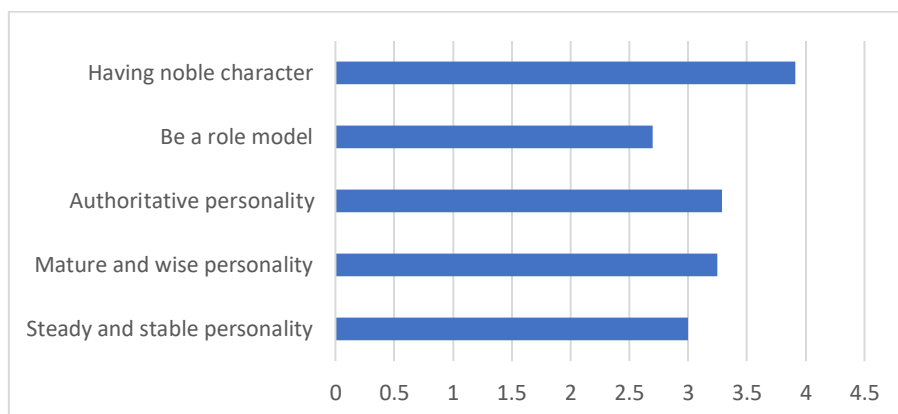
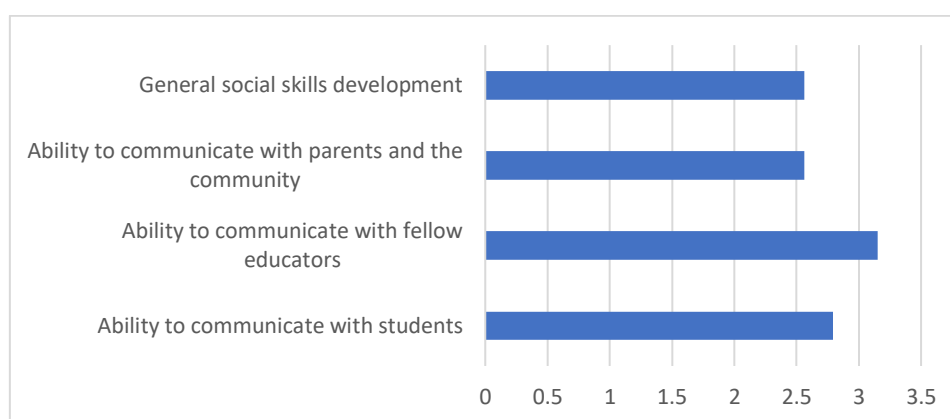


Figure 8. Improving Personality Competence

In social competence, the score is 2.77, and Figure 9 shows that there is a significant improvement in communication skills among educators. Learning communities can bridge the gap between senior and junior teachers, encouraging open discussions. Young teachers can share good practices and innovations for problem-solving, which even experienced teachers are willing to ask about. Good communication among teachers helps create a positive school climate, enhancing other social skills such as interactions with the community and students. This positive environment makes learning more comfortable and can boost student achievement.



**Figure 9.** Improving Social Competence

In general, teacher competency improvement is categorized as Good. Teachers are constantly working to understand student characteristics according to their abilities and needs. This encourages teachers to implement several learning innovations, such as innovative learning methods, models, strategies, and assessments (Verniati et al., 2023; Susilowati et al., 2025). In addition to learning innovations, teachers also regularly report on student learning progress through a contact book and home visits for students experiencing difficulties. This contact book and home visits are not yet implemented by all teachers due to time constraints. Learning communities develop and strengthen teachers' thinking, communication, collaboration, and openness skills (Khusna & Priyanti, 2023; Situmorang & Nurdiansyah, 2024). Discussions within learning communities train teachers to communicate ideas, concepts, opinions, thoughts, and work, thereby enhancing communication skills. After discussions, teachers can also collaborate on developing learning plans, media, and evaluations, thus lightening the administrative burden. Furthermore, teachers can collaborate to observe each other during the learning process. This fosters openness, creating a safe and comfortable school climate not only for teachers but also for students (Febrini et al., 2024). Such school conditions can serve as a benchmark for schools with superior accreditation.

Learning communities provide teachers with facilities for self-development, a new understanding of technology and applications, the utilization of information technology, and career development. Teachers who join learning communities and are registered with the Independent Teaching Platform must adapt to the Learning Management System (LMS), inevitably having to learn the technology and use the features available in the Independent Teaching Platform LMS (Sari et al., 2022; Uluwiyah et al., 2024). Furthermore, there is a wealth of content covering the use of technology in learning, presented with tutorials that greatly assist teachers in learning. Facilitating teachers in utilizing this technology is not without challenges. For older teachers who are unfamiliar with the Independent Teaching Platform LMS, this presents a particular problem. The school, regional, and central education systems provide support so that every teacher has easy

access to and use of the Independent Teaching Platform LMS. In addition to developing technology skills, the PMM learning community, which is integrated with *E-Kinerja*, makes it easier for teachers to report their performance, thus fostering career advancement.

Teacher self-development efforts can be achieved by actively participating in various training programs. Training is crucial for teachers to develop the skills to address student issues (Adawiyah, 2021). Teachers who have participated in training perform better than those who have not (Muslimin, 2020). However, this teacher self-development should be accompanied by improvements to educational institutions responsible for teacher training so that the training and education that teachers participate in can be optimal. In addition to participating in training, teachers must continue to conduct honest self-evaluation and reflection (Ritonga et al., 2022), not only about their character as humans who invite others to knowledge and goodness, but also as individuals who are members of the teaching profession. According to participants, learning communities are very helpful for teachers in conducting honest and open reflections, and train teachers to accept input from colleagues (Khusna & Priyanti, 2023; Sukarni, 2023;). Thus, learning communities can be a mirror for teachers, showing how teachers manage learning, so they can appear attractive in front of the class. The results of this study provide an overview of the positive impact of the existence of a learning community; however, several obstacles that have been reviewed are expected to encourage policies to reduce the administrative burden on teachers and to have more intrinsic motivation in developing their competencies.

### LIMITATION

This study was limited in its access to the results of teacher competency assessments conducted by principals and supervisors, as these results are not permitted for publication. Therefore, teacher competency data collection was conducted using a questionnaire to corroborate the data obtained through interviews. The study was also conducted on only 55 samples, and only in Wonosobo Regency. It would be beneficial to conduct it in several regions to provide a broader range of influencing factors.

### CONCLUSION

According to respondents, learning communities in the Independent Teaching Platform LMS play an important role in improving educator competence and student learning outcomes. Learning communities provide opportunities for teachers to learn and share experiences. The existence of learning communities is considered a means for teachers to develop their competence. Learning communities develop and strengthen teachers' abilities to think, communicate, collaborate, and be open. Learning communities provide teachers with facilities for self-development, new understandings of technology and applications, the use of information technology, and career development. Learning communities have a positive impact on building educator independence, improving student achievement, creating a safe and comfortable atmosphere in Educational Units, and play a significant role in advancing Education in Indonesia. Teachers' motivation to join learning communities is 67% due to obligation, 50% due to e-performance assessment, 67% participate in no more than one learning community. The increase in teacher competence in pedagogy is 3.0 in the good category, professional competence is 3.27 in the good category, personality competence is 3.23 in the good category, and social competence is 2.77 in the fairly good category. Learning communities really help teachers to reflect honestly and openly, and train teachers to accept input from colleagues, so that they can improve teacher competence and student learning achievement. The results of this study

encourage learning communities to be more directed at increasing teachers' intrinsic motivation in improving their competence.

### AUTHOR CONTRIBUTIONS

All authors contributed collaboratively to this study. SJ initiated the main idea of the research, conducted the primary data collection through interviews with school principals and supervisors, and carried out qualitative data processing using NVIVO. PP was responsible for instrument validation and quantitative data analysis. AW contributed to strengthening and affirming the research objectives, benefits, and contributions, as well as participating in qualitative data analysis. WWa assisted in editing and translating the manuscript. ÖAA contributed to qualitative data analysis and discussion, while ASA handled quantitative data analysis and discussion. FC contributed to the study, although specific roles were not explicitly defined. Bİ and VOA were responsible for checking grammar and bibliography. ODA contributed by checking grammar and confirming the conclusions. WWi conducted interview data analysis using NVIVO and contributed to drafting the manuscript. PRS was responsible for quantitative data collection and gathering activity data through the independent learning platform application.

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