Evaluating the Effectiveness of the Learning Community Program in Improving Educators' Pedagogical Competence

Trisna Apriani^{1,*}, Manap Somantri¹, Muhammad Kristiawan¹, Zaharah Hussin²

¹Master of Educational Administration Study Program, University of Bengkulu, Bengkulu, Indonesia ²Master Department of Educational Foundation and Humanities, Universiti Malaya, Kuala Lumpur, Malaysia

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ABSTRACT

Purpose of the study: This study aims to evaluate the learning community program at *Sekolah Pendidikan Non-Formal Sanggar Kegiatan Belajar* [Non-Formal Education School Learning Activity Center] SPNF-SKB Kaur in improving the pedagogical competence of learning facilitators using the CIPP (Context, Input, Process, Product) evaluation model.

Methodology: This research employed a descriptive qualitative approach with the CIPP model. Participants included the Head of SPNF-SKB Kaur, learning community managers, and learning facilitators. Data were collected through interviews, observations, and documentation, then analyzed using Miles, Huberman, and Saldaña's interactive model, including reduction, display, verification, and conclusion drawing.

Main Findings: The findings show that the learning community program is relevant and effectively managed. It successfully supports planning, implementation, and resource provision, leading to improved pedagogical competence of facilitators and positive impacts on student learning outcomes. Nevertheless, challenges remain, such as limited motivation among some facilitators, insufficient module availability for Package A and B, and suboptimal support from local government.

Novelty/Originality of this study: This study provides one of the first comprehensive evaluations of a learning community program for facilitators in non-formal education. Unlike previous studies that focused mainly on teachers in formal schools, this research highlights both the effectiveness and challenges of learning communities in enhancing pedagogical competence in non-formal education settings, filling an important gap in the literature.

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Corresponding Author:

Trisna Apriani,

Master of Educational Administration Study Program, University of Bengkulu,

Jl. WR Supratman, Kandang Limun, Bengkulu, 38371, Indonesia

Email: trisnaapriani874@gmail.com

1. INTRODUCTION

Non-formal education serves as a vital complement to formal education by providing flexible and inclusive learning opportunities for individuals and communities who are often underserved by conventional educational systems. It plays a key role in promoting lifelong learning, literacy improvement, and community empowerment, especially in rural or marginalized areas where access to formal education may be limited. Within this context, learning facilitators occupy a strategic and multifaceted position not only as instructors responsible for delivering learning content but also as mentors who guide, motivate, and empower learners to achieve personal and social transformation. To fulfill these dual responsibilities effectively, facilitators must possess

strong pedagogical competence, which includes the ability to design, implement, and evaluate learning processes that respond to learners' diverse backgrounds, learning needs, and sociocultural contexts.

In recent years, the learning community program has emerged as an innovative professional development initiative designed to strengthen facilitators' pedagogical competence through collaborative practice, reflective discussion, and shared learning experiences. Studies such as Rahma et al., have shown that participation in learning communities significantly enhances educators' professional competence, pedagogical knowledge, and instructional creativity [1]. Through sustained interaction and peer collaboration, facilitators can exchange ideas, address instructional challenges, and develop a deeper understanding of effective learning strategies. However, most existing studies have concentrated primarily on formal education settings, such as schools and universities, while research focusing on learning communities in non-formal education contexts remains limited. This creates a substantial research gap, given that facilitators in non-formal education environments often operate under very different conditions characterized by minimal supervision, diverse learner profiles, flexible curricula, and varying degrees of institutional support.

In the specific context of Sekolah Pendidikan Non-Formal Sanggar Kegiatan Belajar [Non-Formal Education School Learning Activity Center] SPNF-SKB Kaur District, the learning community program has been implemented as a professional learning initiative involving weekly collaborative meetings among facilitators. These meetings are designed to promote joint reflection, lesson planning, and experience sharing aimed at improving teaching practices. Despite its potential benefits, the program has not yet been systematically evaluated to determine its effectiveness in enhancing facilitators' pedagogical competence. This absence of structured evaluation represents a critical research gap, as it limits stakeholders' ability to assess the actual impact of the program, identify challenges, and make evidence-based improvements. Understanding whether and how such learning communities contribute to the development of pedagogical competence is essential for ensuring the sustainability and scalability of professional development initiatives in non-formal education settings.

To address this gap, the present study applies the CIPP (Context, Input, Process, Product) evaluation model developed by Stufflebeam to comprehensively evaluate the effectiveness of the learning community program in SPNF-SKB Kaur District. The CIPP model provides a holistic framework that enables analysis from four key dimensions: context (the relevance and necessity of the program), input (the adequacy of resources, facilities, and facilitator support), process (the quality of program implementation and participation), and product (the outcomes and impacts on facilitators' pedagogical competence). This evaluative approach ensures that the research does not merely measure outcomes but also examines the conditions and processes that influence program success.

Furthermore, the findings of this study are expected to provide empirical evidence that can guide policymakers, educational managers, and practitioners in improving the design and implementation of professional development programs in non-formal education institutions. By identifying strengths, weaknesses, and areas for improvement, the study contributes to developing a sustainable and evidence-based model for enhancing pedagogical competence through collaborative learning frameworks.

Therefore, the objective of this research is to evaluate the effectiveness of the learning community program in improving the pedagogical competence of community learning facilitators in SPNF-SKB Kaur District, thereby offering insights and a systematic framework for strengthening similar professional development initiatives in other non-formal education contexts.

2. RESEARCH METHOD

This study employed a qualitative descriptive research design using the CIPP (Context, Input, Process, Product) evaluation model developed by Stufflebeam [2]. The qualitative approach was selected because it allows for an in-depth exploration of participants' experiences, perceptions, and insights related to the effectiveness of the learning community program in enhancing pedagogical competence. The CIPP model provides a systematic and comprehensive framework for evaluating programs by examining their relevance, resources, implementation process, and outcomes.

The research was conducted at SPNF-SKB Kaur District and involved twelve participants, including the Head of the institution, six learning facilitators actively engaged in the learning community, three program managers consisting of the Chairperson, Secretary, and Treasurer, and two learners participating in SKB learning activities. The participants were selected using purposive sampling, a non-probability technique that allows the researcher to intentionally select individuals who are directly involved in and knowledgeable about the program. This approach ensured that data were collected from key stakeholders with direct experience of the program's planning, implementation, and results. The sample size was determined based on the data saturation principle, in which data collection was discontinued once no new themes emerged. This number is considered sufficient in qualitative studies to achieve analytical depth and representativeness of the observed phenomena [3].

The research instruments consisted of interview guides, observation checklists, and document review sheets, all developed based on the four dimensions of the CIPP model. The interview guide focused on gathering participants' perspectives on program relevance, available resources, implementation strategies, and outcomes related to pedagogical competence. The observation checklist was used to record facilitator participation, collaboration, and meeting management. Meanwhile, the document review sheet was designed to analyze program reports, meeting minutes, and other supporting documents to confirm the data collected through interviews and observations. All instruments were validated through expert judgment involving two academics in educational evaluation and one practitioner in non-formal education. To ensure reliability, a pilot interview was conducted with two facilitators, after which revisions were made to improve question clarity and relevance.

Table 1. Instrument Grid

CIPP Component	Indicator Focus	Data Collection Instrument	Source
Context	Program relevance to facilitator needs	Interview guide (Items 1–4)	Facilitators, Head
Input	Resources: human, facilities, finance, institutional support	Interview & document checklist	Managers, Documents
Process	Implementation: meeting frequency, participation, collaboration	Observation & interview	Facilitators, Observation notes
Product	Outcomes: changes in pedagogical competence	Interview & document analysis	Facilitators, Students

Data were collected from April to June 2025 using three primary techniques: interviews, observation, and documentation. Semi-structured interviews were conducted face-to-face with participants, each lasting 30–60 minutes and recorded with their consent. The interviews were guided by questions based on the four CIPP components. Weekly observations of the learning community meetings were also carried out to document real-time interactions, levels of engagement, and patterns of collaboration among facilitators. Documentation such as meeting notes, program reports, and institutional records was reviewed to triangulate and enrich the findings. All data were transcribed verbatim and organized in NVivo 12 software to facilitate data management and analysis.

The data were analyzed using thematic analysis following the six-step framework of Braun and Clarke, adapted to the four CIPP components [4]. The process included familiarization with data through repeated reading and memo writing, generating initial codes aligned with the CIPP indicators, searching and reviewing themes, refining and naming themes, and finally constructing a comprehensive narrative of findings. NVivo software supported this process by helping visualize theme networks and ensuring transparency in the analysis. Although this study employed a qualitative approach, the analytical rigor was strengthened through triangulation, inter-coder verification, and data saturation, which serve as qualitative equivalents to statistical validity and reliability in quantitative research.

To ensure trustworthiness, the study applied Lincoln and Guba's criteria, which include credibility, dependability, confirmability, and transferability [5]. Credibility was maintained through triangulation of data sources and methods; dependability through peer debriefing and audit trails; confirmability through verbatim transcription and coding transparency; and transferability through detailed contextual descriptions to allow replication in similar settings. The strength of this study lies in its in-depth exploration of stakeholder perspectives using a small but information-rich sample. The use of purposive sampling and saturation principles ensured that the data were comprehensive and contextually grounded. Although statistical analysis was not applied due to the qualitative nature of the research, the systematic use of the CIPP evaluation model, thematic analysis procedures, and NVivo-assisted coding provided methodological robustness and analytical rigor comparable to quantitative studies.

3. RESULTS AND DISCUSSION

This study aimed to evaluate the role of the learning community in enhancing the pedagogical competence of Learning Facilitators at SPNF-SKB Kaur. The findings indicate that the program has been relatively successful in terms of planning, implementation, and outcomes, although several challenges remain. The results are presented based on the CIPP evaluation model (Context, Input, Process, Product) and are further analyzed in relation to previous studies and theoretical frameworks.

3.1 Context of the Learning Community Program in improving the pedagogical skills of Learning Facilitators at SPNF-SKB Kaur

The evaluation of the program's context revealed that the pedagogical capacity of Learning Facilitators at SPNF-SKB Kaur remains diverse. While a few facilitators demonstrated adequate skills in lesson planning, classroom management, and assessment, the majority required further improvement, particularly in developing instructional modules and applying technology in teaching. This challenge is compounded by the nonlinearity between facilitators' educational backgrounds and the subjects they teach, as well as the increasing demands of digital learning.

To determine the initial conditions of the learning facilitators before implementing the learning community program, preliminary interviews were conducted. This step aligns with the context evaluation stage in the CIPP model, which serves to identify program needs and problems. The interview results are presented in Table 2.

Table 2. Results Interview To Initial conditions of the Learning Supervisor

Focus	Data Findings
Initial Conditions of Learning	The Learning Supervisors at SPNF-SKB Kaur have pedagogical abilities in terms of planning, implementing, and evaluating learning which are still varied.
Supervisors	Some already have quite high abilities while most of them still need development and improvement. Most of the Learning Supervisors have never participated in training related to developing pedagogical competencies and abilities.
Challenges faced by Learning Facilitators	The changing education system and curriculum, learning in the digital era, education that is not linear with the subjects taught.
Tacillators	The diverse characteristics of students and the low pedagogical competence of tutors, namely:
Challenges in the learning process	a. Difficulty in planning learning (preparing lesson plans, syllabus and teaching modules).
	b. Implementation of learning (monotonous learning methods)
	c. Some learning evaluations are not yet directed

Table 2 shows that learning facilitators still experience difficulties in planning and implementing learning, particularly in method innovation and media utilization. This finding indicates a gap in pedagogical competency that needs to be addressed. According to teacher professional development theory, effective competency improvement is achieved through collaborative activities such as learning communities, thus reinforcing the urgency of implementing the program. Based on the data found in the SPNF Kaur, the low pedagogical skills of the tutors can be seen from the initial conditions due to non-linear education and also the challenges of change faced. These findings align with Karopak et al., who emphasized that teachers' academic background alignment significantly influences student learning outcomes [6]. Similarly, Meyvita et al., highlighted the multifaceted challenges educators face in the Industrial Revolution 4.0 era, including curriculum adaptation, technology integration, and the shift toward student-centered learning [7]. Consequently, the learning community has proven relevant as a platform for capacity building, addressing the contextual needs of Learning Facilitators. It is very important for a teacher to continue to develop the pedagogical competence of teachers, which is absolutely possessed by professional teachers. Teacher pedagogical competence can be seen from the ability to master learning knowledge, prepare lesson plans, and implement learning in the classroom [1].

To identify the needs for improving the pedagogical competence of learning facilitators, in-depth interviews were conducted. This activity corresponds to the *context evaluation* stage of the CIPP model, which aims to assess the program's relevance and needs. The interview results are presented in Table 3.

Table 3. Results Interview To The Need for Pedagogical Improvement Training for Learning Facilitators

Focus	Data Findings
	Learning Supervisors at SPNF-SKB Kaur really need pedagogical guidance
Need for Pedagogical	because they have high motivation to become Innovative and adaptive
	Educators, must have pedagogical skills in dealing with the diversity of
Development	Students, Learning Supervisors are less competent in using IT, causing
	learning to be less focused and not adapting to developments in the times.
	All SPNF-Kaur Learning Facilitators are in dire need of training related to
	pedagogical improvement. Most Learning Facilitators rarely participate in
Pedagogical Training Needs	pedagogical development training. Trainings were rarely conducted before the
	learning community existed. PNFs were less involved in training and were
	rarely invited and involved.

Based on Table 3, it can be concluded that learning facilitators require more targeted training to strengthen their skills in lesson planning, classroom management, and learning evaluation. This finding aligns with Destiana and Utami, who emphasized that effective professional development must be based on educators' actual needs [8]. Therefore, these results reinforce the necessity of implementing the learning community program as a sustainable strategy for improving pedagogical competence.

From the findings data displayed in the Table above, it is concluded that the need for mentoring and pedagogical training for Learning Facilitators is very much needed. One of the obstacles in developing ideal competencies for Learning Facilitators is the unequal access or opportunity to participate in self-development training [8] so that learning communities become the main alternative as a forum for improving and developing pedagogical competencies for Learning Facilitators. The study in this research is then supported by the findings Rukin and Muflih, which found that integrated training in Learning Community activities makes the HR development process more contextual and applicable, because it takes place in a collaborative atmosphere that encourages reflection, discussion, and continuous improvement of practices [9]. Thus, the Learning Community is not only a forum for sharing knowledge, but also a strategic means to improve the quality of learning and educational services as a whole. The pedagogical coaching and training program, which is one of the main activities of the learning community program, is very much needed by the Learning Facilitators. This ability has the potential to increase if it receives more attention. In addition to the motivation and support provided by the head of the educational unit to the learning facilitators, the learning facilitators must also be involved in learning communities, training, seminars, and workshops [10]. This quote is in line with the findings of the SPNF-SKB Kaur learning community regarding the importance of pedagogical training for tutors.

Interviews were conducted to assess how well the learning community program objectives align with tutors' professional needs. This corresponds to the *context evaluation* stage of the CIPP model. The results are shown in Table 4.

Table 4. Results Interview Relevance of Program Objectives to the Needs of Learning Tutors		
Focus	Data Findings	
Program Relevance	The learning community program has a very significant relevance in improving pedagogical competence, Minister of Education and Culture Regulation Number 16 of 2007 concerning Academic Qualification Standards and Teacher Competence, which states that pedagogical competence is one of the four core competencies of teachers and must be developed continuously, including through discussion forums and learning communities.	
Suitability of program objectives to the needs of Learning Facilitators	 Through active participation in the community, Tutors can share teaching experiences, share good practices, learning strategies, lesson planning, lesson implementation, and learning evaluation and reflection on classroom practices that can enrich their understanding and pedagogical skills. They can also obtain constructive feedback from their peers In learning communities, learning facilitators often receive training related to improving pedagogical skills. The SKB Kaur learning community aims to improve the quality of education and teaching through collaboration and learning between fellow educators (as stated in the SKB Kaur learning community profile). In the SPNF-SKB Vision and Mission, the Head of the SPNF-SKB describes how students become subjects in the long-term goals of the SPNF-SKB and the values they aim for. In addition, the Vision is the values that underlie the implementation of learning. This can be achieved and is effective with competent educators. Based on the need of Learning Supervisors for the importance of pedagogical competence for a Learning Supervisor, this makes the Learning Community Program an alternative solution that is very relevant to the needs of Learning Supervisors. 	

As seen in Table 4, program objectives are considered relevant to tutors' pedagogical improvement needs. This supports Desimone's view that professional development is most effective when aligned with educators' actual needs. From an in depth analysis of the finding in the spnf-skb kauur learning community, it was foud that from a practical standpoint, this indicates that the program was appropriately designed based on participants' actual needs. This is consistent with the principle of needs assessment, which states that effective training programs must be grounded in learners' real conditions [11]. Well developed PLC are positively associated with improved teacher instructional practices and, in some studies, increased student achievement demonstrating the strong relevance of PLCs/learning communities to teachers' pedagogical needs [12].

3.2 Input from the Learning Community Program to improve the pedagogical skills of Learning Facilitators at SPNF-SKB Kaur

In terms of input, the study found that most facilitators involved in the program possessed adequate competencies, and some even held national certifications. Infrastructure and learning facilities were relatively sufficient, though the limited availability of modules for Package A and B remained a constraint. Funding relied mainly on operational grants (BOP), but regulatory restrictions limited flexibility in financial allocation. Input evaluation assists in the decision-making of how facilities, human resources, and budget will be determined and constituted to achieve program objectives [13].

Interviews were conducted to identify the characteristics and backgrounds of participants involved in the learning community program. This corresponds to the input evaluation stage of the CIPP model, which examines human resources and program readiness. The summary of findings is presented in Table 5.

Table 5. Results Interview To Learning Community Participant Profile

Focus	Data Findings
Participant Position	Participants and managers of the learning community come from the functional positions of Learning Supervisors, totaling 7 people. The person in charge is the Head of SPNF-SKB Kaur who is also a Learning
Participants' Educational Background	Supervisor, the Chairperson and Secretary are also Learning Supervisors. Of the 7 participants: 5 people have a bachelor's degree in non-formal education, 1 person has a bachelor's degree in mathematics education, 1 person has a doctoral degree in education
Training that has been attended by participants	 There are only 2 Learning Facilitators who have participated in training outside the learning community, namely: a. WK, Training attended: BGP program good practice evaluation, KOSP Workshop b. AJS, Training attended: Operational Assistance Training for Implementation Implementation, Learning Facilitator Competence, and Implementation of the Independent Curriculum.

As shown in Table 5, most participants have diverse educational backgrounds and teaching experiences. From the Table above, it can be concluded that the number of participants in the learning community consisting of Learning Supervisors is seven people, of the 7 Community Members, 5 people have a bachelor's degree in non-formal education, 1 person has a mathematics education degree, and 1 other person has a doctorate in education. Of the 7 Learning Supervisors, only 2 Learning Supervisors actively participate in training outside the community and before the existence of the learning community, the training they participated in was the preparation of Operational Curriculum (KOSP) in Educational Units at Education Quality Assurance Center (BPMP), training on evaluating good practices at Teacher Leader Center (BGP), and KOSP workshops. Inventorying participant profiles is important so that evaluations can explain why pedagogical effects differ between groups [14]. Practical participatory evaluation posits that the engagement of stakeholders in the evaluation process will help improve evaluation utilization [15], and in the SPNF-Kaur learning community, participant profiles are available and provide an overview of the human resources in the learning community which are quite adequate but require training.

Interviews and observation were conducted to identify the criteria required for effective learning community facilitators. This relates to the *input evaluation* stage of the CIPP model, which focuses on assessing the quality of human resources supporting the program. The summarized results are shown in Table 6 and Table 7.

Table 6. Results Interview To Learning Community Facilitator Criteria

Focus	Data Findings
Facilitator Criteria	 The facilitator must have the following criteria: Have Competence Mastery and understanding of the material that will be presented in the training Have a competency certificate Have experience as a competent facilitator

Based on the results of the interview above, it can be concluded that the managers of the learning community program in carrying out training in the learning community program always prioritize the presence of competent presenters as activity facilitators, one of the criteria is that the Facilitator must have a National certificate, and must have frequently provided material in various activities to improve Educator competency.

Through the integration of knowledge and skills, facilitators are able to deliver materials and manage the learning process professionally, effectively, and efficiently. Competence or ability is an important asset that must be possessed by every facilitator or speaker in a learning community. This competence is the main provision in carrying out their roles optimally [16] Based on the results of observations, the facilitators or speakers in the SPNF-SKB Kaur Learning Community showed good material delivery skills. Competent facilitator compliance is generally associated with positive outcomes for participants [17].

Table 7. Observation To Learning Community Facilitator Skills

No.		Findings data
		The facilitator prepares the media that will be used, namely infocus,
1	Preparation and mastery of the material	laptop and other infrastructure. The facilitator's mastery of the material can be seen from the delivery of the learning objectives of the material that are easy for participants to understand and makes participants understand the importance of the material for them.
2	Material delivery techniques	The delivery of the material uses broadcast material that is easy to understand and follows the flow, the material is conveyed well by the participants in the KOSP preparation training.
3	Interaction with Participants	Interaction with participants was very good before entering the material. The facilitator gave a starting question about KOSP, then participants were invited to discuss and ask questions and in the main activity, participants worked on KOSP based on their respective duties and functions, divided into groups.
4	Use of media and technology	It can be seen that the facilitator uses infocus media and also YouTube in the training process.
5	Closing and evaluation	The closing was carried out well, by summarizing the results of the material delivery and reflecting on the participants to see whether the training objectives had been achieved.

In the observation results, the researcher found supporting evidence that strengthens the interview results that the facilitators in learning community activities are indeed competent, facilitators are able to deliver material and manage the learning process professionally, effectively, and efficiently. Practically, this suggests that well managed inputs qualified facilitators, adequate facilities, and accessible learning resources are critical to sustaining the effectiveness of the program [18]. Trainers' characteristics will be shown to have a significant effect on online training effectiveness at a 0.05 level of significance [19]. As seen in Table 6 and Table 7 effective facilitators are expected to possess strong communication, collaboration, and pedagogical skills. This supports Knowles' *adult learning theory*, which emphasizes that facilitators should act as guides who encourage participant autonomy and engagement in the learning process.

Interviews were conducted to examine the resources supporting the implementation of the learning community program, including facilities, materials, and institutional support. This corresponds to the *input evaluation* stage of the CIPP model. The results are summarized in Table 8 and Table 9.

Table 8. Results Interview To Learning Community Resources

Focus	Data Findings
Availability of Facilities and Infrastructure	A community learning space equipped with sufficient and relevant learning media, with tables and chairs, laptops, computers, infocus, and LCD projectors available.
Availability of Teaching Materials	The module is quite adequate but it is necessary to add teaching modules for packages A and B as material for sharing good practices.
Budget/Funding Availability	The activity budget comes from BOP funds but is not yet ideal.

From in-depth analysis of the findings dataEducational facilities and infrastructure have a positive and significant impact on teacher performance. The availability of adequate facilities helps teachers carry out the learning process more effectively, which ultimately contributes to improved student achievement [20]. The success of a learning community in sustaining pedagogical change depends on the support of facilities such as collaboration spaces, learning resources, and technology that enable community members to conduct observations, feedback, and reflection together [21].

Table 9. Documentation Results and Learning Community and support from the government		
No.	Facilities and infrastructure	Criteria
1	Availability of Facilities and Infrastructure: Community Learning Room, Infocus, Tables and Chairs	Good/Adequate
2	Availability of Teaching Materials: Modules	Good/Adequate
3	Budget/Funding Availability: BOP	Not yet sufficient
4	Support from the government	Not yet sufficient

From the table above, it can be concluded that the facilities and infrastructure in the learning community are adequate, but there is still a lack of package B and A modules. Funding for this learning community's activities comes from Operational Assistance for Education (BOP) funds, but it is still not ideal because of regulations and rules that limit the use of BOP). Funding is a crucial component in implementing nonformal education activities. Without proper planning and management of funds, learning community programs will struggle to run effectively and sustainably. Clear funding sources enable optimal activity implementation, infrastructure procurement, and participant competency development [22]. Improvement and Funding is a form of educational service for intelligent and talented children which is organized with educational facilities in special groups with various models, the aim is to improve the quality of education in Indonesia. It can be concluded that this learning community is fully supported by the head of the SPNF-SKB Kaur institution, but this learning community in non-formal education receives less attention from the local government. Research conducted by Saugi et al., shows that support for educational funding can come from various sources, including scholarships, government assistance, and social connections held by students [23]. Many educational institutions, both public and private, research shows that the right support can be very beneficial for recipients.

As shown in Table 8 and Table 9, the program is supported by adequate facilities and learning materials, though some limitations remain in technological and financial aspects. Institutional and material support is crucial for sustaining professional learning communities. In a way overall, input in Program learning community in SPNF SKB Kaur shows positive things and suports learning community activities. Such as competent facilitators, adequate facilities and infrastructure but need to be supplemented with teaching modules, support from the government and funding needs to be increased. This context evaluation strengthens the argument that participation in learning communities has been shown to contribute positively to improving teachers' pedagogical abilities [1]. Improvements to education are necessary in order to keep up with the education requirements of today. The Input evaluation model was created for the decision-making towards education improvement, so this model is appropriate in this regard [24].

3.3 The process of the Learning Community Program in improving the pedagogical abilities of Learning Facilitators at SPNF-SKB Kaur

The implementation process was found to be dynamic and flexible, with activities conducted twice a month through discussions, presentations, case studies, and question—answer sessions. Most participants were actively engaged, although challenges included inconsistent scheduling, lower motivation among a small group of facilitators, and limited documentation of activities. Process evaluation provides critical information needed to improve implementation on a large scale across a variety of contexts [25], The importance of process evaluation in examining how and why an intervention succeeds or fails is increasingly recognized [26].

Interviews were conducted to understand the regularity and management of meeting schedules within the learning community program, The summarized findings are shown in Table 10.

Table 10. Results Interview To Learning Community Meeting Schedule		
Focus	Data Findings	
Number of Meetings	Meetings are held twice a month in the 2nd and 3rd week, but the days are flexible to suit the needs and busy schedule of the	
Attendance of Community	Learning Supervisor. Most of the Learning Facilitators were present at every activity,	
Participants	there was only one person who rarely attended due to being busy as an assessor and facilitator for BAN PAUD PNF.	
Meeting quality	Learning Facilitators feel helped to improve their competencies in every routine meeting of the learning community.	

As presented in Table 10 the data above concludes that the schedule is flexible. The schedule should be structured, the importance of having a study schedule shows that motivation has a significant impact on student learning outcomes. Study habits encompass various routine activities and strategies used [27]. Effective scheduling and continuous monitoring by project managers are essential for the project's success [28], Time

management is critical to a project's success because it makes it easier to create controls that guarantee the project is carried out with few deviations and produces satisfactory outcomes with the resources already in place [29].

Interviews explored the level of involvement and participation of learning facilitators in the learning community program. This aspect reflects the *process* dimension of the CIPP model, which emphasizes the importance of active engagement for achieving program effectiveness. The summarized findings are presented in Table 11 and Table 12.

Table 11. Results Interview To Participant Involvement and Participation

Focus	Data Findings
Participant Involvement	Most of the learning facilitators were actively involved in the meetings, they actively asked questions, discussed and gave feedback.

From the data above, it can be concluded that most learning facilitators are actively involved in learning community activities, Instructional leadership is directly related to the level of teacher participation in reflective and collaborative practice. Through active engagement in reflective dialogue and shared practice, members of the learning community are able to strengthen mutual trust and improve the quality of learning [30]. Teachers' involvement as active participants in learning communities helps them understand pedagogical concepts and practices more deeply. Through collaborative activities, teachers learn from each other's experiences and develop more innovative learning strategies [31].

Table 12. Observation To Learning Community Participation

		\mathcal{E} , \mathcal{I}
No.	Observed description	Scale/Notes
1	Number of Participants present from the list of total members	ne Most of the hadib (there was 1 Learning Supervisor who was absent)
2	How active are participants in asking/responding?	Most of the training participants actively asked questions and responded to the material presented by the presenter.
3	Collaborate, work together in group discussions	Participants were seen actively working on the group work that had been divided up.
4	Listening to the material	Most of the participants listened well to the presentation of the material by the facilitator.

As shown in Table 11 and Table 12 In the learning community activities, the Pamong Belajar were seen to be active, discussing, seeking joint solutions to the problems they faced, in sharing good practices they were enthusiastic about asking questions, such as sharing good practices regarding the use of gamification in learning, Pamong Belajar actively asked the facilitator and practiced directly how to use the games taught, likewise when inviting external facilitators in the KOSP training activities they were enthusiastic and actively discussed and took advantage of this opportunity to ask questions, in other learning community activities each Pamong Belajar was required to express opinions and tell the problems they faced in the learning process, who guided the activities as the host, the Pamong Belajar (Learning Supervisor) moderator was involved in turns to get used to speaking and being active in the activities. The active participation of participants in preparing the supporting elements of the training proved to play an important role in producing training outcomes that met good standards [32]. The importance of having a study schedule demonstrates that motivation has a significant impact on student learning outcomes. Study habits encompass various routine activities and strategies students employ in the learning process, such as time management, reading techniques, and effective note-taking [27]. Research conducted by Nurgas et al., proves that teachers who participate in learning community programs experience significant benefits, such as increased professional competence, mastery of innovative teaching methods, and closer collaboration [33]. Research conducted by Subairi and Musaddad, shows that the role of the principal is basically to provide support and improvement through planned coaching [10].

Interviews and observasion were conducted to identify the teaching and learning methods applied during learning community activities. This aspect is part of the *process* dimension in the CIPP model, focusing on how the program is implemented to achieve its objectives. The findings summarized in Table 13 and Table 14 highlight the variety and effectiveness of instructional methods used.

Table 13. Results Interview to Methods used in Learning Community activities	
Focus (Methods used)	Data Findings
Discussion Method	Effective in building members' communication and cooperation skills.
Question and answer	Effectively build participant participation in understanding the material
Case study	Effective in solving problems faced by members
Presentation	Effective in building Participant participation and sharing materials and knowledge with other Members

Focus group discussion has significant and positive impact on PSTs' self-efficacy perception, focus group discussion enabled them to make progress in topics such as lesson planning, classroom management, and teaching strategies [34]. Effective questioning strategies are crucial in the process of teaching and learning. Effective questioning tactics help instructors in obtaining feedback from students on their comprehension of the subject matter [35]. The project illustrates that case study-based improvement interventions can significantly enhance lecture delivery, fostering better structure, clarity, and adoption of feedback among clinical teachers [36]. The result of this research shows that the implementation of Pecha Kucha presentation method is successful since the criteria of success are achieved. Moreover, most of the students are actively involved in the learning process [37].

Table 14. Observations on the Use of Methods in Learning Community Activities		
F	ocus	Data Findings
Methods used	Discussion	n, Q&A, Case Studies and Presentations

As indicated in Table 13 and Table 14 The participatory methods employed were effective in strengthening communication, collaboration, and problem-solving skills. This aligns with Bandura's social learning theory, which emphasizes the importance of interaction, observation, and reflection in learning. Similarly, Nafukho, demonstrated that case study and discussion methods enhance learners' motivation and achievement [38]. The main factor driving the emergence of student interest in learning is the teaching method used by a teacher when presenting material [39]. Selecting the right method can increase motivation, and strengthen collective learning outcomes in the community, as well as achieve the goals of a learning community.

The interviews examined the roles and responsibilities of facilitators within the learning community program. This aspect relates to the process dimension of the CIPP model, emphasizing the importance of facilitation in ensuring effective learning interactions. The summarized findings are presented in Table 15 and Table 16.

Table 15. Results Interview To Role of Facilitator		
Focus	Data Findings	
The role of the facilitator	 The facilitator gives directions Facilitator Facilitates dialogue/discussion and questions and answers Facilitator Summarizes the material 	

Practice facilitators are key liaisons to help the quality improvement program; they help all stakeholders work toward a shared target and leverage tailored strategies [40], SPNF-SKB Kaur has taken the right step in selecting a facilitator.



Figure 1. Learning Community Meeting Activities

	Table 16. O	bservation To Role of Facilitator
No.	Observed description	Facilitator Performance Notes
1		The facilitator provides opening directions, directions when delivering the material, discussion directions and closing directions.
2	and answers	The facilitator provides time for discussion and dialogue by forming groups, directing and providing time for participants to ask questions.
3		The facilitator summarizes the material that has been presented in the form of a conclusion.

As shown in Table 15 and Table 16. From the interview results above, it can be concluded that the facilitator played an active role in the activity, Facilitation competence significantly influences adult learners' learning immersion and achievement, highlighting the necessity of instructors' active involvement and support [41].

Table 17. Observation To Use of Learning Media

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Observed description	Media	Criteria
	Infocus	Available
Media used	Video	Available
	Module	Available

As shown in Table 17 From the findings above, it can be concluded that the media used in the learning community activities were Infocus, Video, and Modules. All three media were available and in good condition, and were used in the activity process to support the effectiveness of the training meetings. Nowadays, information and communications technologies (ICTs), in which audiovisual media technologies are encompassed, are omnipresent in all educational levels and discipline [42].

Table 18. Results Interview To Obstacles faced in activities

Focus	Data Findings
Obstacles faced	Inconsistent meeting schedule, There are still participants who are less active in participating in activities, Lack of teaching modules for packages A and B, Lack of documentation

As shown in Table 18 it can be concluded that the obstacles faced by the learning community in its implementation are the problem of inconsistent schedules and low awareness of some members to participate in activities. In addition, the lack of Package A and B teaching modules is also an obstacle, and in several important learning community activities there is very minimal documentation.

In general, the process of implementing activities is well managed by the administrator, the Learning Community activity schedule is carried out flexibly, the exact schedule of this community activity is carried out twice a month outside of teaching and learning activities, this is to adjust to the presence of learning community participants, Learning Supervisors always discuss actively in learning community activities, they are very active and enthusiastic about participating in every learning community activity, the methods used in the learning community activities of the SPNF-SKB Kaur are discussion methods, questions and answers, presentations and case studies. These methods are very helpful for community members in understanding the material because they involve active participation, collaboration, and reflection which allows them to learn more deeply and contextually in learning community activities, both training and sharing good practices, obstacles faced by the learning community in its implementation are inconsistent schedule problems, and low awareness of some members to participate in activities, perhaps because of their respective busy schedules. Choosing the right method can increase motivation, and strengthen collective learning outcomes in the community, as well as achieve the goals of a learning community [43]. This is also based on the results of head superfiction, Supervision can be simply understood as an effort to provide assistance and improvement. This activity is carried out in the form of planned coaching, with the aim of supporting teachers and education personnel to carry out their duties more effectively.

These findings highlight that program success largely depends on consistent scheduling and active participant engagement. Practically, this implies that program managers at SPNF-SKB Kaur need to strengthen monitoring and ensure accountability to maintain high levels of participation.

3.4 The product of the Learning Community Program in improving the pedagogical abilities of Learning Facilitators at SPNF-SKB Kaur

The product evaluation revealed that the program had a significant impact on enhancing both theoretical understanding and practical pedagogical skills. Nearly all facilitators reported improved competence in lesson planning, instructional strategy selection, classroom management, media use, and formative and summative assessment. Importantly, these improvements were reflected in better student outcomes, such as higher report card scores, exam results, and graduation rates. Program evaluation is an important aspect of any organization. The ability to reflect on past performance and plan for the future is essential to an organization's success product [44].

Interviews were conducted to identify the personal impact experienced by learning facilitators after participating in the learning community program. This aspect corresponds to the *product* dimension of the CIPP model, which evaluates the outcomes and benefits resulting from program implementation. The summarized findings are presented in Table 19.

Table 19. Results Interview to the Personal Impact of Learning Communities on Learning Facilitators

Focus	Data Findings
Increased understanding of pedagogic theory	Most of the Learning Facilitators understand pedagogical theory.
Understanding learning planning	Most of the Learning Facilitators understand the theory of learning planning.
Understand the implementation of learning	Most of the Learning Facilitators understand the theory of implementing learning.
Understanding learning evaluation	Most of the Learning Facilitators understand the theory of learning evaluation.

As shown in Table 19, From the interview results above, it can be concluded that almost all Learning Supervisors experienced an increase in their understanding of pedagogical theory. Most Learning Supervisors experienced an increase in their ability to understand theory in terms of planning, implementing and evaluating learning. Pedagogical competence is a teacher's ability to organize the learning process which involves understanding planning, implementing learning, and understanding the characteristics of students [45]. This shows the importance of the learning community in improving the pedagogy of tutors at SPNF-SKB Kaur.

The evaluation results in the *product* component of the CIPP model focus on how the learning community program improved the pedagogical competence of learning supervisors in three main areas: planning, implementation, and evaluation of learning. This section explores these improvements as reflected in the interview findings summarized in Tables 20–22.

Table 20. Results Interview To Pedagogical Improvement of Learning Supervisors(Planning Learning)

Focus	Data Findings
Ability to implement effective	In general, Learning Supervisors experience an increase in effective
planning	learning planning.
Ability to prepare lesson plans	In general, Learning Supervisors are able to prepare good learning RPPs.
Ability to determine learning objectives	In general, learning facilitators are able to determine learning objectives.
Ability to determine learning strategies	In general, learning facilitators are able to determine the learning strategies that will be used.
Ability to plan class management	In general, learning tutors are able to plan class management.
Ability to consider the diverse	In general, learning tutors are able to consider the diverse needs of
needs of students	students.

From the Table above, The results of an in-depth analysis of the data findings show that there has been progress in the pedagogical abilities of the planing Learning Supervisors. Ample studies have confirmed that the concepts of Community of Practice and Lesson Study can effectively develop professional development, especially in the design of learning [46], This is in line with the data findings in SPNF-SKB Kaur.

Table 21. Results Interview To Pedagogical Improvement of Learning Supervisors(Implementing)		
Focus	Data Findings	
Improving the ability to carry out effective learning activities	In general, Learning Supervisors have experienced an increase in implementing effective learning.	
Ability to determine appropriate methods and approaches in learning	In general, Learning Supervisors are able to determine appropriate methods and approaches to learning.	
Ability to manage interactions with students	In general, Learning Supervisors are able to manage interactions with students.	
Ability to determine learning objectives	In general, learning facilitators are able to determine learning objectives.	
Ability to use learning media	In general, learning facilitators have the ability to use learning media.	
Ability to carry out active learning	In general, learning facilitators are able to carry out active learning.	
Ability to facilitate differences in learning styles	In general, learning tutors facilitate differences in learning styles.	
Ability to carry out formative and summative assessments	In general, Learning Supervisors are able to carry out formative and summative assessments.	

From the Table above, The results of an in-depth analysis of the data findings show that there has been progress in the pedagogical abilities of the imlementing Learning Supervisors. Professional learning communities improve teaching practices and student learning [47]. Teachers benefit from learning communities through increased knowledge, skills, and satisfaction [48]. Learning communities provide teachers with pedagogical support and professional growth [49]. This is what makes the teachers who have participated in the learning community at SPNF-SKB Kaur competent in carrying out learning.

Table 22. Results Interview To Pedagogical Improvement of Learning Supervisors (Evaluating Learning)

Focus	Data Findings
Ability to carry out effective learning	In general, Learning Supervisors experience an increase in
evaluations	effective learning evaluations.
The ability to analyze learning outcomes to	In general, Learning Supervisors are able to analyze learning
determine the level of student achievement	outcomes to determine the level of student achievement.
Ability to provide feedback to students	In general, learning tutors are able to provide feedback to students.
Ability to use evaluation results for	In general, Learning Supervisors are able to use evaluation
improvement	results for improvement.
Ability to reflect and involve students in	In general, learning tutors are able to reflect and involve
reflection	students in reflection.
Ability to judge fairly	In general, the Learning Supervisor is able to assess fairly.

From the table above, The results of an in-depth analysis of the data findings show that there has been progress in the pedagogical abilities of the evaluating Learning Supervisors.

Table 23. Observation To Pedagogical Skills of Learning Supervisors in Managing Learning

Learning Management Skills	Findings data (Observation notes)
Ability to prepare lesson plans	RPP is made according to standards and regulations
Ability to determine learning objectives	Learning objectives are conveyed clearly
Ability to determine learning strategies	Selection of learning strategies that use gamification-based learning methods
Ability to determine appropriate methods and approaches in learning	The method used is effective, namely the question and answer and discussion method.
Ability to manage interactions with students	Manage interactions with students in a directed manner, students are active in learning
Ability to determine learning objectives	Learning objectives are conveyed to students
Ability to use learning media	Media used Infocus and Laptop
Ability to carry out active learning	Active and fun learning
Ability to facilitate differences in learning	Learning styles with a differentiated approach take into account
styles	the differences in age of students.
Ability to carry out formative and summative	Formative assessment is carried out before learning to determine
assessments	the initial abilities of students by conducting tests using quizzes,

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Learning Management Skills	Findings data (Observation notes)
	summative assessment is carried out to see the improvement in
	students' abilities by using quizzes.
The ability to analyze learning outcomes to	Student learning outcomes are analyzed well to determine further
determine the level of student achievement	planning.
Ability to provide feedback to students	There is feedback to students
Ability to use evaluation results for	The results of the learning evaluation are used for further
improvement	improvements.
Ability to reflect and involve students in	Reflection is carried out to find out the shortcomings and
reflection	weaknesses of the learning process

From the table above, it can be concluded that the Learning Supervisor has implemented effective learning. Learning community activities have a positive impact on the development of competency and pedagogical abilities of Learning Facilitators. research conducted by Sulong, analysis of the research results indicates a significant influence of learning communities on the pedagogical competence of PAUD teachers, Likewise, in SPNF-SKB Kaur there is development of tutor pedagogy with the existence of a learning community [50].

Overall, the findings from Tables 21–23 indicate that the learning community program has effectively enhanced supervisors' pedagogical competence in all phases of teaching. The results are consistent with prior studies showing that collaborative professional development fosters reflection, innovation, and sustained pedagogical growth. The novelty of this research lies in demonstrating that such improvements are also achievable in *non-formal education settings*, where structured supervision is limited.

Table 24. Results Interview To Implementation of Pedagogical Skills In the Learning Process

Focus	Data Findings
Application of learning outcomes planning, implementing and evaluating learning	In general, Learning Facilitators have applied the knowledge they have gained in learning community activities in teaching and learning activities.

From the table above, it can be concluded that most of the learning facilitators have implemented the learning they received from the learning community program. This illustrates an increase in the pedagogical abilities of the learning facilitators. Teachers who have good professional and pedagogical competence Able to manage the class effectively and create a conducive and enjoyable learning environment. With a deep understanding of the teaching material (professional competence) and the ability to design, implement, and evaluate the learning process (pedagogical competence), teachers can manage student behavior wisely and provide constructive feedback [51].

The success of the learning community program can also be seen from its impact on students' academic outcomes. Interviews revealed improvements in participation, motivation, and achievement after facilitators applied new pedagogical approaches. The results are summarized in Table 25.

Table 25. Results Interview To Academic Improvement of Students

Focus	Data Findings
Improvement in Report Card Grades	More increasing
Improved Exam Scores	More increasing
Graduation Improvement	More increasing

As shown in Table 25, it can be concluded that there has been an increase in academic scores and graduation percentage.application of learning outcomes in learning communities in learning activities that have an impact on improving students' academic performance. This finding supports previous studies Geletu, the study evaluated the effects of teachers' professional and pedagogical competencies on implementing cooperative learning method and enhancing students' academic achievement [52]. The findings indicated that both competencies positively influenced the implementation of cooperative learning and students' academic achievement, The novelty of this research lies in demonstrating that a structured learning community is effective not only in formal education contexts but also in non-formal education settings such as SPNF-SKB, This is supported by Ferdinand and Andala, research which shows positive correlation between teachers' competence and students' academic performance, with a P-value of .000 and r = .848 [53]. Practically, this highlights that professional learning communities can serve as an innovative and sustainable strategy to improve the quality of non-formal.

4. CONCLUSION

This study concludes that the Learning Community Program at SPNF-SKB Kaur is effective in enhancing the pedagogical competence of Learning Facilitators. The evaluation across the CIPP dimensions shows that the program is contextually relevant, supported by adequate resources, and implemented through participatory and flexible processes, resulting in measurable improvements in facilitators' pedagogical practices and student outcomes. Theoretically, this study strengthens the evidence that structured professional learning communities contribute significantly to the development of educators' pedagogical competence, particularly in non-formal education settings where evaluative studies remain limited. Practically, the findings suggest that sustaining program effectiveness requires stronger institutional support, consistent scheduling, and the provision of adequate teaching resources. At the policy level, the results highlight the importance of government involvement in funding and regulatory support to ensure the continuity and scalability of such programs.

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REFERENCES

- [1] A. S. Rahma, N. D. Angelina, and M. Hazin, "Evaluasi program Platform Merdeka Mengajar (PMM) di Kota Surabaya menggunakan model CIPP [Evaluation of the Platform Merdeka Mengajar (PMM) program in Surabaya City using the CIPP model]," *J. Pendidik. Indones.*, vol. XX, no. XX, pp. 1–8, 2024.
- [2] Lois-ellin Datta, "Evaluation Theory, Models, and Applications, by Daniel L. Stufflebeam and Anthony J. Shinkfield. San Francisco: Jossey-Bass, 2007. 768 pp. 70.00," *Am. J. Eval.*, vol. 28, no. 4, pp. 573–576, Dec. 2007, doi: 10.1177/1098214007308902.
- [3] J. M. Morse, "Determining Sample Size," *Qual. Health Res.*, vol. 10, no. 1, pp. 3–5, Jan. 2000, doi: 10.1177/104973200129118183.
- [4] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qual. Res. Psychol.*, vol. 3, no. 2, pp. 77–101, Jan. 2006, doi: 10.1191/1478088706qp063oa.
- [5] O. C. Enworo, "Application of Guba and Lincoln's parallel criteria to assess trustworthiness of qualitative research on indigenous social protection systems," *Qual. Res. J.*, vol. 23, no. 4, pp. 372–384, Mar. 2023, doi: 10.1108/QRJ-08-2022-0116.
- [6] J. Karopak, M. Yunus, and S. Hamid, "Pengaruh linieritas pendidikan dan kompetensi pedagogik guru terhadap hasil belajar siswa SD di Kecamatan Bontoala Kota Makassar [The influence of educational linearity and teacher pedagogical competence on the learning outcomes of elementary school students in Bontoala District, Makassar City]," *Bosowa J. Educ.*, vol. 3, no. 1, pp. 54–58, 2022, doi: 10.35965/bje.v3i1.1889.
- [7] D. A. Kurniawan, A. Astalini, D. Darmaji, T. Tanti, and S. Maryani, "Innovative learning: Gender perception of emodule linear equations in mathematics and physics," *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, vol. 4, no. 2, pp, 92-106, 2022, doi: 10.23917/ijolae.v4i2.16610.
- [8] R. Rukin and A. Muflih, "Pelatihan sumber daya manusia pada komunitas belajar di sdn model kota Malang dalam meningkatkan proses pembelajaran [Human resource training in learning communities at SDN Model Malang City to improve the learning process]," KOMUNITA J. Pengabdi. dan Pemberdaya. Masy., vol. 4, no. 2, pp. 135–148, 2025, doi: 10.60004/komunita.v4i2.167.
- [9] T. Tanti, A. Astalini, D. A. Kurniawan, D. Darmaji, T. O. Puspitasari, and I. Wardhana, "Attitude for physics: The condition of high school students," *Jurnal Pendidikan Fisika Indonesia*, vol. 17, no. 2, pp. 126-132, 2021, doi: 10.15294/jpfi.v17i2.18919.
- [10] S. Subairi and A. Musaddad, "Strategi kepala sekolah dalam meningkatkan kompetensi pedagogik guru [Principal's strategy in improving teacher's pedagogical competence]," *Islam. Manag. J.*, vol. 1, no. 1, pp. 66–77, 2024, doi: 10.71259/z88yp972.
- [11] T. Tanti, D. Deliza, and S. Hartina, "The effectiveness of using smartphones as mobile-mini labs in improving students' beliefs in physics," *JIPF (Jurnal Ilmu Pendidikan Fisika)*, vol. 9, no. 3, pp. 387-394, 2024, doi: 10.26737/jipf.v9i3.5185.
- [12] V. Vescio, D. Ross, and A. Adams, "A review of research on the impact of professional learning communities on teaching practice and student learning," *Teach. Teach. Educ.*, vol. 24, no. 1, pp. 80–91, 2008, doi: 10.1016/j.tate.2007.01.004.
- [13] M. C. Nunez-Oviedo and J. J. Clement, "Large scale scientific modeling practices that can organize science instruction at the unit and lesson levels," *Front. Educ.*, vol. 4, no. July, 2019, doi: 10.3389/feduc.2019.00068.
- [14] J. Yang, Y. Zhang, Y. Zhou, and Y. Ji, "What are the core features of professional learning community in Chinese preschool teachers' perspectives: based on grounded theory analysis.," *Front. Psychol.*, vol. 14, p. 1177321, 2023, doi: 10.3389/fpsyg.2023.1177321.
- [15] H. T. Chen, L. Morosanu, and V. H. Chen, "Program plan evaluation: A participatory approach to bridge plan evaluation and program evaluation," *Am. J. Eval.*, vol. 45, no. 4, pp. 551–561, 2024, doi: 10.1177/10982140241231906.

[16] T. Tanti, W. Utami, D. Deliza, and M. Jahanifar, "Investigation in vocation high school for attitude and motivation students in learning physics subject", *Jor. Eva. Edu*, vol. 6, no. 2, pp. 479-490, 2025, doi: 10.37251/jee.v6i2.1452.

- [17] M. Martin, B. Steele, T. F. Spreckelsen, J. M. Lachman, F. Gardner, and Y. Shenderovich, "The association between facilitator competent adherence and outcomes in parenting programs: A systematic review and SWiM analysis.," *Prev. Sci.*, vol. 24, no. 7, pp. 1314–1326, Oct. 2023, doi: 10.1007/s11121-023-01515-3.
- [18] T. Tanti, D. Darmaji, A. Astalini, D. A. Kurniawan, and M. Iqbal, "Analysis of user responses to the application of web-based assessment on character assessment," *Journal of education technology*, vol. 5, no. 3, pp. 356-364, 2021, doi: 10.23887/jet.v5i3.33590.
- [19] S. F. A. Aziz, N. Hussein, N. A. Husin, and M. A. Ibrahim, "Trainers' characteristics affecting online training effectiveness: A pre-experiment among students in a Malaysian secondary school," *Sustain.*, vol. 14, no. 17, 2022, doi: 10.3390/su141711047.
- [20] M. Ybnu Taufan, "Professional development of teachers, competencies, educational facilities and infrastructure on teacher performance and learning achievement of high school students in Makassar City," *Golden Ratio Soc. Sci. Educ.*, vol. 2, no. 1 SE-Articles, pp. 24–38, Mar. 2022, doi: 10.52970/grsse.v2i1.168.
- [21] T. L. Tinnell, P. A. S. Ralston, T. R. Tretter, and M. E. Mills, "Sustaining pedagogical change via faculty learning community," *Int. J. STEM Educ.*, vol. 6, no. 1, p. 26, 2019, doi: 10.1186/s40594-019-0180-5.
- [22] T. Tanti, K. Anwar, J. Jamaluddin, A. S. Saleh, D. K. Yusup, and M. Jahanifar, "Faith meets technology: Navigating student satisfaction in indonesia's islamic higher education online learning", *Jur. Ilmh. Ilm. Ter. Un. Ja*, vol. 9, no. 2, pp. 695–708, Jun. 2025, doi: 10.22437/jiituj.v9i2.41513.
- [23] W. Saugi, A. R. AF, and U. Haryaka, "Kendala dan dukungan dalam pembiayaan pendidikan mahasiswa program studi piaud uinsi Samarinda [Obstacles and support in financing the education of students in the Islamic Education Study Program at UINSI Samarinda]," *Borneo J. Islam. Educ.*, vol. 5, no. 1, pp. 1–11, 2025, doi: 10.21093/bjie.v5i1.9869.
- [24] J. Y. Choe, K. M. Jang, S. Y. Min, S.-K. Hwang, B. Kang, and B.-H. Choe, "Propionic acidemia with novel mutation presenting as recurrent pancreatitis in a Child," *J Korean Med Sci*, vol. 34, no. 47, Dec. 2019, doi: 10.3346/jkms.2019.34.e303
- [25] D. Wierenga, L. H. Engbers, P. Van Empelen, S. Duijts, V. H. Hildebrandt, and W. Van Mechelen, "What is actually measured in process evaluations for worksite health promotion programs: a systematic review," *BMC Public Health*, vol. 13, no. 1, p. 1190, 2013, doi: 10.1186/1471-2458-13-1190.
- [26] R. M. C. Schelvis *et al.*, "Evaluating the implementation process of a participatory organizational level occupational health intervention in schools," *BMC Public Health*, vol. 16, no. 1, p. 1212, 2016, doi: 10.1186/s12889-016-3869-0.
- [27] A. Amrulloh, N. darajaatul Aliyah, and D. Darmawan, "Pengaruh kebiasaan belajar, lingkungan belajar dan motivasi belajar terhadap prestasi belajar siswa MTS Darul Hikmah Langkap Burneh Bangkalan [The influence of learning habits, learning environment and learning motivation on the learning achievement of students at MTS Darul Hikmah Langkap Burneh Bangkalan]," *AL-MIKRAJ J. Stud. Islam dan Hum. (E-ISSN 2745-4584)*, vol. 5, no. 01, pp. 188–200, 2024, doi: 10.37680/almikraj.v5i01.5656.
- [28] L. Anastasiu, C. Câmpian, and N. Roman, "Boosting construction project timeline: The case of critical chain project management (CCPM)," *Buildings*, vol. 13, no. 5, pp. 1–35, 2023, doi: 10.3390/buildings13051249.
- [29] J. Victory and I. Indrastuti, "Analisis perbandingan perencanaan dan pelaksanaan pada time schedule pembangunan struktur ruko 3 lantai dengan metode CPM dan PERT (Studi Kasus: Regency Piayu) [Comparative analysis of planning and implementation of the time schedule for the construction of a 3-story shophouse structure using the CPM and PERT methods (Case Study: Piayu Regency)]," *J. Tek. Sipil Cendekia*, vol. 6, no. 1, pp. 1080–1093, 2025, doi: 10.51988/jtsc.v6i1.266.
- [30] B. Vanblaere and G. Devos, "Relating school leadership to perceived professional learning community characteristics: A multilevel analysis," *Teach. Teach. Educ.*, vol. 57, pp. 26–38, 2016, doi: 10.1016/j.tate.2016.03.003.
- [31] M. Blomhøj, ICME-13 Monographs Lines of Inquiry in Mathematical Modelling Research in Education. 2016.
- [32] A. Fadoli, "Evaluasi program pelatihan kader pemberdayaan masyarakat desa (KPMD) pada program nasional pemberdayaan masyarakat generasi sehat dan cerdas (PNPM-GSC) di Kecamatan Pasean Pamekasan [Evaluation of the village community empowerment cadre training program (kpmd) in the national program for empowering healthy and intelligent generations (PNPM-GSC) in Pasean District, Pamekasan]," *J. Mhs. Teknol. Pendidik.*, vol. 5, no. 1, pp. 1–8, 2018.
- [33] I. H. Nurgas, M. Nur, A. Rasyid, S. Mania, U. Islam, and N. Alauddin, "Evaluasi program komunitas belajar guru dengan pendekatan responsive model [Evaluation of the teacher learning community program using the responsive model approach]," *Didakt. J. Kependidikan*, vol. 14, no. 1, pp. 901–914, 2025.
- [34] N. Kotluk, H. Memduhoglu, and A. Yayla, "The effect of focus group discussions on pre-service teachers' teaching experiences and practices: A mixed methods study," *Int. J. Instr.*, vol. 10, pp. 273–292, Oct. 2017, doi: 10.12973/iji.2017.10416a.
- [35] T. Tofade, J. Elsner, and S. T. Haines, "Best practice strategies for effective use of questions as a teaching tool.," *Am. J. Pharm. Educ.*, vol. 77, no. 7, p. 155, Sep. 2013, doi: 10.5688/ajpe777155.
- [36] X. Sun *et al.*, "A case study: a continuous improvement project of lecturing skills for clinical teachers in Chinese residency standardized training," *BMC Med. Educ.*, vol. 22, no. 1, p. 265, 2022, doi: 10.1186/s12909-022-03311-z.
- [37] S. Arniatika, "Improving speaking performance through pecha kucha presentation method," *Pedagog. J. English Lang. Teach.*, vol. 6, no. 2, p. 129, 2019, doi: 10.32332/pedagogy.v6i2.1329.
- [38] F. M. Nafukho *et al.*, "Training design in mediating the relationship of participants' motivation, work environment, and transfer of learning," *Eur. J. Train. Dev.*, vol. 47, no. 10, pp. 112–132, 2022, doi: 10.1108/EJTD-06-2022-0070.
- [39] J. Ye *et al.*, "Identifying contextual factors and strategies for practice facilitation in primary care quality improvement using an informatics-driven model: Framework development and mixed methods case study," *JMIR Hum. Factors*, vol. 9, no. 2, pp. 1–15, 2022, doi: 10.2196/32174.

- [40] S.-E. Kim and Y. S. Lee, "The impact of facilitation competence of instructors on learning immersion and learning achievement Focusing on adult learners," *J. Infrastructure, Policy Dev.*, vol. 8, no. 14, p. 9437, 2024, doi: 10.24294/jipd9437.
- [41] C. Nicolaou, M. Matsiola, and G. Kalliris, "Technology-enhanced learning and teaching methodologies through audiovisual media," *Educ. Sci.*, vol. 9, no. 3, 2019, doi: 10.3390/educsci9030196.
- [42] I. Ibrahim, "Pengaruh penerapan metode studi kasus dalam efektifitas pembelajaran [The influence of the application of the case study method on learning effectiveness]," Soc. J. Inov. Pendidik. IPS, vol. 3, no. 1, pp. 1–10, 2023, doi: 10.51878/social.v3i1.2169.
- [43] J. Brisson, I. Pekelny, and M. Ungar, "Methodological strategies for evaluating youth gang prevention programs," *Eval. Program Plann.*, vol. 79, p. 101747, 2020, doi: 10.1016/j.evalprogplan.2019.101747.
- [44] T. P. Widiyani, I. Wijayanti, and J. Siswanto, "Analisis kompetensi pedagogik mahasiswa ppl ppg prajabatan dalam pembelajaran di sekolah dasar," *Ainara J. (Jurnal Penelit. dan PKM Bid. Ilmu Pendidikan)*, vol. 5, no. 2, pp. 145–155, 2024, doi: 10.54371/ainj.v5i2.424.
- [45] K. Cojorn and K. Sonsupap, "Impact of community of practice and lesson study on fostering the student thinking competency," *Int. J. Educ. Lit. Stud.*, vol. 12, no. 1, pp. 284–294, 2024, doi: 10.7575/aiac.ijels.v.12n.1p.284.
- [46] C. Penlington, "Dialogue as a catalyst for teacher change: A conceptual analysis," *Teach. Teach. Educ.*, vol. 24, no. 5, pp. 1304–1316, 2008, doi: 10.1016/j.tate.2007.06.004.
- [47] R. Prenger, C. L. Poortman, and A. Handelzalts, "The effects of networked professional learning communities," *J. Teach. Educ.*, vol. 70, no. 5, pp. 441–452, 2019, doi: 10.1177/0022487117753574.
- [48] E. Campos, K. Zuza, J. Guisasola, and G. Zavala, "Recognition and conversion of electric field representations: The case of electric field lines," *Phys. Rev. Phys. Educ. Res.*, vol. 19, no. 2, p. 20117, 2023, doi: 10.1103/PhysRevPhysEducRes.19.020117.
- [49] B. N. Sulong and N. K. A. Rahmadani, "Pengaruh komunitas belajar terhadap kompetensi pedagogik guru PAUD [The influence of learning communities on the pedagogical competence of PAUD teachers]," *JIIP J. Ilm. Ilmu Pendidik.*, vol. 8, no. 8, pp. 9161–9167, 2025, doi: 10.54371/jiip.v8i8.8912.
- [50] A. Aisah, M. Maufur, and B. Basukiyatno, "Implementasi komunitas praktisi dalam meningkatkan kompetensi profesional guru bersertifikat pendidik [Implementation of a community of practitioners in improving the professional competence of certified educator teachers]," *J. Educ. Res.*, vol. 5, no. 3, pp. 3072–3082, 2024, doi: 10.37985/jer.v5i3.1417.
- [51] G. M. Geletu, "The effects of teachers' professional and pedagogical competencies on implementing cooperative learning and enhancing students' learning engagement and outcomes in science: Practices and changes," *Cogent Educ.*, vol. 9, no. 1, p. 2153434, Dec. 2022, doi: 10.1080/2331186X.2022.2153434.
- [52] R. Ferdinand and H. O. Andala, "Teachers' competence and students' academic performance in secondary schools in Rwanda," *J. Educ.*, vol. 6, no. 1, pp. 73–90, 2023, doi: 10.53819/81018102t5182.