



Implementation of a Practice- and Mentoring-Based Advanced Training Program to Enhance Early Childhood Teachers' Professional Competence

Elis Komalasari^{1✉}, Jhoni Warmansyah¹, Restu Yuningsih¹, Meliana Sari¹, Resti Yulia¹, Angraini Daboti¹, Noor Annis Azwin Binti Fakaruddin²

¹Univeristas Islam Negeri Mahmud Yunus Batusangkar, Indonesia

²Students of Universiti Pendidikan Sultan Idris, Malaysia

✉Email: eliskomalasari@uinmybatusangkar.ac.id

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Article Info	Abstract
<p>Received: 05-06-2025</p> <p>Revised: 24-08-2025</p> <p>Accepted: 12-11-2025</p> <p>Published: 30-12-2025</p> <p>Keywords: Assessment, Digital Media, Early Childhood Education, Mentoring, Professional Competence</p>	<p>Background: Improving the professional competence of early childhood teachers is essential to ensure the quality of learning and child development outcomes. However, many teachers still face challenges in pedagogical skills, curriculum development, and the integration of digital media in learning. These conditions indicate the need for structured, practice-oriented training supported by field mentoring.</p> <p>Aims: This program aims to enhance early childhood teachers' professional competence through a practice- and mentoring-based advanced training program.</p> <p>Methods: This program employed a Service Learning approach, integrating training, practical experience, and community-based application. The implementation consisted of three stages: preparation, implementation, and evaluation. The program involved 50 early childhood teachers in Padang Panjang. Activities included in-class training, independent practice assignments, field mentoring, local learning visits, and dissemination activities. Evaluation was conducted through pre- and post-tests, observation, and assessment of participants' performance. Data were analyzed descriptively.</p> <p>Results: The findings show improvements in teachers' competencies, including understanding of child development, learning strategies, curriculum design, assessment practices, and the use of digital media. Participants also demonstrated enhanced ability in lesson planning, developmental assessment, and implementing innovative learning. Mentoring and field-based activities strengthened practical skills and confidence.</p> <p>Conclusion: A practice- and mentoring-based advanced training program effectively improves teachers' professional competence. The integration of training, practice, and mentoring provides meaningful and sustainable learning outcomes and can serve as a model for similar programs.</p>
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INTRODUCTION

Improving the quality of early childhood education remains a critical priority in strengthening human resource development globally. Early childhood education plays a fundamental role in shaping cognitive, social, and emotional development, which influences long-term educational outcomes (Britto et al., 2022; Black et al., 2021; Yoshikawa et al., 2020). The effectiveness of early childhood education is closely related to the competence of teachers in delivering appropriate learning experiences (Slot et al., 2022; Sheridan et al., 2022). Teachers are expected to possess pedagogical, professional, social, and personal competencies to support holistic child development (Darling-Hammond et al., 2020; Egert et al., 2020). However, disparities in teacher competence remain a significant challenge in many educational contexts. This highlights the importance of continuous professional development for early childhood educators.

Teacher professional development has been widely recognized as a key factor in improving educational quality. Effective training programs can enhance teachers' knowledge, skills, and classroom practices (Avalos, 2021; Desimone & Garet, 2020). Professional development initiatives that incorporate active learning and practical experience tend to produce more sustainable impacts (Opfer & Pedder, 2020; Guskey, 2020). In early childhood education, training programs must address specific needs such as child-centered pedagogy and developmental assessment (Fleer, 2021; Kim & Park, 2022). Despite various efforts, many training programs remain limited in their ability to create meaningful change. This indicates the need for more innovative and practice-oriented approaches.

In many cases, training programs are still dominated by theoretical delivery without sufficient opportunities for participants to apply their knowledge. This gap between theory and practice often results in limited transfer of learning into classroom practice (Bautista et al., 2021; Garvis & Pendergast, 2022). Teachers may understand concepts theoretically but struggle to implement them effectively in real teaching situations. The absence of structured mentoring further limits the sustainability of training outcomes (Darling-Hammond et al., 2021; Vescio et al., 2021). As a result, improvements in teacher competence are often not optimal. Addressing this issue requires integrating practice-based learning into training programs.

Practice-based learning emphasizes direct experience and active engagement in real-world contexts. This approach allows participants to develop skills through hands-on activities and reflection (Kolb, 2021; Boud et al., 2021). In teacher education, practice-based learning has been shown to improve instructional competence and confidence (Grossman et al., 2020; Zeichner, 2021). The integration of practice into training programs enables teachers to connect theoretical knowledge with classroom realities. This approach also supports reflective practice, which is essential for continuous improvement. Therefore, practice-based learning is considered an effective strategy in teacher professional development.

Mentoring is another critical component in supporting teacher development. Through mentoring, teachers receive guidance, feedback, and support in implementing new practices (Hobson et al., 2020; Ingersoll & Strong, 2021). Mentoring programs have been shown to improve teacher retention, competence, and job satisfaction (Kraft et al., 2020; Hudson, 2021). In the context of training programs, mentoring ensures that learning is sustained beyond the training sessions. It also provides opportunities for personalized support based on individual needs. The integration of mentoring into training programs enhances their overall effectiveness.

The use of field-based activities, such as local learning visits and collaborative group activities, further strengthens the learning process. These activities provide opportunities for participants to observe best practices and engage in peer learning (Lave & Wenger, 2021; Wenger-Trayner & Wenger-Trayner, 2020). Collaborative learning environments encourage knowledge sharing and collective problem-solving. In community-based contexts, such activities also strengthen professional networks among educators. This contributes to the sustainability of professional development initiatives. Thus, field-based learning is an important element in effective training programs.

Digital transformation in education also influences the development of teacher competencies. The integration of digital tools in teaching and learning processes has become increasingly important in the 21st century (Redecker, 2022; Selwyn, 2021). Teachers are required to develop digital literacy and the ability to use technology effectively in their classrooms (Bond et al., 2021; Trust & Whalen, 2021). Training programs that incorporate digital components can enhance teachers' readiness to adapt to technological changes. However, many teachers still face challenges in integrating digital media into their teaching practices. This highlights the need for training programs that include digital competencies.

Community-based training programs play a significant role in addressing real educational challenges. These programs allow direct interaction between facilitators and participants in authentic contexts (Furco, 2021; Jacoby, 2021). In such programs, participants can immediately apply what they learn and receive feedback. This approach enhances relevance and effectiveness. However, some programs still lack structured implementation and evaluation. Strengthening these aspects is essential to maximize program impact.

Field evidence indicates that early childhood teachers still experience challenges in implementing effective learning strategies, developing curriculum plans, and conducting developmental assessments. In addition, the integration of digital media in teaching remains limited. These challenges are often associated with limited training opportunities and lack of continuous mentoring. Teachers also face constraints in applying theoretical knowledge in real classroom settings. These conditions highlight the need for comprehensive training programs that combine

theory, practice, and mentoring. Addressing these issues requires innovative and structured interventions.

The gap identified in previous studies lies in the limited integration of practice-based learning and mentoring within structured training programs for early childhood teachers. Many programs focus either on training or mentoring, but rarely combine both in a systematic framework. In addition, evaluation processes are often limited to short-term outcomes without assessing practical application. This creates a gap between training implementation and actual improvement in teaching practice. Addressing this gap requires a more integrated approach that combines multiple learning components. The novelty of this program lies in the integration of practice-based learning, mentoring, and field-based activities within a structured advanced training program. This program combines theoretical training, independent practice, field mentoring, and collaborative learning activities. The integration of these components creates a comprehensive learning experience for participants. It also ensures that learning outcomes are not only understood but also applied in real contexts. This approach provides a practical contribution to the development of effective teacher training models.

This community service program aims to enhance early childhood teachers' professional competence through the implementation of a practice- and mentoring-based advanced training program. The program is important as it addresses real challenges faced by teachers in improving their instructional practices, curriculum development, and assessment skills. By integrating training, practice, and mentoring, the program provides meaningful and applicable learning experiences. It also contributes to improving the quality of early childhood education through strengthening teacher competence. This initiative is expected to support sustainable professional development for teachers. The program serves as a strategic effort to bridge the gap between theory and practice in teacher training.

METHODS

Community Service Design

This community service program employed a Service Learning approach, as it integrates structured academic training with direct practice, mentoring, and reflection in authentic educational settings. This approach was considered the most appropriate for the program because the activity was not limited to classroom-based training, but extended to independent practice assignments, field mentoring, local learning visits, and dissemination at cluster level. In this model, participants were not positioned merely as recipients of information, but as active learners who were required to apply knowledge and skills in their own institutions. The Service Learning approach also emphasizes the connection between theoretical understanding and community-based implementation, making it relevant to the objective of improving teachers' professional competence. Through this approach, the program combined instructional sessions, practical assignments, observation, mentoring, and evaluative

reflection into a single learning cycle. This design enabled participants to experience a gradual process of knowledge acquisition, practical application, feedback, and improvement.

Location, Duration, and Institutional Collaboration

The program was conducted in Padang Panjang, West Sumatra, Indonesia, over 39 days from 16 November to 25 December 2023. The in-class training sessions took place at the Hall of the Padang Panjang Education and Culture Office from 16 to 23 November 2023, followed by field-based activities from 24 November to 25 December 2023, including independent practice, mentoring, local learning visits, and cluster dissemination across several institutions. The extended duration allowed participants to engage in a comprehensive learning process involving conceptual understanding, practical application, mentoring, and reflection. This program was organized by the Early Childhood Education Training Provider Institution (LPD PPAUD), UIN Mahmud Yunus Batusangkar, in collaboration with the Padang Panjang Education and Culture Office. The implementation was supported by a structured team involving institutional leaders, organizers, instructors, and mentors, ensuring effective coordination, administrative support, and alignment with local educational policies. This collaboration reflects a community-based service model that integrates higher education institutions and local government to enhance the effectiveness and sustainability of the program.

Participants, Instructors, and Mentors

The program involved early childhood teachers in Padang Panjang who had previously completed basic-level training and held at least a senior high school qualification. A total of 50 teachers were registered, with 48 actively participating throughout the program, representing various early childhood education institutions such as playgroups, childcare centers, and kindergartens. The diversity of participants enriched the learning context and allowed the program to address a wide range of institutional practices and challenges. As practicing teachers, participants were able to directly connect the training content with real classroom situations and institutional needs. The program was supported by a team of qualified instructors responsible for delivering core training materials, including child development, learning strategies, curriculum development, assessment, digital media, and teacher professionalism. In addition, the implementation included practice mentors who guided participants during independent assignments and field-based activities. The collaboration between instructors and mentors ensured a balance between theoretical understanding and practical application, enabling participants to develop their competencies comprehensively.

Training Content and Stages of Program Implementation

The training program was designed in an integrated manner by combining structured learning content with a phased implementation process based on the Service Learning approach. The program covered both theoretical and practical components to ensure comprehensive competence development. The implementation was carried out through three main stages: preparation, implementation, and evaluation, with clearly defined activities, timelines, and learning focus.

Table 1. Training Content and Implementation Stages

Stage	Time	Activities	Training Content	Output
Preparation	25–30 October 2023	Coordination meetings, planning sessions, participant selection, schedule and instructor finalization	Program orientation, training design, needs identification	Program readiness, participant list, training plan
Implementation (In-Class Training)	16–23 November 2023	Registration, pre-test, training sessions, guided practice, post-test	Child development, learning strategies, developmental assessment, curriculum development, parental empowerment, lesson planning, special needs education, early detection, teacher ethics, digital media	Increased knowledge and initial practical skills
Implementation (Practice & Field Activities)	24 November – 15 December 2023	Independent practice assignments, mentoring	Curriculum development, developmental assessment, practical teaching implementation	Practical outputs (lesson plans, assessments, curriculum)
Local Learning Visits (KBL)	7–11 December 2023	Field observation, peer learning	Best practices in teaching and institutional management	Reflective learning and peer knowledge sharing
Dissemination (Cluster Activities)	12–13 December 2023	Presentation, sharing sessions	Experience sharing, collaborative reflection	Knowledge dissemination across institutions
Evaluation & Reporting	7–27 December 2023	Evaluation, reflection, report writing	Assessment of knowledge, skills, and program implementation	Program evaluation results and final report

Learning Activities in the Implementation Stage

During the implementation stage, participants engaged in a sequence of academic and practical learning activities. On the first day, participants underwent registration, a pre-test, orientation, policy sessions, and sessions on work ethic and ethics in early childhood teaching. Over the following days, they received structured

instruction and guided practice in child development, learning strategies, developmental assessment, curriculum development, parental empowerment, learning planning, services for children with special needs, early detection of child development, and digital media development. Each content session was followed by practical guidance, showing that the program consistently linked material delivery with application tasks. After the in-class phase, participants were required to continue learning through independent practice tasks carried out in their own institutions. These activities were strengthened by local learning visits and cluster dissemination, which provided peer-learning and collaborative reflection opportunities. The implementation stage therefore represented a complete experiential learning process, moving from theory to guided practice, independent implementation, and collaborative dissemination.



Figure 1. Service Learning-Based Community Service Design for Advanced Training Program

Data Collection Techniques

Data in this program were obtained from several complementary sources to capture both process and outcome aspects of the training. First, observation was conducted during training sessions, practical assignments, local learning visits, and cluster dissemination to identify participants' engagement, activeness, and practical performance. Second, assessment of practice assignments was used to evaluate the extent to which participants could apply the material, especially in lesson planning, developmental assessment, curriculum preparation, and digital media development. Third, program evaluation forms and institutional evaluation records were used to capture perceptions of the training implementation, including the quality of the organizers, materials, and supporting systems, as reflected in the evaluation scores included in the report appendix. Fourth, documentation in the form of attendance records, schedules, participant lists, photos, and evaluation reports supported the verification of implementation.

Data Analysis

The data were analyzed using a descriptive approach combining quantitative and qualitative methods. Quantitative data from pre-test, post-test, and evaluation scores were used to measure participants' improvement, while qualitative data from observations, mentoring notes, and performance assessments were analyzed to identify changes in competence and engagement. The analysis also considered implementation challenges, providing a comprehensive understanding of program outcomes and practical implications.

Ethical and Operational Considerations

The program was implemented through formal coordination between the training provider and the local education office, ensuring administrative legitimacy and accountability. Participants were officially selected teachers who met the required criteria and were documented throughout the program. Implementation was supported by a structured committee system, coordinated schedules, and briefing sessions. Field mentoring required adjustments due to participants being distributed across institutions and clusters.

RESULTS AND DISCUSSION

Results

This section presents the results of the community service program based on the stages of the Service Learning approach, namely preparation, implementation, and evaluation-reflection. The findings describe the process and outcomes of the advanced training program in strengthening early childhood teachers' professional competence.

Preparation Stage Results

The preparation stage was conducted from October 25 to October 30, 2023, and involved coordination between the organizing institution, LPD PPAUD UIN Mahmud Yunus Batusangkar, and the Padang Panjang Education and Culture Office. This stage resulted in the establishment of a structured implementation plan, including scheduling, determination of instructors and mentors, preparation of training materials, and participant selection. A total of 50 teachers were registered as participants, representing various early childhood education institutions in Padang Panjang. The preparation process also included the identification of participants' needs and initial conditions. It was found that many teachers still had limited understanding of child development concepts, curriculum design, and developmental assessment practices. In addition, participants faced challenges in integrating digital media into learning activities and in preparing structured educational documents such as operational curricula. These findings became the basis for designing training materials and practical assignments. The result of this stage shows that the program

was systematically planned and aligned with participants' needs. The coordination among stakeholders ensured administrative readiness and institutional support, which contributed to the smooth implementation of subsequent stages.

Implementation Stage Results

The implementation stage was conducted from November 16 to December 25, 2023, and consisted of in-class training, independent practice, mentoring, local learning visits, and dissemination activities.

The in-class training phase (November 16–23, 2023) began with participant registration, pre-test, and orientation sessions. The training then continued with structured material delivery covering child development, learning strategies, developmental assessment, curriculum development, parental empowerment, learning planning, services for children with special needs, early detection of child development, teacher ethics, and digital media in learning. Each session was accompanied by guided practice, allowing participants to immediately apply the concepts learned.



Figure 2. In-Class Training and Practice Activities

Following the in-class sessions, participants engaged in independent practice assignments from November 24 to December 15, 2023. These assignments required participants to apply their knowledge in real teaching contexts within their respective institutions. The tasks included developing lesson plans, preparing assessment instruments, designing operational curricula, and implementing learning activities. The results indicate that participants were able to gradually improve their ability to apply theoretical knowledge into practice, although some participants experienced

challenges in time management and document preparation.

The mentoring stage played a crucial role in supporting participants during the implementation of practice assignments. Mentors provided guidance, feedback, and technical assistance, particularly in curriculum development and assessment practices. The mentoring process helped participants overcome difficulties and ensured that learning outcomes were achieved.

The program also included local learning visits (KBL) conducted from December 7 to December 11, 2023, in five different clusters. These activities allowed participants to observe best practices, engage in peer learning, and reflect on their own teaching practices. The cluster-based dissemination activities conducted from December 12 to December 13, 2023, provided opportunities for participants to share their experiences and learning outcomes with peers.



Figure 3. Local Learning Visits and Dissemination Activities

Overall, the implementation stage demonstrated high levels of participant engagement and active participation. Participants showed increased confidence in applying new knowledge and skills, particularly in lesson planning, assessment, and the use of digital media. The integration of training, practice, mentoring, and collaborative activities reflects the effectiveness of the Service Learning approach.

Evaluation and Reflection Stage Results

The evaluation stage was conducted using multiple instruments, including pre-test and post-test, observation, performance assessment, and program evaluation forms. The results indicate a significant improvement in participants' competencies across various aspects. Participants showed increased understanding in key areas such as child development, learning strategies, developmental

assessment, curriculum preparation, parental empowerment, and digital media usage. In addition, participants demonstrated improved skills in preparing lesson plans, conducting assessments, and implementing innovative learning activities in their respective institutions.

The quantitative findings, as presented in Table 1, show a consistent increase in all competency indicators. The average pre-test scores ranged from 55.2 to 65.1, indicating that participants initially had moderate levels of understanding. After the implementation of the training program, the post-test scores increased significantly, ranging from 77.6 to 84.2. The gain scores ranged between +19.1 and +22.4, with the highest improvement observed in the use of digital media in learning. This finding suggests that participants initially faced greater challenges in integrating technology into teaching, but the training and mentoring activities effectively enhanced their digital competence.

Table 1. Pre-Test and Post-Test Results of Participants' Competence

No	Competency Aspect	Pre-Test Mean	Post-Test Mean	Gain
1	Understanding of Child Development	62.4	82.7	+20.3
2	Learning Strategy Competence	60.8	80.9	+20.1
3	Curriculum Development Skills	58.6	79.5	+20.9
4	Developmental Assessment Skills	57.9	78.8	+20.9
5	Use of Digital Media in Learning	55.2	77.6	+22.4
6	Lesson Planning Ability	59.7	81.3	+21.6
7	Understanding of Teacher Ethics	65.1	84.2	+19.1

Furthermore, qualitative findings from observations and performance assessments indicate that participants were able to effectively apply the knowledge gained during training into practical teaching activities, as reflected in increased confidence, improved classroom management, and more structured lesson implementation. The mentoring process played a crucial role in supporting participants, particularly in completing practice assignments related to curriculum development and assessment. Program evaluation results showed positive outcomes, with participants rating the program as "good" to "very good" in terms of organization, material delivery, and overall satisfaction, and highlighting that the integration of training, practice, and mentoring provided meaningful learning experiences. Reflection findings further revealed that the program not only enhanced cognitive understanding but also strengthened practical skills and professional attitudes, despite challenges such as limited time for assignments and mentor availability, confirming the overall effectiveness of the Service Learning-based training in improving teachers' professional competence.

Discussion

The findings of this community service program demonstrate that the

integration of training, practice, and mentoring through a Service Learning approach effectively enhances early childhood teachers' professional competence. The significant improvement shown in pre-test and post-test results indicates that combining theoretical instruction with direct practice creates more meaningful learning experiences. Previous community service-based studies have reported similar findings, where practice-oriented training leads to better knowledge retention and skill acquisition (Laverack, 2021; Wallerstein et al., 2020; Greenwood & Levin, 2021; Minkler, 2020; Ledwith, 2020). In the context of teacher development, experiential learning allows participants to directly apply concepts, thereby strengthening both cognitive and practical competencies. This confirms that community-based training programs are more effective when they integrate real-world application into the learning process.

The role of mentoring in this program further strengthens the effectiveness of the intervention. The findings show that participants who received continuous guidance were more capable of completing practice assignments and implementing learning innovations in their classrooms. This is consistent with previous PKM-based studies emphasizing that mentoring is a key factor in sustaining learning outcomes beyond training sessions (Hudson, 2021; Kraft et al., 2020; Ingersoll & Strong, 2021; Hobson et al., 2020; Aspors & Fransson, 2020). Mentoring provides opportunities for feedback, reflection, and problem-solving, which are essential in bridging the gap between theory and practice. In community service contexts, mentoring also fosters closer interaction between facilitators and participants, enhancing the overall impact of the program. This suggests that mentoring should be considered a core component of PKM-based training models.

The improvement in digital competence observed in this program highlights the importance of integrating technology into teacher professional development, as reflected in the highest gain score in digital media usage, indicating that participants initially faced challenges but improved significantly after the intervention. This finding aligns with previous PKM studies showing that training combined with practical application effectively enhances teachers' technological skills (Heeks, 2022; Gil-Garcia et al., 2021; Dunleavy et al., 2020; Kleine, 2021; Bond et al., 2021). The use of digital tools not only improves teaching effectiveness but also supports documentation and assessment processes, which are increasingly important in early childhood education to meet contemporary demands. Furthermore, consistent with prior research emphasizing that effective community service programs should be participatory, context-based, and outcome-oriented (Banks et al., 2021; Furco, 2021; Jacoby, 2021; Eyler, 2020; Bringle & Hatcher, 2021), this program demonstrates that the integration of Service Learning leads to measurable improvements in teacher competence and institutional practices, successfully achieving its objectives while bridging the gap between theory and practice.

Community Service Contribution

This program contributes to strengthening early childhood education by

enhancing teachers' professional competence through an integrated model of training, practice, and mentoring. The program improves participants' knowledge, skills, and confidence in implementing learning activities, curriculum development, and assessment practices. At the institutional level, the program supports the development of more structured teaching and administrative practices. The integration of Service Learning with practice-based training represents an innovative approach that can be replicated in similar contexts. In addition, the program strengthens collaboration between higher education institutions, local education authorities, and early childhood education providers. These contributions demonstrate that the program provides both practical impact and academic value beyond routine training activities.

Limitations and Suggestions

The implementation was conducted within a limited timeframe, which affected the depth of practice and mentoring processes. The number of mentors was also limited, reducing the intensity of individual guidance during field practice. In addition, variations in participants' initial competencies influenced the level of outcomes achieved. Future programs are recommended to extend the duration of implementation, increase the number of mentors, and provide more intensive follow-up activities. Expanding the program to a larger and more diverse group of participants is also suggested to enhance generalizability. Further studies are needed to examine the long-term impact of such training programs on teaching practices.

CONCLUSION

This community service program demonstrates that the implementation of a practice- and mentoring-based advanced training program using a Service Learning approach effectively enhances early childhood teachers' professional competence. The program successfully improves participants' knowledge, practical skills, and confidence in implementing learning activities. The integration of training, practice, mentoring, and evaluation creates meaningful and sustainable learning outcomes. These findings indicate that community-based training programs can serve as effective strategies for improving teacher quality. Future programs should adopt more structured and sustainable approaches to maximize impact and scalability.

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AUTHOR CONTRIBUTION STATEMENT

EK, JW, RY, MS, RY, AD, RY, contributed to the conceptualization, implementation, data collection, analysis, and manuscript preparation. NA contributed to supervision, validation, and critical revision of the manuscript. All authors have read and approved the final version of the manuscript.

AI DISCLOSURE STATEMENT

The authors utilized ChatGPT as a supporting tool during the preparation of this manuscript, particularly for organizing and refining the academic writing. All content generated has been carefully reviewed, revised, and validated by the authors to ensure accuracy and academic integrity. The authors take full responsibility for the final content of this publication.

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest, whether financial, institutional, or personal, that could have influenced the implementation of this study or the preparation of this manuscript.

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