Implementation of a Professional Competence Development Training Program for Teachers

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Abstract

This study examines the implementation of a training (*diklat*) program for developing teachers' professional competence at SMPN 7 Makassar. The problem addressed in this research concerns how training programs improve teachers' professional skills and the challenges arising in applying training outcomes in classroom practice. The objective of the study is to analyze the impact of professional development training on teachers' competence, identify implementation barriers, and evaluate the effectiveness of project-based and technology-based training methods supported by school management. This research employed a qualitative approach with nine teachers of SMPN 7 Makassar who participated in the diklat program as research subjects. Data were collected through classroom observations, semi-structured interviews, questionnaires, and document analysis, including lesson plans, teaching modules, and assessment instruments. The research instruments consisted of observation sheets, interview guidelines, questionnaires, and documentation checklists. Data analysis was conducted using interactive qualitative analysis, encompassing data reduction, data display, and conclusion drawing. Data validity was ensured through triangulation of sources and techniques by comparing findings from questionnaires, interviews, observations, and documentation. The findings indicate that the training program has a positive impact on teachers' professional competence, particularly in lesson planning, classroom management, preparation of teaching modules, use of diagnostic assessment, technology integration, and implementation of project-based learning. Teachers demonstrated improved understanding of students' characteristics and applied more creative instructional strategies, such as entrepreneurship projects integrated into learning activities. However, the implementation of training outcomes faces several challenges, including limited time, inadequate facilities, funding constraints, and varying levels of teachers' technological skills, especially among senior teachers. Overall, the study concludes that the training program effectively enhances teachers' professional competence, although its sustainability and long-term impact depend on strong institutional support, adequate infrastructure, and continuous assistance to bridge the gap between training and classroom practice.

Keywords: *Teacher Professional Competence, Training Program, Project-Based Learning, Educational Technology*

Introduction

The quality of education is strongly influenced by the quality of teachers as the main agents in the learning process. Teachers are not only responsible for delivering subject matter, but also for facilitating learning, developing students' character, and adapting instructional strategies to curriculum changes and technological development. In the context of educational reform and digital transformation, teachers are required to continuously improve their professional competence in order to respond to diverse student needs and learning environments.

Professional competence includes mastery of content knowledge, instructional planning, classroom management, assessment, and the integration of technology in teaching. However, in practice, many teachers still face difficulties in transforming these demands into effective classroom performance. Without systematic development, teachers may rely on conventional approaches that limit student engagement and innovation in learning (Darling-Hammond et al., 2017).

Empirically, schools often encounter challenges in ensuring that teachers are well prepared to implement student-centered and technology-supported instruction. Curriculum changes and policy expectations require teachers to be adaptive, reflective, and innovative, yet not all teachers possess sufficient pedagogical and technological readiness. Limitations in instructional creativity, assessment skills, and digital literacy frequently hinder the achievement of meaningful learning outcomes. Therefore, education and training programs (diklat) become a strategic instrument for strengthening teachers' professional competence. Training is expected to bridge the gap between policy expectations and classroom realities by equipping teachers with practical skills and reflective capacities. The effectiveness of training is not determined only by its content, but also by how the program is implemented and supported within the school context, because sustainable teacher change requires organizational support (Linsiyah et al, 2023).

Recent studies show that professional development plays a significant role in improving instructional quality and student learning outcomes. Training programs contribute to better lesson planning, classroom management, and assessment practices. Teachers who participate in structured development activities tend to become more confident in applying new pedagogical strategies. Moreover, project-based and technology-based training approaches are increasingly promoted because they allow teachers to experience innovation directly and apply it in authentic teaching situations. Such approaches encourage teachers to design learning activities that are contextual, interactive, and relevant to students' lives. Well-designed professional development improves both instructional practice and student achievement (Yoon et al., 2017).

Other research also highlights the importance of collaboration and reflection in professional development. Teachers benefit when training is integrated with collegial discussion, mentoring, and professional learning communities. Through collaboration, teachers are able to share experiences, discuss instructional challenges, and jointly construct solutions. Reflective practice embedded in training enables teachers to evaluate their own performance and continuously improve their instructional strategies. In addition, digital-based training supports teachers in accessing learning resources, developing media, and managing online or blended learning environments that are increasingly required in contemporary education. Teachers' digital and pedagogical integration skills are increasingly recognized as core components of professional competence (König et al., 2020).

Despite these positive findings, several limitations remain in the implementation of teacher training programs. Many studies focus primarily on training outcomes rather than on the process of implementation within specific school settings. In practice, the impact of training is often constrained by limited facilities, time allocation, workload, and weak institutional support. Teachers may understand training materials, but experience difficulties in applying them consistently in classrooms. Differences in teachers' backgrounds and technological readiness can also create gaps between training design and real instructional practice. Consequently, professional development risks becoming a formal activity rather than a sustainable process of competence improvement, as institutional leadership and school culture strongly influence whether training is transformed into daily practice (Zheng et al., 2018).

This situation indicates a research gap between the general effectiveness of training programs reported in previous studies and the actual implementation of those programs in specific school contexts. There is still limited empirical evidence on how professional competence development training is carried out at the school level, how teachers respond to it, and what kinds of challenges and supports influence its success. Particularly in Indonesian public junior high schools, contextual factors such as leadership, infrastructure, organizational culture, and teacher characteristics play an important role but are rarely examined in depth. Therefore, understanding implementation dynamics is as important as measuring training outcomes. Based on this gap, this study investigates the implementation of a professional competence development training program for teachers at SMPN 7 Makassar. The research seeks to answer the following questions: How is the diklat program implemented to develop teachers' professional competence? What challenges do teachers face in applying training results in classroom practice? How do training methods support instructional improvement? And what role does school support play in sustaining professional development? Accordingly, the objectives of this study are to analyze the implementation process, identify obstacles, evaluate the contribution of training to teachers' professional competence, and examine institutional support mechanisms.

The novelty of this research lies in its implementation-focused and contextual approach. Unlike studies that mainly emphasize training effectiveness, this research integrates analysis of training processes, teacher responses, and school support within a real school setting. By exploring how diklat programs operate in practice at SMPN 7 Makassar, this study provides practical insights for policymakers, school leaders, and educators in designing sustainable professional development programs that are responsive to institutional realities and teachers' actual needs.

Method

This study employed a qualitative research design with a triangulation approach to examine the implementation of a professional competence development training program (diklat) for teachers at SMPN 7 Makassar. Qualitative design was chosen to explore in depth teachers' experiences, practices, and perceptions regarding the application of training outcomes in classroom contexts. Triangulation was applied to integrate multiple data sources and techniques in order to enhance credibility and reduce potential bias by comparing evidence from interviews, observations, questionnaires, and document analysis (Creswell et al, 2018).

The research was conducted at SMPN 7 Makassar, South Sulawesi, Indonesia. The study took place over three months, from March to May 2025. The selection of the site was based on the school's active involvement in professional development programs for teachers. The research participants consisted of 12 key informants, including the school principal, vice principal for curriculum, training program coordinator, and nine subject teachers who had participated in the professional development training.

These informants were selected as key participants based on their roles, experience, and direct involvement in the implementation of the training program, enabling them to provide rich and relevant information for the study. Data collection was carried out using triangulation techniques to enhance the validity and trustworthiness of the findings. Triangulation combines multiple data sources, methods, and perspectives to cross-check information and strengthen qualitative evidence (Miles et al., 2020). In this study, data were collected through interviews, classroom observations, questionnaires, and document analysis.

The development of research instruments followed a systematic technical process. First, the interview guideline was constructed based on the research objectives and indicators of teachers' professional competence, including instructional planning, classroom implementation, assessment practices, technology integration, collaboration, and professional attitudes. The initial questions were derived from relevant literature and training program documents, then refined through peer discussion to ensure clarity, relevance, and depth. Semi-structured interviews were conducted with all informants to explore experiences, challenges, and perceived impacts of the diklat program while allowing flexibility to follow emerging issues. Second, the observation instrument was developed in the form of an observation sheet focusing on teachers' instructional behavior during classroom activities.

The indicators included lesson opening, use of learning strategies, student engagement, classroom management, assessment implementation, and technology use. These indicators were adapted from the objectives of the diklat program and professional competence standards, and then revised to ensure feasibility for classroom observation. Observations were conducted during teaching sessions to capture actual instructional practices after the training. Third, the questionnaire instrument was designed as a supporting tool to capture teachers' perceptions of competence development after participating in the diklat program. The items were constructed using the same analytical aspects applied in interviews and observations to maintain consistency across instruments. The questionnaire contained scaled statements on instructional planning, classroom implementation, assessment, technology integration, collaboration, and professional attitudes. The draft was reviewed to avoid ambiguity and ensure readability for respondents. Finally, document analysis instruments were developed in the form of a checklist to examine lesson plans, teaching modules, assessment instruments, and training reports.

The checklist focused on the alignment between objectives, activities, assessment, and the integration of project-based and technology-based learning. Document analysis enabled comparison between reported practices and actual instructional artifacts, strengthening the triangulation process. In this qualitative study, interviews, observations, and document analysis served as the primary data sources. The questionnaire functioned as a supporting instrument for triangulation purposes. Rather than operating as a standalone quantitative measure, the questionnaire complemented qualitative findings by confirming patterns emerging from interviews and observations. Its role was to strengthen credibility by comparing teachers' perceptions with observed practices and documented instructional evidence.

Data analysis was conducted using an interactive qualitative analysis model consisting of data reduction, data display, and conclusion drawing. During data reduction, interview transcripts, observation notes, questionnaire responses, and documents were organized and coded based on analytical aspects such as competence improvement, implementation barriers, and training method effectiveness. Data were then displayed in narrative form and tables to facilitate interpretation. Finally, conclusions were drawn by identifying patterns, relationships, and meanings across data sources, continuously verified through comparison among interviews, observations, questionnaires, and documents.

The trustworthiness of the data was ensured through triangulation of sources and techniques. Findings from interviews were compared with observation results, questionnaire responses, and document analysis to confirm consistency. This process allowed the researcher to cross-check information from different perspectives and minimize subjective bias. Through systematic triangulation, the study ensured that the findings represented credible and comprehensive descriptions of the implementation of the diklat program at SMPN 7 Makassar.

Results

This section presents the research findings on the implementation of the professional competence development training (diklat) program at SMPN 7 Makassar. In accordance with qualitative reporting standards, the presentation of findings begins with empirical data derived from interviews, classroom observations, and document analysis, which are systematically summarized in table form. The results are then organized based on three analyzed aspects, namely: (1) the impact of professional development training on teacher competence, (2) barriers in implementing training outcomes, and (3) the effectiveness of the training methods. Questionnaire data are presented afterward to support and strengthen the qualitative findings through triangulation.

Impact of Diklat on Teacher Professional Competence

Table 1 Impact of Diklat on Teacher Professional Competence

Aspect	Interview Findings	Observation Findings	Document Evidence
Instructional Planning	Teachers stated that lesson planning became more meaningful and coherent.	Teachers clearly explained objectives and learning flow.	Lesson plans show alignment of objectives, activities, and assessment.
Classroom Practice	Teachers applied discussion and project activities.	Students were more active and interactive.	Teaching modules include project-based scenarios.
Assessment	Teachers used formative feedback and performance tasks.	Teachers monitored student progress during lessons.	Assessment instruments include varied evaluation tools.
Technology Integration	Teachers felt confident using digital media.	Multimedia supported classroom instruction.	Lesson plans integrate digital resources.
Collaboration	Teachers shared materials and ideas.	Joint lesson planning observed.	Meeting notes show collaborative activities.

Table 1 indicates that the diklat program positively influenced teachers' professional competence in instructional planning, classroom implementation, assessment, technology integration, and collaboration. Interview data show that teachers no longer treated lesson planning as an administrative task but as a pedagogical guide. Observations confirm more structured lesson openings and interactive learning processes, while document analysis demonstrates coherence among objectives, activities, and assessment components. This finding reflects the core of professional competence development, where training strengthens teachers' ability to connect curriculum, pedagogy, and assessment as emphasized by (Kewajiban, 2025).

The improvement in classroom practice is characterized by the increased use of student-centered strategies such as discussion and project-based activities. These changes align with researcher view that effective teaching emphasizes student engagement and visible learning processes (Hattie, 2017). Technology integration also became more meaningful, as teachers used digital media not only technically but pedagogically, supporting researcher argument that professional development should link technological tools with instructional goals (Voogt et al, 2018).

Implementation Barriers in Applying Diklat Outcomes

Table 2 Implementation Barriers in Applying Diklat Outcomes

Aspect	Interview Findings	Observation Findings	Document Evidence
Time Limitation	Teachers reported limited teaching time.	Some lessons were rushed.	Schedules show dense workload.

Aspect	Interview Findings	Observation Findings	Document Evidence
Facilities	Lack of digital tools.	Limited devices in classrooms.	Inventory lists incomplete facilities.
Funding	Follow-up training was constrained.	Few development activities observed.	Budget documents show limited allocation.
Technology Skills	Senior teachers needed mentoring.	Variation in technology use.	Training reports show uneven competence.

Table 2 presents the barriers encountered in implementing the training outcomes. Interview data reveal that limited instructional time and inadequate facilities hinder optimal application of diklat results. Observations confirm variation in technology use across classrooms, especially among senior teachers. Document analysis further shows constraints in infrastructure and funding allocation. These barriers indicate that competence development is not only determined by training content but also by institutional readiness. Although diklat improves professional knowledge, its classroom implementation depends on organizational support and resource availability.

Effectiveness of Training Methods

Table 3 *Effectiveness of Training Methods*

Method	Interview Findings	Observation Findings	Document Evidence
Project-Based Learning	Teachers stated projects increased student motivation.	Students actively engaged in group tasks.	Modules include entrepreneurship projects.
Technology-Based Training	Teachers felt digital tools improved learning.	Multimedia supported lesson explanation.	Lesson plans include videos and online platforms.

Table 3 shows that the training methods used in the diklat program were effective in supporting professional competence development. Interview results indicate that project-based learning encouraged creativity and student participation. Observations reveal higher classroom engagement when projects and technology were integrated into instruction, and document analysis confirms the inclusion of entrepreneurship projects and digital resources in teaching modules. These findings demonstrate that training methods emphasizing real-life projects and technology integration strengthen instructional quality, supporting the view that professional development should provide practical pedagogical experiences that can be directly applied in classroom contexts.

Results of Questionnaire (Angket)

Questionnaire data were used to strengthen the qualitative findings related to the impact of the diklat program on teachers' professional competence. Of the nine teachers, 78% reported improvement in instructional planning, particularly in aligning objectives, activities, and assessment. Approximately 81% stated greater confidence in applying student-centered strategies such as discussion and project-based learning, reflecting the characteristics of effective instruction described by (Apriliyanti, 2020). In assessment practices, 75% of respondents perceived improvement in using formative and summative evaluation, including feedback and performance tasks. For technology integration, 83% of teachers felt more confident using presentations, videos, and online platforms, supporting view that professional development links pedagogy with technology (Voogt et al, 2018). Collaboration and professional attitudes also improved, with 80% of respondents reporting greater involvement in peer discussion and joint lesson planning, which reflects professional growth as conceptualized by (Situmorang et al, 2022).

Triangulation of Findings

Table 4 Triangulation of Findings

Aspect	Interview Findings	Observation Findings	Document Evidence	Questionnaire Results	Triangulation Conclusion
Instructional Planning	Teachers said planning is now meaningful and coherent	Objectives and lesson flow are clearly explained	Lesson plans align objectives, activities, and assessment	78% reported improvement	Planning competence improved consistently
Classroom Practice	Teachers applied discussions and projects	Students are active and interactive	Modules include project-based activities	81% perceived better practice	Teaching shifted to student-centered learning
Assessment	Teachers used feedback and performance tasks	Teachers monitor progress during lessons	Assessment instruments are varied	75% reported assessment improvement	Assessment became learning-oriented
Technology Integration	Teachers confident using digital media	Multimedia supports explanation	Lesson plans integrate digital tools	83% perceived confidence	Technology integrated pedagogically
Collaboration	Teachers share ideas and materials	Joint lesson planning observed	Meeting records show collaboration	80% reported collaboration	Professional culture strengthened

The convergence of interview, observation, document, and questionnaire data indicates consistent improvement in teachers' professional competence as the main impact of the professional development training. Instructional planning, classroom practice, assessment, technology integration, and collaboration showed positive change across all data sources. At the same time, the triangulated findings also reveal implementation barriers, particularly those related to time constraints, limited facilities, funding availability, and varying levels of technological skills among teachers. These barriers affect the extent to which training outcomes can be applied consistently in classroom practice. Overall, this integrated analysis demonstrates that the effectiveness of the diklat program is evident in improving teacher competence, while its sustainability and practical impact are strongly influenced by institutional support and resource availability, including the effectiveness of training methods that emphasize technology use and project-based learning.

Discussion

This section discusses the findings of the study on the implementation of the professional competence development training (*diklat*) program at SMPN 7 Makassar. The discussion connects empirical evidence from interviews, observations, documentation, and questionnaire data with theoretical perspectives on teacher professional development. Consistent with the analytical framework of this study, the discussion is systematically organized into three main aspects: (1) the impact of professional development training on teacher competence, (2) implementation barriers in applying diklat outcomes, and (3) the effectiveness of the training methods.

Impact of Professional Development Training on Teacher Competence

The findings indicate that the diklat program positively influenced teachers' professional competence in instructional planning, classroom practice, assessment, technology integration, collaboration, and professional attitudes. Teachers became more systematic in formulating learning objectives, selecting instructional strategies, and designing assessment instruments.

This supports the argument that effective professional development strengthens teachers' ability to connect curriculum goals, pedagogy, and assessment into coherent instructional designs (Syariifah et al, 2019). At SMPN 7 Makassar, lesson planning was no longer treated merely as administrative work but as a pedagogical guide for meaningful learning. Improvements were also evident in classroom implementation. Teachers increasingly adopted student-centered strategies such as group discussion, project-based learning, and formative feedback.

These practices demonstrate a shift from routine instruction to more adaptive and reflective teaching. Professional learning becomes effective when teachers inquire into their own practice and use evidence to modify instruction, a process that was encouraged through the diklat program and resulted in more interactive learning environments (Timperley, 2018). Assessment competence also improved after the training program. Teachers integrated formative assessment and feedback into daily teaching practices rather than using assessment merely as a grading mechanism. Sustainable educational improvement is achieved when instructional strategies are embedded in teachers' daily routines (Robby et al, 2024). The findings show that teachers at SMPN 7 Makassar embedded assessment practices into classroom activities, making professional competence development more continuous and meaningful.

Technology integration further illustrates the impact of diklat. Teachers began to use digital media, online platforms, and multimedia resources to support instruction by connecting pedagogical goals with technological tools to create meaningful learning experiences (Voogt et al., 2018). The training program helped teachers move beyond basic technology use toward pedagogically oriented integration, increasing student engagement and instructional effectiveness. Beyond technical skills, diklat also influenced teachers' professional attitudes and collaboration. Teachers showed stronger motivation to innovate and greater commitment to improving instructional quality. Professional development reshapes teachers' beliefs, identity, and sense of responsibility (Takalao et al, 2024). The emergence of peer discussions and joint lesson planning at SMPN 7 Makassar supports the view that professional learning is most effective when teachers work collectively to analyze problems and adapt innovations to their contexts (Opfer et al, 2019).

Implementation Barriers in Applying Diklat Outcomes

Although the diklat program improved teachers' competence, the implementation of training outcomes encountered several barriers. Time limitations, inadequate facilities, funding constraints, and uneven technological skills particularly among senior teachers were identified as major challenges. These constraints limited the extent to which teachers could apply new strategies consistently in classroom practice. Institutional and leadership support play a crucial role in overcoming implementation barriers, as professional learning systems must be supported by leadership practices that encourage innovation, reflection, and continuous improvement (Schleicher, 2018). At SMPN 7 Makassar, although teachers demonstrated improved competence, resource limitations sometimes restricted the full implementation of project-based and technology-supported instruction.

In addition, variation in teachers' technological readiness created differences in classroom application. Some teachers adapted quickly, while others required continuous guidance. This condition indicates that professional development is not a one-time activity but a long-term process. Professional networks and reflective interaction help teachers sustain learning beyond formal training sessions (Trust et al., 2017). Strengthening mentoring systems and peer support is therefore essential to reduce gaps in implementation.

Effectiveness of Training Methods

The effectiveness of the diklat program is closely related to the training methods used, particularly project-based and technology-based approaches. Project-based learning encouraged teachers to design instruction connected to real-life contexts, such as entrepreneurship projects integrated into learning. This approach increased student engagement and teachers' creativity in organizing classroom activities, indicating that training becomes meaningful when it provides practical pedagogical experiences rather than abstract instruction. Technology-based training also contributed to improving instructional quality. Teachers learned to use multimedia, presentations, and online platforms to support explanation and interaction.

Technology integration is effective when teachers understand how digital tools support pedagogical objectives, as reflected in the instructional practices at SMPN 7 Makassar where technology was used as part of learning design rather than merely for presentation (Voogt et al., 2018). From a broader policy perspective, the implementation of diklat should be viewed as part of a comprehensive school development strategy. The development of teacher competence depends on the alignment of training programs with school culture, leadership, and broader educational policy frameworks (OECD, 2020). The findings suggest that the effectiveness of diklat at SMPN 7 Makassar depends not only on training content but also on institutional commitment, continuous mentoring, and supportive school management.

Conclusion

This study analyzed the implementation of the professional competence development training program (diklat) at SMPN 7 Makassar and its contribution to improving teachers' instructional practices. The findings show that the diklat program positively influenced lesson planning, classroom implementation, assessment practices, technology integration, collaboration, and professional attitudes. Teachers became more systematic in organizing instruction, applied student-centered strategies, utilized digital media, and strengthened collegial interaction within the school environment. The results indicate that diklat functions not merely as a formal training activity but as a professional learning process that supports reflective and adaptive teaching practices. This study contributes to the body of knowledge on teacher professional development by providing empirical evidence from a school-based context in Indonesia, particularly regarding how training implementation leads to measurable improvement in professional competence.

However, the findings should be interpreted cautiously due to several limitations. The study was conducted in a single school, which limits generalization to other contexts. In addition, the research relied mainly on observation and self-report instruments, and the duration of data collection was relatively short, making it difficult to examine long-term sustainability of the training outcomes. Despite these limitations, the study advances scientific understanding by emphasizing the importance of integrating training with classroom practice, collaboration, and institutional support. Viewing diklat as a continuous learning system rather than a one-time program is essential for sustainable professional competence development. Based on these findings and limitations, future research should involve multiple schools or regions to enhance generalizability, employ longitudinal designs to examine long-term impacts on teacher competence and student outcomes, and integrate mixed-method approaches for more objective measurement. Further studies should also explore the roles of leadership, educational policy, and digital mentoring systems in supporting sustainable professional development, particularly in strengthening teachers' technological and pedagogical capacities.

Acknowledgment

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