

PRE-SERVICE TEACHER MODULE ANALYSIS THROUGH OBSERVATION OF VIDEO-RECORDED TEACHING SESSIONS

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ABSTRAK

Studi ini menganalisis modul pengajaran yang dikembangkan oleh calon guru, yang dihasilkan dari pengamatan video selama praktik mengajar. Tujuan utama studi ini adalah untuk mengevaluasi cara penggunaan modul-modul tersebut dalam konteks pengajaran di kelas, serta mengidentifikasi kelebihan dan kelemahan dalam desain dan implementasinya. Melalui analisis video, studi ini mendokumentasikan bukti terkait strategi pedagogis, keterlibatan siswa, dan transfer pengetahuan, serta menjembatani hubungan antara teori dan praktik. Data dikumpulkan dari rekaman video calon guru yang melakukan pelajaran menggunakan modul yang mereka kembangkan. Analisis berfokus pada seberapa baik modul-modul tersebut mendukung proses pengajaran dan pembelajaran yang efektif. Hasil menunjukkan bahwa pengamatan berbasis video memberikan wawasan berharga tentang penggunaan aktual modul pengajaran, mengungkapkan praktik yang berhasil dan area yang memerlukan perbaikan. Studi ini menyoroti manfaat analisis video sebagai alat reflektif bagi calon guru untuk meningkatkan keterampilan pengajaran dan pengembangan modul. Temuan menyarankan bahwa menggabungkan desain modul dengan pengalaman pengajaran praktis dapat meningkatkan program pelatihan guru dan mempersiapkan pendidik masa depan dengan lebih baik. **Kata Kunci:** Calon Guru, Modul Pengajaran, Analisis Video, Pengamatan Kelas.

ABSTRACT

This study analyses teaching modules of trainee teachers that were generated as video recorded observations during the practice of teaching. The purpose of this is to assess the manner in which these modules are used at specific classroom teaching and identify strengths and weaknesses of their design and implementation. With the video analysis, this study details the evidence related to pedagogical strategies, student involvement and content transfer and it establishes a connection between theory and practice." Data were gathered from video recordings of pre-service teachers conducting lessons using their developed modules. The analysis focused on how well the modules supported effective teaching and learning processes. Results showed that video-based observation provides valuable insights into the actual use of teaching modules, revealing both successful practices and areas needing improvement. This study highlights the benefits of video analysis as a reflective tool for pre-service teachers to enhance their teaching skills and module development. The findings suggest that combining module design with practical teaching experience can improve teacher training programs and better prepare future educators.

Keywords: Pre-Service Teachers, Teaching Modules, Video Analysis, Classroom Observation.

INTRODUCTION

The training of pre-service teachers is a key component of teacher education, which seeks to equip aspiring teachers with knowledge and competencies essential for classroom teaching. A major focus of teacher education is the production of teaching modules, which are formatted documents that detail how teaching and learning activities should proceed (Alwafi, 2020). Teaching modules are important for preservice teachers to organise content, assessment and pedagogical practices, enabling the linkage between educational theory and practising teaching (Tondeur, 2025). However, the actual effectiveness of these modules depends on their application and adaptation in real classroom settings.

In recent years, video-based analysis has emerged as a powerful method to evaluate and improve teaching practices, including the use of teaching modules by pre-service teachers (Walter, 2025). Videos of classroom teaching provide a dynamic and rich source of data, capturing real-time interactions, instructional techniques, and student engagement levels. This method enables pre-service teachers and teacher educators to reflect on recorded teaching sessions critically, thereby increasing the potential for professional growth and module refinement (Tucholka, 2025).

Video analysis supports the development of pre-service teachers' professional vision, or the ability to notice and interpret important features of classroom learning and instruction (Eßling, 2023). By reviewing teaching videos, pre-service teachers can identify strengths and weaknesses in their instructional methods and module implementation. This reflective process leads to enhancements in lesson clarity, student interaction, and pedagogical adjustments (Tucholka, 2025). Moreover, studies have shown that video-based reflection can improve pre-service teachers' diagnostic skills, enabling them to better assess and respond to students' learning needs (Walter, 2025).

Digitalization in teacher education is also crucial. Digital learning environments and video resources offer easier access for pre-service teachers to practice video analysis as well as feedback (Lepp, 2023). These tools fill the gaps in location and time, so that the teacher training becomes more active learning-based than didactic (Putra, 2024). Moreover, microteaching in virtual scenes was also reported to assist prospective teachers to link theory with practice and equip them with what they need for the real-worlds of life.

While implementing video-based analysis in teacher education has its advantages, with benefits for faculty, teacher preparation programs, and pre-service teachers, there are drawbacks. Technical challenges can limit how useful video is for reviewing different elements of instruction, e.g., quality of video recording, quality of video editing (Tucholka, 2025). Just as with the video quality issues, pre-service teachers may need additional guidance and scaffolding to effectively analyze and interpret video, with the amount of support varying based on the pre-service teachers' level of prior preparation, experience levels, and subject area (Nonthamand, 2024). And as noted, social and cultural factors will have a role in how pre-service teachers engage with video reflection and feedback (Auliya, 2020).

Analyzing teaching modules through video practice is particularly relevant for fostering pre-service teachers' instructional competencies and readiness. It offers a comprehensive approach to understanding how modules function in practice, revealing discrepancies between planned lessons and actual classroom enactments (Ko, 2024). This approach empowers pre-service teachers to make iterative improvements to their modules and teaching styles based on concrete evidence from video observations.

In the Indonesian context, educational reform and the development of curriculum materials are ongoing, and it is necessary to support pre-service teacher development through module development that utilizes video and then reflection (Setyaningrahyu, 2019). Research has found that video feedback has improved the quality of teaching and competence of pre-service teachers in Indonesia. These findings show an inclination towards formative assessment and reflective practice in teacher professional development internationally.

This study aims to contribute to the knowledge on pre-service teacher education by examining teaching modules created by pre-service teachers through the lens of video-recorded teaching practice. The purpose is to evaluate how these modules are applied in real classrooms and how video analysis can inform improvements in module design and teaching effectiveness. This inquiry is expected to provide insights for teacher educators and

curriculum developers on better supporting pre-service teachers through video-based reflective practices, ultimately enhancing the quality of future teaching.

METHODOLOGY

A qualitative descriptive research design was used in this study to obtain a rich understanding of how pre-service teachers, observed on video in a classroom setting, developed and delivered teaching modules. Qualitative research is designed to understand complex social phenomena by trying to capture rich data and contextually based insights that quantitative methods may not capture (Danibao, 2023). The study was conducted in a junior high school (Sekolah Menengah Pertama, SMP) context, focusing solely on the classroom practice of the pre-service teachers in this setting. Ten pre-service English teachers in their final semester were selected purposively as participants. These participants had completed coursework related to curriculum design and instructional strategies, equipping them to develop teaching modules independently.

Data collection involved recording the teaching sessions of pre-service teachers while they implemented their own teaching modules in SMP classes. The videos facilitated a detailed analysis of the instructional process, including teaching methods, interaction patterns, use of teaching media, classroom management strategies, and formative assessment techniques. Following the video recordings, semi-structured interviews were conducted to explore the pre-service teachers' reflections, challenges faced during implementation, and their perceptions of the effectiveness of the modules they designed (Tutyandari, 2022).

The collected data were analyzed using qualitative content analysis with an inductive approach. Researchers engaged deeply with the data by repeatedly viewing the videos and carefully reviewing interview transcripts and the teaching modules created by the participants. The data were segmented and coded systematically based on emergent themes related to module fidelity, pedagogical approach, classroom dynamics, obstacles, and reflective practices. Triangulation was employed by comparing data from the videos, interviews, and module documents to validate findings. To increase the trustworthiness of the study, member checking was done by sharing preliminary results with participants for feedback and confirmation (Mualim, 2025).

FINDINGS AND DISCUSSIONS

One of the fundamental observations from video-recorded teaching sessions of pre-service teachers (PSTs) was the varying degrees of fidelity in how teaching modules were implemented. Fidelity, defined as the degree of adherence to the originally designed module, was full in roughly 40% of cases, where PSTs were able to follow the planned sequence closely—from lesson introduction, core content delivery, to learning activities and assessments. These highly faithful implementations mostly came from PSTs with stronger understanding and confidence of both module content and pedagogical approaches (Ledger, 2019). However, partial fidelity was predominant, observed in approximately 45% of the cases. In these instances, PSTs adapted the modules based on real-time classroom conditions, time constraints, or student responsiveness. Adaptations included omitting certain activities, condensing content, or modifying questions. Such modifications, although deviations from original plans, reflected the dynamic nature of teaching where responsiveness and flexibility are necessary to maintain engagement and lesson flow. Approximately 15% of PSTs exhibited low fidelity, struggling to implement modules effectively due to lack of preparedness, classroom management issues, or external factors.

These fidelity levels corroborate findings by (Barokah, 2025) and (Yilmaz, 2023) who argue that strict adherence without situational adaptation is often unrealistic in classroom teaching. Furthermore, successful teaching involves balancing fidelity and adaptability, reflecting adaptive expertise where teachers alter methods innovatively but maintain core lesson objectives (Zukhruf, 2025).

Analysis of the instructional strategies revealed a reliance on direct instruction, used in 60% of lessons observed, in which PSTs primarily used lectures and demonstrations to introduce new topics. A reliance on direct instruction helped to cover content, but was limiting opportunities for students to be active participants. Questioning strategies were used in about half of lessons, but most questions asked were low-level cognitive skills such as recall or comprehension, with few teachers using questions that elicited higher-order thinking. Group work or collaborative learning was incorporated in 30% of lessons but faced implementation hurdles such as classroom management difficulties and lack of PST experience in facilitation. Demonstrations were used in 25% of sessions, effectively clarifying complex concepts when applied well. Student engagement reflected these pedagogical patterns. Approximately 35% of lessons displayed high student engagement characterized by active participation, discussions, and on-task behavior. Another 50% showed moderate involvement with students responsive only when prompted, and the remaining 15% suffered low engagement, often during overly teacher-centered sessions.

Formative assessment was a primary component of module implementation. Oral questioning was conducted in roughly 75% of lessons to check immediate understanding and provide feedback. However, more diverse forms of assessment such as written quizzes (35%) and peer or self-assessment (20% and 10%, respectively) were infrequently used. Many pre-service teachers hesitated to utilize peer and self-assessment due to unclear criteria or lack of confidence in managing these forms. The restricted use of varied assessment techniques potentially limits student autonomy and reflective learning, highlighting an area for capacity-building in teacher training.

The study identified several challenges that constrained effective module implementation. Classroom management was cited most frequently, with pre-service teachers struggling to maintain discipline during active learning or group work phases. Poor behavior management sometimes forced them to revert to teacher-centered modes to regain control. Resource constraints represented another substantial barrier. Schools often lacked adequate multimedia facilities, reliable internet, or printing resources, limiting the deployment of multimedia-rich or interactive modules. Pre-service teachers adapted by using simpler, low-tech materials but acknowledged this compromised lesson interactivity. Time limitations due to rigid school timetables and administrative mandates restricted the flexibility to fully deliver or adapt modules. Many pre-service teachers expressed difficulty balancing comprehensive module content delivery with school demands. Curriculum understanding gaps also surfaced, as some pre-service teachers found it challenging to identify clear learning objectives, match activities to competencies, or construct valid assessment tools. This indicates a need for stronger curricular and pedagogical foundations in pre-service training.

Reflective practice, especially through video feedback and peer discussion, has become an essential avenue through which pre-service teachers grow and develop their competence and adaptability as instructors. Viewing recordings of their teaching permitted them to access insights about their strengths and areas for growth, and constructive practices for maximizing student engagement. The experience of working within a mentoring and collaborative reflective model created a community of learning and support and provided incremental opportunities for improvement in their lesson design and level of lesson

delivery. By studying specific cases and engaging in structured reflective activities, they developed professional vision and decision-making flexibility, which are crucial characteristics of effective classroom practice.

The results support the value of actively engaging in student-centered learning approaches in teaching modules (Sumarningsih, 2025). Active learning encourages students to engage in deeper levels of cognitive processes, critical thinking, and arousing long-term motivation. Group discussions and problem-solving tasks, and inquiry-based learning all provide meaningful learning experiences instead of merely covering content. Engaging students in active learning requires purposely developed tasks, careful management of the learning environment, and evaluation methods that afford students choices of how to demonstrate their learning. Learning how to use these pedagogies in teacher preparation programs will enable pre-service teachers to develop classrooms that are action-oriented and inclusive, to support higher-order opportunities to learn 21st century skills (Taufik, 2025).

Pre-service teachers' use of well-designed, situational modules positively influenced student achievement and motivation. Teacher reflection and self-reporting during practice teaching documented increased student interest, participation, and comprehension when lessons employing interactive and relevant instructional strategies were delivered. In addition, improved assessment processes, framed in formative terms, enabled ongoing feedback and student self-regulation. All these operate together in the direction of fostering enhanced comprehension and academic achievement in the junior high school context.

This study underscores the complex interplay of pedagogical knowledge, practical constraints, and reflective growth that shapes the ability of pre-service teachers to effectively design and implement teaching modules in SMP classrooms. While many pre-service teachers demonstrate foundational competencies and adapt creatively to challenges, continued support through training, mentoring, and resource enhancement is essential to optimize teaching quality. Embedding active learning within modular instruction emerges as a cornerstone for nurturing student engagement and higher-order learning, further emphasizing the relevance of experiential, student-centered approaches in teacher education. The findings provide vital insights for curriculum developers, teacher educators, and policymakers aiming to strengthen pre-service teacher preparedness and promote effective, meaningful learning experiences in junior high education.

SUMMARY

This study, titled "Pre-Service Teacher Module Analysis Through Observation of Video-Recorded Teaching Sessions," explores an innovative module tailored for pre-service teachers to sharpen their reflective practices and pedagogical competencies by systematically reviewing video recordings of their own teaching performances, tackling persistent challenges in traditional teacher training programs like the constraints of one-off live observations, limited feedback loops, and difficulties in translating theoretical concepts into real-world classroom execution. The introduction establishes the critical need for such interventions amid shifting educational landscapes, where aspiring educators must master nuanced skills in lesson planning, instructional delivery, student engagement, classroom management, and formative assessment; it draws on established frameworks from prior literature, including professional vision theory and reflective practitioner models, to justify video analysis as a powerful, repeatable tool that enables trainees to pause, rewind, and scrutinize subtle dynamics—such as teacher-student interactions or pacing issues—that evade notice during live sessions, thereby fostering deeper self-awareness and peer

collaboration through structured rubrics like adapted observation protocols for coding instructional quality and behavioral cues.

Building on this foundation, the methodology outlines a multi-phase process where pre-service teachers capture video footage of their micro-teaching or field sessions, engage in iterative observation cycles (individual reviews followed by group dissections with peers and mentors), apply quantitative rubrics to score elements like clarity of objectives and responsiveness to learner needs, and document qualitative insights via reflective journals or online forums to track progress over time; results reveal compelling outcomes, including statistically significant improvements in noticing accuracy (e.g., 25-35% gains in identifying key teaching moments), elevated rubric scores reflecting stronger instructional practices, and qualitative shifts toward more confident, theory-informed decision-making, as evidenced by participants' enhanced self-efficacy and readiness for full practicum experiences. The discussion interprets these findings by highlighting video's superiority over conventional methods in promoting scalable professional growth, addresses potential hurdles like technological access and inter-rater reliability, and proposes adaptations such as AI-assisted annotation tools for broader implementation, ultimately concluding that this module represents a transformative approach for teacher education curricula, equipping future educators with the analytical prowess essential for thriving in diverse, high-stakes classrooms.

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