

Pedagogical Competence and Professionalism of Certified Elementary School Teachers: An Evaluation in Small Border Islands

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Abstract

This study evaluates the implementation of pedagogical and professional competencies among certified elementary school teachers in Small Border Islands (Pulau-Pulau Kecil Perbatasan/PPKP), focusing on West Moa District, Southwest Maluku Regency, a geographically remote 3T (underdeveloped, frontier, and outermost) region facing serious educational challenges. The study adopted an evaluative approach using a descriptive qualitative design with quantified rubric-based scoring, grounded in Stake's Countenance Evaluation Model, in which competency achievement was benchmarked against the standards outlined in Indonesian Law Number 14 of 2005 on Teachers and Lecturers. Participants included five school principals and 18 certified elementary school teachers from five public primary schools in the district. Data were obtained through participatory observations, questionnaires, structured interviews, and document analysis, and were validated through triangulation of techniques and sources. Findings indicate that teachers demonstrate strong pedagogical competence (overall >92%), particularly in understanding learner characteristics (92.66%), communication with students (93.36%), and learning evaluation (94.66%). Professional competence also reached high levels (overall >90%), with the strongest result in lesson opening and closing (95.00%). In comparison, self-development scored lowest (89.90%) due to limited access to professional training networks in border areas. These results confirm that teacher certification has meaningfully strengthened pedagogical and professional capacities even under conditions of limited educational infrastructure. However, sustained, context-responsive professional development is essential to further enhance instructional quality in PPKP primary schools.

Keywords: Pedagogical Competence, Professional Competence, Small Border Islands, Teacher Certification, 3T Regions.

Abstrak

Penelitian ini bertujuan mengevaluasi implementasi kompetensi pedagogik dan profesional guru Sekolah Dasar yang telah tersertifikasi di wilayah Pulau-Pulau Kecil Perbatasan (PPKP), dengan fokus pada Kecamatan Moa Barat, Kabupaten Maluku Barat Daya sebuah wilayah terpencil 3T (Tertinggal, Terdepan, Terluar) yang menghadapi tantangan pendidikan yang serius. Penelitian menggunakan pendekatan evaluatif dengan desain deskriptif kualitatif berbasis penilaian rubrik terukur, yang dikerangkai oleh Model Evaluasi Countenance (Stake). Standar penilaian mengacu pada Undang-Undang Nomor 14 Tahun 2005 tentang Guru dan Dosen. Subjek penelitian meliputi lima kepala sekolah

dan 18 guru SD tersertifikasi dari lima sekolah dasar negeri di kecamatan tersebut. Data dikumpulkan melalui observasi partisipatif, kuesioner, wawancara terstruktur, serta studi dokumentasi, dan diuji keabsahannya melalui triangulasi teknik dan sumber. Hasil penelitian menunjukkan bahwa kompetensi pedagogik guru berada pada kategori sangat baik (rata-rata >92%), terutama dalam memahami karakteristik peserta didik (92,66%), komunikasi dengan siswa (93,36%), dan evaluasi pembelajaran (94,66%). Kompetensi profesional juga mencapai level tinggi (>90%), dengan capaian tertinggi pada kemampuan membuka dan menutup pelajaran (95,00%), sementara indikator pengembangan diri mencatat skor terendah (89,90%) akibat keterbatasan akses terhadap pelatihan dan jejaring profesional di wilayah perbatasan. Temuan ini mengkonfirmasi bahwa sertifikasi guru telah berkontribusi nyata dalam memperkuat kapasitas pedagogik dan profesional, meskipun dukungan program pengembangan profesi yang kontekstual dan berkelanjutan masih sangat diperlukan untuk meningkatkan kualitas pembelajaran di SD wilayah PPKP.

Kata Kunci: Kompetensi Pedagogis, Kompetensi Profesional, Pulau-pulau Kecil Perbatasan, Sertifikasi Guru, Wilayah 3T.

INTRODUCTION

In Indonesia's Small Border Islands (Pulau-pulau Kecil Perbatasan/PPKP), such as Moa Island in Southwest Maluku Regency, certified elementary school teachers face a unique and pressing challenge: delivering quality education under severe geographical isolation, inadequate facilities, and limited access to professional development networks (Linando et al., 2025; Nuryadi et al., 2025; Werang et al., 2022). Yet, despite these constraints, the question of whether teacher certification has translated into meaningful pedagogical and professional practice in these 3T (underdeveloped, frontier, and outermost) regions remains largely unanswered in the empirical literature. This study directly addresses that gap.

Teachers occupy a strategic position in education, as the success of the learning process largely depends on the quality of their roles (Nastuti et al., 2024). At the elementary school level, teachers directly contribute to building students' foundational knowledge, attitudes, and skills that determine their success at subsequent educational levels (Cuzcano-Huarcaya et al., 2023). The achievement of national education goals cannot be separated from teachers who possess adequate competence and professionalism (Novriyanto et al., 2025; Syata et al., 2024), which constitutes an essential prerequisite for high-quality and sustainable learning (P. D. J. P. Lestari et al., 2023).

Contemporary educational developments require teachers not only to master instructional content but also to manage learning effectively, innovatively, and student-centeredly (Choliq et al., 2025). Along with the development of the 21st-century educational paradigm, teachers are no longer merely transmitters of knowledge but are

learning designers, facilitators, and mentors capable of creating meaningful learning experiences (Basilotta-Gómez-Pablos et al., 2022; Habibah, 2022). In elementary classrooms, this shift is evident when teachers use differentiated instruction, for instance, integrating multimodal teaching materials such as pictures, oral storytelling, and hands-on activities to accommodate students' diverse learning styles, or applying contextual questioning techniques to engage students with varying cognitive abilities (Afiah et al., 2024). Such learning environments enhance students' motivation and active participation (Rahmi et al., 2024; Syawitri, 2025).

In an effort to improve teacher quality and professionalism, the Indonesian government has implemented a teacher certification program based on four core competencies: pedagogical, personal, professional, and social. This policy is designed as a national instrument to enhance teacher quality in accordance with established professional standards (Arief et al., 2025; Usman et al., 2024). Among these, pedagogical competence plays a particularly strategic role, as it directly relates to teachers' ability to guide and manage students' learning processes (Maulida et al., 2024; Pasaribu et al., 2025). It includes understanding students' characteristics, planning and implementing instruction, selecting appropriate strategies and methods, managing classrooms, and conducting systematic and continuous learning evaluations (Arifin & Hanif, 2024; Besare et al., 2024; Matitaputty et al., 2024; Umarella et al., 2025). In addition, professional competence relates to mastery of subject matter and teachers' capacity for continuous professional development in line with curriculum demands (Baskara & Sutarni, 2024; Domínguez-González et al., 2025). The synergy between these two competencies constitutes the primary foundation for creating high-quality, meaningful learning (Khodijah et al., 2024; Ozturk et al., 2025).

Although the certification program has been implemented nationally, its outcomes vary across regions due to differences in geographical conditions, social contexts, and availability of educational facilities (Hasanuddin et al., 2024). In practice, there are still certified elementary school teachers who have not fully demonstrated optimal professional performance (Ratri et al., 2024). A specific and concerning example is the inconsistent preparation of lesson plans among certified teachers in remote areas; some teachers were found to rely on previous years' lesson plans without contextual adaptation, and limited use of varied instructional methods was documented, particularly in island schools where resource constraints restrict pedagogical creativity. It raises concerns that teacher

certification remains largely administrative in nature and has not fully translated into improvements in contextual teaching practices, particularly in PPKP regions.

Previous studies indicate that teachers' pedagogical and professional competencies are closely associated with learning quality and student outcomes (Moreira et al., 2023; Subairi et al., 2024; Wulandari & Sudrajat, 2025). However, most of these studies have been conducted in urban areas or regions with relatively adequate educational facilities and therefore do not fully reflect the actual conditions of teachers in small, outer-island border regions. More critically, there is a notable absence of evaluation studies specifically targeting PPKP elementary schools using systematic evaluation frameworks such as Stake's Countenance Model (R. D. Lestari, 2023; Stake, 1967; Stufflebeam & Shinkfield, 1985). This dual-methodological and substantive gap underscores the need for contextual evaluation research in 3T regions.

Based on the above considerations, this study seeks to answer two evaluation questions: (1) To what extent do certified elementary school teachers in the PPKP region of West Moa demonstrate pedagogical competence, as benchmarked against Law Number 14 of 2005 standards? (2) To what extent do they demonstrate professional competence, and what factors support or constrain competency development in this border context? The findings are expected to provide an empirical basis for formulating more context-specific and sustainable teacher development policies for PPKP primary schools.

RESEARCH METHODS

This study employed an evaluative research design with a descriptive qualitative approach, incorporating quantified rubric-based scoring to enable systematic competency assessment. The combination of qualitative and quantitative elements places this study within a mixed-methods evaluation framework, in which competency achievement percentages were derived from structured rubric scoring of observational, interview, and questionnaire data rather than from a statistical survey. This framing is consistent with Stake's Countenance Evaluation Model, which served as the theoretical foundation for the evaluation design.

Stake's Countenance Model emphasizes two primary components: description and judgment. The descriptive component was used to portray the actual conditions of teachers, students, and the role of school principals as academic supervisors in the teaching and learning process. The judgment component was used to assess teachers' performance in fulfilling their professional duties in accordance with established competency standards,

specifically those outlined in Indonesian Law Number 14 of 2005 on Teachers and Lecturers. This model was selected because it integrates empirical data with normative standards in educational evaluation, making it well-suited to assessing the extent to which certification policies have been realized in practice.

The study was conducted in October 2025 across five public elementary schools in the PPKP area of West Moa District, Southwest Maluku Regency. These schools represent varying levels of educational facilities and serve students from diverse socioeconomic backgrounds typical of border island communities. Research participants were selected purposively based on their direct involvement in instructional activities and school management. The sample consisted of 5 school principals (1 per school) and 18 certified elementary school teachers, giving a total of 23 participants. Inclusion criteria required teachers to hold an active teacher certification (*sertifikasi guru*) and to be actively involved in teaching at the time of data collection. Non-certified teachers and administrative staff not involved in instruction were excluded from the study.

Data sources comprised primary and secondary data (Ajayi, 2023). Primary data were obtained directly from teachers and school principals through participatory observations, questionnaires, and structured interviews. Participatory observation was conducted across four weeks (October 2025), with each teacher observed for a minimum of two full classroom sessions (approximately 70 minutes each). Observers used a structured rubric checklist aligned with the competency indicators. Questionnaires were administered to collect data on teachers' perceptions and self-reported instructional practices. Structured interviews used systematically prepared guidelines to obtain focused, in-depth information from both teachers and principals. Secondary data were collected from official school documents, including school profiles, organizational structures, infrastructure conditions, and school operational records.

Data collection procedures ensured triangulation of both techniques (observation, interview, questionnaire, documentation) and sources (teachers, principals, documents) to enhance credibility (Natow, 2020). Ethical procedures were followed throughout: informed consent was obtained from all participants before data collection, the identities of schools and teachers were anonymized (SD A–E; Teacher T1–T18), and the study received institutional approval from Pattimura University and permission from the Southwest Maluku District Education Office.

Data analysis followed the descriptive qualitative stages of data reduction, data display, and conclusion drawing and verification. Competency percentages were derived

by scoring observational rubrics and questionnaire responses against predefined criteria, then converting scores to percentages to enable comparisons across schools and indicators. Scoring criteria were anchored to five performance categories: Very Poor (<55%), Poor (55–64%), Sufficient (65–74%), Good (75–89%), and Very Good ($\geq 90\%$).

The trustworthiness of data was ensured through credibility (accurate reflection of field conditions), dependability (systematic and consistent documentation), and confirmability (findings supported by traceable empirical evidence). The competency indicators used in this evaluation were organized into two domains. For pedagogical competence, five indicators were assessed: (1) understanding student characteristics; (2) mastery of learning theories; (3) curriculum development ability; (4) communication skills with students; and (5) learning evaluation practices. For professional competence, five indicators were likewise assessed: (1) mastery of subject matter, concepts, and structure; (2) ability to open and close lessons; (3) ability to vary learning activities; (4) classroom management; and (5) self-development and professional growth.

RESULTS AND DISCUSSION

Results

The findings are organized around Stake's Countenance Model: the descriptive component presents the observed conditions. In contrast, the judgment component assesses these conditions against the competency standards set out in Law No. 14/2005. Competency levels were categorized as Very Good ($\geq 90\%$), Good (75–89%), Sufficient (65–74%), Poor (55–64%), and Very Poor (<55%).

Pedagogical Competence

The pedagogical competence of 18 certified elementary school teachers across five public schools in the PPKP area of West Moa District was assessed through five indicators. Overall results indicate that all schools fall within the Very Good category ($\geq 90\%$), with achievement percentages as follows: SD A (92.46%), SD B (92.33%), SD C (92.69%), SD D (92.66%), and SD E (94.33%). The narrow range of scores (1.99 percentage points) indicates remarkable consistency in the implementation of pedagogical competency across schools with varying facility levels.

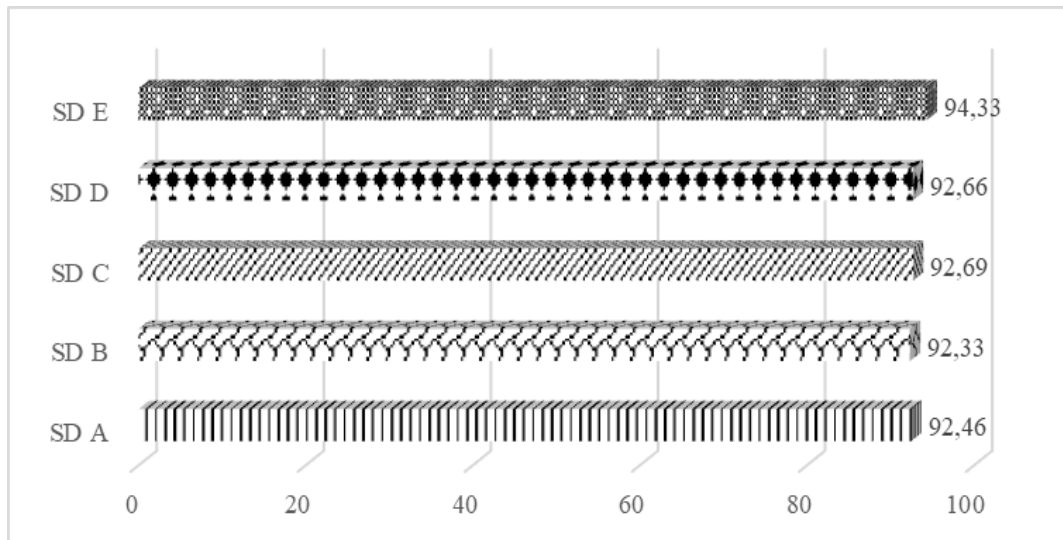


Figure 1. Percentage Results of Pedagogical Competence of Certified Teachers in the Sampled Elementary Schools

At the indicator level, all five pedagogical indicators exceeded 90%, confirming the Very Good categorization. The evaluation of learning practices recorded the highest score (94.66%), followed by communication skills with students (93.36%), understanding of student characteristics (92.66%), curriculum development (90.96%), and mastery of learning theories (90.33%).

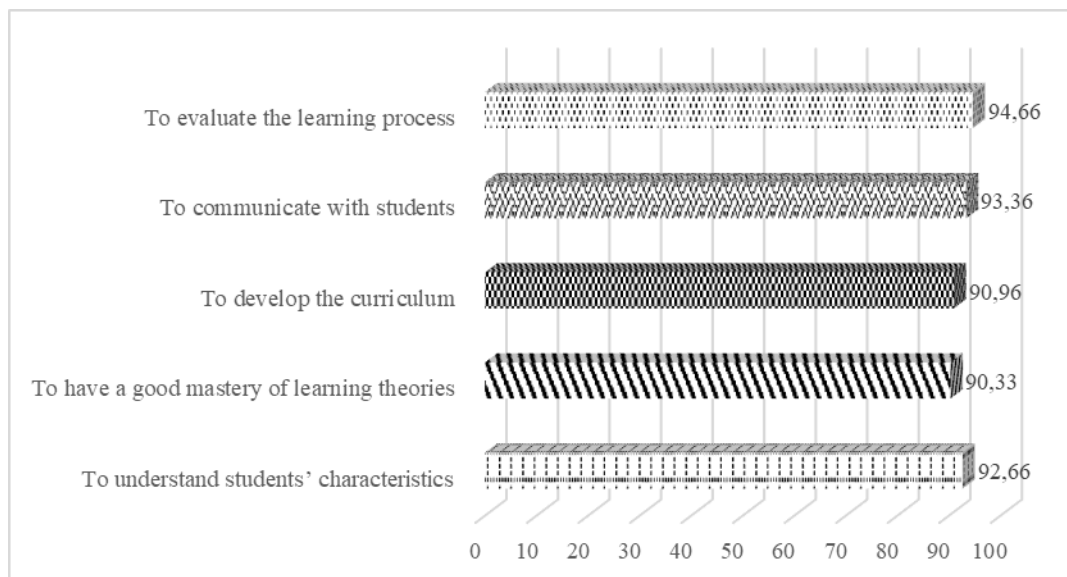


Figure 2. Percentage Results by Indicator of Pedagogical Competence of Certified Teachers in the Sample Schools

Professional Competence

Professional competence results were similarly strong across all five schools. Achievement percentages were: SD A (90.83%), SD B (90.79%), SD C (92.46%), SD D (92.30%), and SD E (94.00%) — all within the Very Good category.

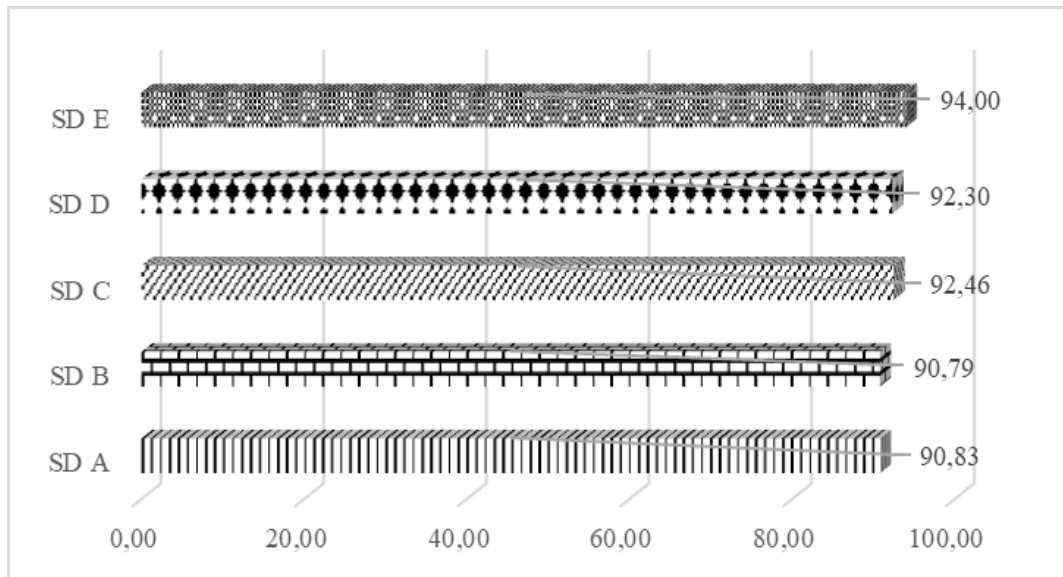


Figure 3. Percentage Results of Professional Competence of Certified Teachers in the Sampled Elementary Schools

At the indicator level, the ability to open and close lessons recorded the highest score (95.00%), followed by classroom management (93.66%), mastery of subject matter and structure (92.69%), ability to vary learning activities (90.30%), and self-development (89.90%). Notably, the self-development indicator was the only one that fell into the Good rather than the Very Good category, reflecting constrained access to professional training networks in the PPKP region.

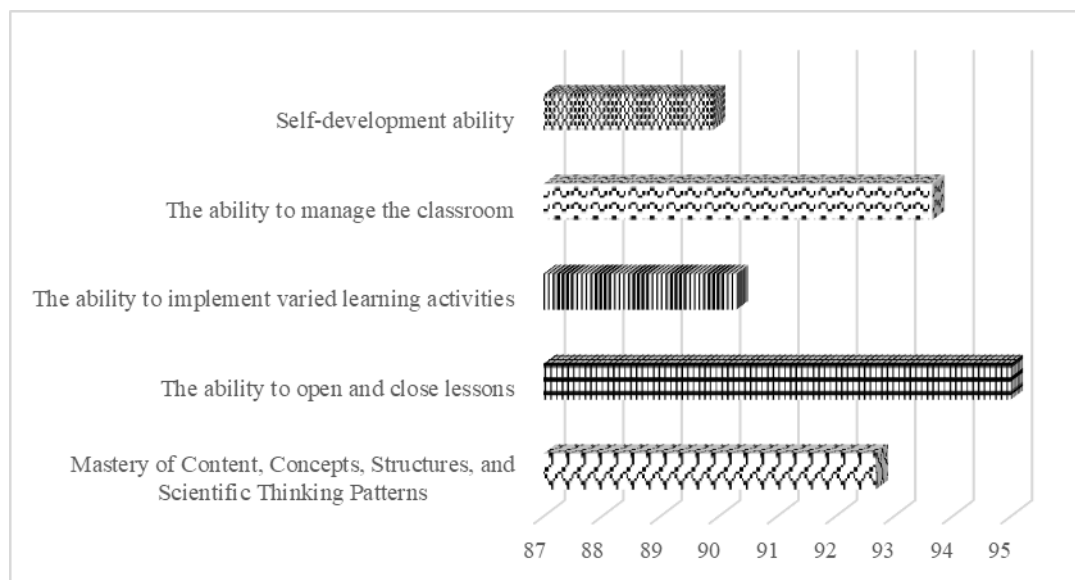


Figure 4. Percentage Results by Indicator of Professional Competence of Certified Teachers in the Sampled Elementary Schools

Discussion

Pedagogical Competence of Certified Teachers in the PPKP Region

Pedagogical competence constitutes the primary foundation of teacher professionalism, as it directly relates to the ability to manage the learning process effectively and meaningfully in accordance with students' developmental needs. The results of this study indicate that the pedagogical competence of certified elementary school teachers in the PPKP region of West Moa falls within the Very Good category, with achievement percentages exceeding 92% across all sampled schools. This finding provides empirical evidence that teacher certification serves not only as an administrative requirement but also as a mechanism that strengthens teachers' pedagogical capacity, even under conditions of limited educational infrastructure.

Regarding the understanding of student characteristics (92.66%), field observations revealed concrete examples of teachers applying this understanding in practice: teachers were observed organizing classroom seating to accommodate students with learning difficulties, conducting informal diagnostic questioning at the start of lessons to gauge prior knowledge, and adjusting the pace of instruction based on students' visible responses. Teachers identified students' learning needs through sustained interaction rather than formal assessment tools, a context-responsive strategy well-suited to the resource-limited PPKP environment. That aligns with the principle that differentiated instruction in border region classrooms must be driven more by teacher sensitivity than by formal diagnostic infrastructure (Feng et al., 2025; Werong et al., 2024).

The mastery of learning theories (90.33%), while the lowest-scoring pedagogical indicator, was nonetheless observed at an applicative rather than merely conceptual level (Himayatillah & Lismawati, 2025). Teachers demonstrated this mastery not through abstract articulation but through classroom practice: constructivist learning principles were evident when teachers posed open questions and allowed students to discuss answers in pairs before reporting to the class. In the PPKP context, this theoretical grounding becomes a critical asset, enabling teachers to create meaningful learning experiences without depending on fully equipped facilities.

Curriculum development skills (90.96%) were reflected in teachers' capacity to translate the national curriculum into context-specific lesson planning. Teachers acted not only as curriculum implementers but as curriculum developers at the school level, designing modules and teaching materials that incorporated local cultural elements and students' daily life experiences (Marantika et al., 2019), for instance, using local fishing

practices as a context for mathematics word problems. This capacity for flexible, contextual curriculum interpretation reflects pedagogical autonomy and professionalism (Osorio Vanegas et al., 2025). It is particularly vital in PPKP regions where the national curriculum often requires substantial contextual adaptation.

The high score in communication skills with students (93.36%) was consistent across all schools. Interview data from school principals confirmed this pattern: one principal stated that certified teachers in their school were notably more skilled at fostering dialogue-based classroom interactions than their non-certified counterparts, regularly providing constructive verbal feedback and maintaining patience when working with students from difficult home environments. Effective teacher communication has been consistently linked to enhanced student motivation and trust (Moreira et al., 2023). In the PPKP context, where students may face social vulnerabilities in border communities, this interpersonal dimension of pedagogical competence becomes even more important.

The evaluation of learning practices recorded the highest indicator score (94.66%). Observation and document analysis revealed that certified teachers implemented multiple assessment modes: formative classroom questioning during instruction, written exercises, portfolio collection, and end-of-unit summative tests. Importantly, teachers used evaluation results to inform instructional follow-up: remedial sessions were documented in five schools, and enrichment tasks were assigned to high-achieving students. This comprehensive, continuous approach to evaluation confirms that teachers understand assessment as an integral pedagogical instrument rather than merely an end-stage activity, reinforcing the conclusion that pedagogical competence in the PPKP region has developed maturely.

Professional Competence of Certified Teachers in the PPKP Region

Professional competence reflects teachers' ability to master subject matter, manage instruction effectively, and engage in continuous professional development. The results show that professional competence falls within the Very Good category across all five schools, with SD E recording the highest score (94.00%). These findings indicate that teachers possess adequate subject-matter mastery and professional skills to fulfill their roles as educators in border areas.

The high score in subject-matter mastery (92.69%) was supported by documentary evidence: lesson plan analysis showed that teachers presented content sequentially, with clear conceptual progression across lesson units. More critically, observations documented

how subject mastery supported teaching under resource constraints: when visual teaching aids were unavailable, teachers relied on verbal illustration and physical demonstration, for example, using body movements to explain geometric concepts, or oral storytelling to contextualize historical content. This capacity for teacher-generated instructional creativity, grounded in deep content knowledge, is a defining characteristic of professional teaching in resource-constrained border schools (Subairi et al., 2024).

The ability to open and close lessons was recorded as having the highest professional competence score (95.00%). Observations confirmed that teachers consistently began lessons with relevant apperception activities that activated prior knowledge through questions or brief reviews and concluded lessons with meaningful reflection, such as oral summaries and written exit notes. This structured instructional flow aligns with established principles of effective lesson design. It reflects professionalism in managing classroom time, a particularly critical skill in PPKP schools where instructional time is sometimes reduced by school absences tied to community events or weather conditions.

The self-development indicator recorded the lowest score (89.90%), the only indicator falling in the Good rather than Very Good category. It is consistent with the documented structural constraints of the PPKP region: limited access to formal in-service training programs, the absence of regularly operating professional learning communities (KKG/MGMP), and restricted internet connectivity that limits participation in online professional development platforms. Interview data corroborated these constraints, with multiple teachers expressing that their last formal training attendance was more than two years prior. This finding highlights a critical systemic gap: while teachers demonstrate strong on-the-ground competencies, the structural conditions that sustain and renew professional growth remain underdeveloped in border areas. Targeted policy interventions, including mobile training units, peer mentoring programs, and initiatives to expand access to digital learning, are essential to address this gap.

CONCLUSION

This study evaluated the pedagogical and professional competencies of 18 certified elementary school teachers across five public schools in the Small Border Islands (PPKP) of West Moa District, Southwest Maluku, using Stake's Countenance Evaluation Model, benchmarked against the standards outlined in Law No. 14/2005. The evaluation findings confirm that both competency domains reached the Very Good category overall, with

pedagogical competence averaging above 92% and professional competence above 90% across all schools. The strongest domains were learning evaluation (pedagogical, 94.66%) and lesson opening/closing (professional, 95.00%), indicating that teacher certification has meaningfully contributed to the development of structured, student-centered instructional practices even under geographically and infrastructurally challenging conditions.

The weakest indicator was self-development (89.90%), which was at the boundary between Good and Very Good, and was directly attributable to structural barriers, including limited access to training programs, professional learning communities, and digital resources in border regions. It represents the most critical gap for policy intervention. This study has several limitations. First, the sample was limited to one district in Southwest Maluku, which constrains generalizability to other PPKP regions. Second, the absence of student learning outcome data means that the relationship between teacher competence levels and actual student achievement cannot be confirmed. Third, observations were conducted over a defined period and may not fully capture seasonal variations in teaching quality.

For future research, comparative studies across multiple PPKP districts or between PPKP and non-PPKP schools within the same province would strengthen understanding of the contextual effects of border-region schooling on teacher competency outcomes. Longitudinal studies tracking the same cohort of teachers before and after targeted professional development interventions would provide causal evidence on the effectiveness of policy programs. Future research might also examine the relationship between teacher competency levels and student learning outcomes in PPKP contexts, as well as explore the role of school principals' academic supervision in sustaining teacher competency development in remote areas. For policy and practice, the findings call for the development of context-specific professional development programs for PPKP elementary teachers, including mobile mentoring units, inter-school peer-learning networks, and subsidized digital access, to ensure that the strong foundational competencies demonstrated by these teachers continue to grow in response to evolving educational demands.

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