



Professional Competence and Teachers' Challenges in Konawe Kepulauan Regency: A Qualitative Exploration

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ABSTRACT

Purpose –This study aims to explore how teachers' professional competencies are implemented and sustained in island territories, with a particular focus on professional development practices, reflective processes, and the challenges of maintaining learning performance.

Methodology – This study uses a qualitative case study design with an exploratory orientation. Data were collected through semi-structured interviews with teachers, school principals, and education supervisors. The interview guide consisted of open-ended questions focusing on teachers' professional competence, digital challenges, emotional pressures, and work performance. Data were analyzed using a hybrid thematic analysis that combined deductive coding and inductive coding.

Findings – Teachers' professional competence in Konawe Kepulauan is demonstrated through adaptive, practice-oriented strategies rather than through formal professional achievements. Teachers participate in professional development activities suited to their specific contexts, with support from school principals and supervisors. Nevertheless, formal professional development initiatives, including classroom action research and academic publications, are largely lacking. Teachers' professional practices are limited by digital and structural barriers, substantial workloads, and emotional stress, all of which influence their instructional decisions and overall performance.

Contribution –The findings suggest that policymakers and school leaders reconceptualize professional development frameworks by recognizing reflective practice, peer collaboration, and adaptive teaching strategies as legitimate forms of sustainable professional competence in an island context.

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INTRODUCTION

Teachers' professional competence is an important factor that influences the quality of education and national development. Professional competence includes not only mastery of subject matter but also pedagogical skills (Rusdiono et al., 2021), learning management, student assessment, curriculum development, and reflection on learning practices (Halimah, 2024; Puspita & Lestari, 2025; Zaleha et al., 2022). Teachers who can design, implement, and evaluate the learning process are key to improving student learning outcomes (Selvakumar et al., 2025). In addition, teachers must be able to adapt to scientific and technological advances while establishing teaching methods to foster a positive learning environment and boost student motivation and character (Andersen, 2018; Chen & Li, 2025). Therefore, improving teachers' professionalism and competence is a strategically important initiative for the government to enhance the quality of education and develop human resources in Indonesia. However, teachers still encounter many obstacles in applying their professional skills, including inadequate structural conditions, limited geographic locations, and very limited human resources.

Konawe Kepulauan is one of Southeast Sulawesi's districts with inadequate geographical characteristics. In 2024, its Human Development Index was 68.77, placing it in the moderate category (Southeast Sulawesi Provincial Statistics Agency, 2024). The lack of infrastructure, weak economic conditions, welfare, and teacher management contribute to teachers' low pedagogical competency, including their technological competency and continuous professional development (Mokodompit et al., 2025). Therefore, improving educational infrastructure is crucial in supporting the professional development of teachers, especially those in island regions.

The digital and geographical gap among teachers in Konawe Kepulauan is a structural challenge that requires a holistic, context-specific approach (in line with the islands' conditions). Teachers' unpreparedness for online teaching, coupled with schools' lack of support for digital access, makes the learning process less effective and reduces students' motivation to learn (Musthan et al., 2025). In addition, limited access to technology has led to limited use of learning platforms, so teachers mostly rely on low-tech tools easily accessible to all students, such as WhatsApp and Zoom. This shows that teachers' digital competence is a key skill for managing the learning process in sustainability (financial and operational), with its impact measurable in terms of student learning outcomes (Padilla et al., 2024).

Besides the digital divide, teachers face many tough challenges, including emotional stress, teaching difficulties, and system issues. These problems are connected and affect each other. To fix them, we need a big-picture solution that sees teachers as real people with feelings, work needs, and structural problems. They are required to build local strengths (resilience, community, wisdom), change the paradigm from "teachers as a problem" to "teachers as a solution," and create a sustainable, holistic support ecosystem. Teachers are expected to become future educators who not only possess intellectual abilities but also emotional and spiritual abilities, enabling them to facilitate optimal learning and stimulate the development of their professional competencies (Alang et al., 2020).

This research is necessary because Indonesia's educational inequality is most evident in its island regions. At the same time, national discussions focus on curriculum and technology (Asep et al., 2025). Teachers on remote islands still struggle with basic needs: electricity, clean water, and communication with their families (Riyadi & Ghuzini, 2021). The unique context of the islands requires the development of a contextual education model tailored to their characteristics, with a holistic approach that integrates emotional, instructional, and structural aspects (Rini & Yuliantina, 2024).

There have been numerous studies exploring teachers' professional competencies (Aisah et al., 2024; Maenah et al., 2024; Situmorang et al., 2022). These studies have primarily focused on professional development for teachers, aiming to improve teaching practices through specific programs, strategies, and media. Several teacher development programs have been implemented to improve teachers' professional competencies, such as the Teacher Professional Education (PPG) program (Loeneto et al., 2022). In addition,

another approach to teacher professional development involves metacognitive reflection, collaboration, and skills development that can foster teacher independence (Handayani et al., 2021). However, most of these studies focus on urban schools with good facilities, reliable technology, and a stable work environment; there is still little research on how to develop professional skills in regions with major challenges, such as island areas. Teachers in these places often face limited internet access, limited facilities, heavier workloads, emotional stress, and the need to adapt to real-life conditions. As a result, there is a clear gap in research on how teachers in island regions build and develop their professional skills in real-world contexts, especially after the pandemic.

This study aims to explore the challenges teachers face in developing professional competencies in the post-pandemic period, focusing on their experiences and practices. The context of this study is in an island region (Konawe Kepulauan) with inadequate educational infrastructure. This study explores the experiences and challenges faced from various perspectives, not only from teachers but also from school principals.

METHODOLOGY

Research Design

This study uses a qualitative case study design with a descriptive and exploratory orientation. A qualitative case study is a research approach that focuses on an in-depth understanding of a specific, limited context to describe and interpret the meanings, processes, and dynamics within it (Merriam & Tisdell, 2016). This design was chosen to explore the practice of exercising professional competence and the challenges teachers face. The descriptive approach is an analytical approach in which researchers remain close to the data, use a limited framework and interpretation to explain it, and classify information into themes (Creswell & Creswell, 2023).

Participants

This study was conducted in Konawe Kepulauan Regency, Southeast Sulawesi, Indonesia. Participants were selected through purposive sampling based on specific criteria. This technique was chosen to ensure participants had direct, relevant experience with the phenomenon under study. In total, 69 teachers were identified as eligible participants. In qualitative research, this number represents a pool of potential participants, from which in-depth qualitative data were drawn through interviews and document analysis.

Data Collection

Data collection was conducted through semi-structured interviews with teachers, principals, and education supervisors in Konawe Kepulauan. During the data collection process, the researcher provided the information regarding the purpose of the research, the voluntariness of participation, and the confidentiality of their responses, which was outlined in a written consent document. The interview was conducted in person, but if additional data were needed, the researcher used online communication, including phone calls and WhatsApp messages. Field notes were also taken to document contextual observations and insights that emerged during data collection. Each interview session was audio recorded with the participants' permission. The interviews were then transcribed verbatim to ensure accuracy.

Instrument

This study employed a semi-structured interview guide with open-ended questions. This guide explores in depth the professional competencies of teachers and the challenges they face in their daily teaching practices. These open-ended questions also allow participants to freely express their experiences, perceptions, and reflections. The interview guide was developed based on a conceptual framework of teacher professionalism and contextual challenges in geographically constrained settings. The guide focuses on four main areas: teachers' professional competencies, digital challenges, emotional pressures, and teachers' work performance as professional practice. Before use, the guide was reviewed and refined to improve clarity and

suitability for the research focus, prior to data collection. During the interviews, follow-up questions were used to explore emerging issues while maintaining consistency across participants.

Data Analysis

This study uses a hybrid thematic analysis that combines deductive and inductive coding. Deductive coding is used to examine teachers' professional competencies in line with the indicators for high school teachers issued by the Ministry of Education and Culture in 2007. At the same time, inductive coding was used to identify the challenges teachers experienced, enabling issues specific to the research context to emerge directly from participants' stories and experiences through a data-based coding and iterative theme formation process (Braun & Clarke, 2022). These two approaches were applied iteratively, enabling the researchers to refine, expand, and reorganize themes throughout the analytical process. This process involved recursive organizing, coding, memoing, and ongoing interpretation, allowing meanings to develop through continuous engagement with the data (Tracy, 2020). To ensure the credibility and trustworthiness of the findings, triangulation across participant roles (teachers, principals, and supervisors), negative case analysis, and audit trail documentation were employed, ensuring transparency and rigor in the research process (Tracy, 2020; Nowell et al., 2017).

FINDINGS

Teachers' Professional Competence

Comprehensive and in-Depth Mastery of Learning Materials

Based on the interview results, the implementation of teachers' professional competencies in mastering content, organizing lessons, explaining ideas, and promoting a scientific mindset has not yet been explicitly addressed. However, these competencies can still be inferred from how teachers kept students engaged and continued teaching despite the challenges of online learning. When explaining material, teachers did not just give long lectures or stick strictly to standard topics. Instead, they simplified and made the lessons more realistic for students to handle. This shows that teachers chose essential material that could be learned independently and remained meaningful.

"We design our lesson plans to be simple and flexible. The most important thing is that the main objectives are achieved, even if the methods used are different." (Teacher)

Learning adaptation methods implemented by teachers are not always expressed in the form of normative statements about competency standards, but rather through professional behavior oriented towards the achievement of realistic, context-specific learning objectives. Understanding of learning objectives is reflected in lesson plans that meet students' and the school's needs. Teachers realize that learning objectives cannot be achieved through conventional learning approaches, so the learning design is shifted to a student-centered approach. In addition, teachers consciously choose asynchronous approaches so that learning objectives can still be achieved even with limited access to technology.

"We design student-centered learning in the lesson plan, and it is more asynchronous." (Teacher)

The interview results above show that teachers understand the essence of learning objectives and adapt them to fit the situation. Understanding of learning objectives is also reflected in the remediation strategies teachers implement for students who experience learning delays. Teachers develop individual learning plans with measurable weekly targets, making learning objectives more specific while remaining focused.

"For students who are left behind, we design individual learning plans with measurable weekly goals." (teacher)

Regarding essential material, teachers explained that they use short quizzes, concise assignments, or reflective questions to ensure students understand core concepts. This shows that mastery of material is more apparent in pragmatic learning practices than in explicit conceptual explanations.

"At the end of the session, students answer short questions via Google Forms to measure their understanding of key concepts."

In summary, this competency is seen as an adaptive ability to the context rather than an explicit expression of mastery of scientific theory, since the dimension of subject-matter mastery has not been clearly articulated in the data. Teachers are aware of the learning objectives, which are expressed in realistic, flexible, and student-centered ways. Lesson plans are no longer purely administrative but rather adaptive, tailored to students' conditions, resource availability, and structural challenges in the island context.

Teacher creativity in teaching and ICT utilization

The utilization of science, information, and communication technology is an indicator that teachers are implementing their professional competencies. Based on interview results, creativity and ICT-based learning are carried out in an adaptive, pragmatic, and contextual manner, taking into account the limitations of digital infrastructure and devices, as well as the island's geographical conditions. To make education an equal opportunity, teachers use digital technology that is most accessible and familiar to students. One application commonly used by students and teachers is WhatsApp. WhatsApp is the primary medium for the learning process, used to send materials in PDF, photo, and voice recording formats, as well as for communication and assignments.

"...when teaching via WhatsApp or voice recordings... The easiest platform is WhatsApp because it is familiar (Teacher).

"WhatsApp is used to send materials in the form of PDFs, photos, or voice recordings." (Teacher)

In addition, some teachers use other digital platforms such as Google Forms, Google Classroom, and Zoom for short quizzes, discussions, and synchronous learning. However, their use is limited to areas with relatively better internet access.

"We use Zoom when the network is available and Google Classroom for sending assignments." (Teacher)

In these circumstances, the principal acts as a facilitator of the use of science and technology, encouraging teachers to use realistic digital technology and providing managerial support to ensure learning continues. In addition, the principal also encourages the development of interactive print modules that are easy for students to use independently in the context of material development. Although there are various practices in the use of science and technology, these are primarily used as tools to support learning rather than as means for optimal pedagogical innovation. Teachers and schools tend to choose the safest and most affordable technology, even at the cost of fewer teaching methods and shallower levels of student interaction.

Professional Development Sustainability by Reflective Practice

The interview results indicate that teacher professional development practices in the Konawe Kepulauan have not yet led to classroom action research, but rather to the implementation of practice-based learning. In addition, professional development is carried out through skill upgrades, such as training or webinars, either independently or based on school recommendations. This is a form of teacher knowledge adaptation to carry out the teaching process in accordance with students' conditions and the limitations of distance learning.

"I took part in a webinar about online testing, and then I used what I learned." (Teacher)

In addition to formal online training, teachers also utilize peer communities as their main source of learning. Through WhatsApp groups, teachers can learn, share short tutorials, discuss technical issues, and exchange best practices. In the meantime, teachers are self-taught by exploring a variety of digital learning platforms and participating in training organized by communities.

"WhatsApp groups with fellow teachers to share tutorials... self-taught learning...online training from communities"

These findings indicate that teachers engage in professional development flexibly and do not rely solely on formal training from institutions; instead, they build competence through networking and direct

experience. In addition, teacher professional development is not only planned, but also reactive to crises, with high emotional and cognitive demands. In terms of school policy, principals play an important role in encouraging teacher professional development through teaching reflection. One notable practice is the requirement to keep weekly reflection logs, which encourages teachers to reflect on their performance and experiences.

"Teachers collect weekly reflection logs and one example of their best learning evidence (which can be a screenshot, voice note, or photo of a module)."

These reflection logs are not merely administrative documentation; they serve as a basis for improving learning practices. The principal facilitates a monthly evaluation forum, where teachers discuss key obstacles and collaboratively design solutions. In addition, the principal also organizes small-group coaching as a form of more personalized, context-specific professional assistance. Through these sessions, teachers receive direct feedback on their learning practices and the challenges they face.

"Each month, we gather for a joint evaluation forum to discuss the biggest challenges and devise collaborative solutions." (Principal)

"Small group coaching sessions via Zoom/WA call or at school with strict procedure" (Principal)

This practice shows that professional reflection and improvement are not positioned as an individual responsibility but as a collective process facilitated by school leadership. Although teachers and schools have engaged in reflective practices and professional development, the findings indicate that formal forms of professional development, such as conducting classroom action research or publishing scientific papers, have not explicitly emerged in the data. This suggests that teacher professional development during the crisis has focused more on improving direct practices than on fulfilling formal indicators of professional development.

Teachers' Challenges

Digital and Structural Constraints

The findings show that digital limitations and structures also influence teachers' professional competence. These are not only technical issues but also relate to many other aspects, including communication patterns and distance learning systems. All participants reported that internet access was a major factor affecting the effectiveness of the learning process. Different areas on the island have different internet access, and the disparity is significant. A common problem is the lack of internet access in some areas where students live, making it difficult for them to participate in the learning process actively. In addition, they also lack understanding of how to use learning platforms and other multimedia.

"There is internet access in the sub-district center, but it is often unstable. However, on most of the small islands, it is completely unavailable. We can only use WhatsApp for text messaging, and even that is unreliable." (Teacher)

This digital infrastructure disparity indicates that the recommended learning system cannot be implemented effectively due to limited internet access. As a solution, teachers use applications commonly used by students and that require minimal data usage, even though these applications are pedagogically insufficient for helping students gain more knowledge.

"Students find it difficult to access Zoom and Google Classroom. We use WhatsApp applications more often because they are easier to use and we are already familiar with them." (Teacher)

In terms of connectivity, the digital devices used are also extremely limited. Most teachers have access only to cell phones with limited storage and low processing power. It is still uncommon for teachers to have laptops or computers to support their teaching process. On the other hand, students also encounter greater challenges because at home they have to share learning devices with their siblings:

"Most teachers only use personal cell phones rather than laptops, and in addition, students have to share cell phones with their family members as learning devices." (Principal)

Not all teachers use technology the same way. Teachers emphasize that the use of digital technology must be adapted to students' conditions and the complexity of the learning material to be delivered, so that asynchronous and low-bandwidth approaches are more dominant than real-time online learning. Another challenge faced is the lack of electricity availability. Not all areas on the island have the same electricity supply. In some areas, the electricity supply is adjusted according to the local government's schedule. This makes it difficult for teachers to adjust students' time with online learning according to the schedule:

"Electricity supply in some areas is not available 24 hours a day, so the learning schedule often has to be adjusted to the hours when the electricity is on." (Teacher)

The limitations mentioned above have encouraged teachers to adopt low-tech and hybrid teaching strategies as a pragmatic response. Teachers have developed learning guides that integrate WhatsApp-based teaching and have implemented selective home visit programs to ensure that students in remote areas and without internet access continue to receive learning experiences. In addition, teachers' prepared teaching materials are distributed regularly and sent as videos.

"We use WhatsApp, printed materials, and visits to village meeting places to help students keep learning." (Teacher)

In conclusion, the lack of infrastructure is the most significant obstacle to maximizing online learning. This prevents teachers from optimizing their ICT-based professional competencies and forces them to adapt their teaching strategies to the current situation constantly.

Multiple roles of teachers as a result of increasing workloads

The complexity of the learning process increasingly links professional competence to the ability to multitask. Teachers report that they are not only subject teachers but also motivators, people who must understand technology, and emotional supporters for students and families. This rapid expansion of roles has occurred without adequate preparation or training, creating emotional and professional pressure:

"Suddenly, we are no longer just teachers but also have to be IT operators, content creators, and psychologists for students. All of this had to be learned in a very short time." (teacher)

The principal's perspective states that digital and structural constraints force a realignment of institutional priorities. Instead of imposing a standard digital teaching model, principals focus on flexible solutions that fit local realities. Schools primarily function as facilitators, supporting the distribution of learning materials, mediating communication, and providing feedback on teacher issues:

"We are not allowed to make teachers use a certain platform, but we suggest they pay more attention to printing materials and keeping in touch with parents. (Principal)

On the other hand, education supervisors highlighted that digital inequality risks widening the education gap in a region. For example, students living on remote islands will face disproportionate barriers to participating in online learning. Therefore, teachers need to consider adjusting to students' needs and being more adaptive:

"If distance learning is implemented evenly, the gap will become even wider. We must be realistic about the conditions in each region." (supervisor)

Overall, the findings indicate that digital and structural constraints are not peripheral challenges but rather fundamental conditions that shape professional practice in Konawe Kepulauan. Teachers' professional competence is manifested through ongoing negotiation with the constraints of the infrastructure. This requires them to make practical choices, adjust their teaching methods, and keep working hard to support students spread out over a wide area.

Teachers' Emotional Resilience in Shifting Professional Identity

Emotional pressure is one of the dimensions that poses a professional challenge and is related to changes in professional identity. In terms of emotional pressure, the changing role of teachers extends beyond academic learning to include building strong communication with parents, which is part of teachers'

professional competencies. Teachers must be able to collaborate with parents in the process of children's learning at home because they are the main controllers for students:

"We are not just teaching but also becoming a place for students and parents to share their stories. This is emotionally demanding." (Teacher)

Throughout this transition phase, several aspects of teaching and learning have changed. Among these are the lack of teacher-student interaction in physical classrooms, the emotional challenges teachers face due to the difficulty of direct interaction and communication with students, and the inability to observe students' expressions in person. These factors affect teachers' professional identity. Similarly, this happens when teachers conduct instruction through applications like WhatsApp or voice recordings. Technically, this is feasible, but it creates constraints and raises doubts. Teachers always feel as if they are "alone" without being able to know whether learning is actually taking place:

"When teaching via WhatsApp or voice recordings, I feel like I am talking to myself." (Teacher)

The changes in the education system that require online learning have caused emotional distress among teachers, including fear, panic, uncertainty, and decreased motivation in the teaching process. The professional competence of teachers is evident here, as the learning process continues even under challenging conditions and ideal instructional standards are consistently applied. Based on the result of an interview with a teacher regarding their emotional experience, they said that:

"This was my first experience, and it was so difficult that it made me anxious and confused. It affected my motivation to teach because I felt that the lessons were not running effectively." (Teacher)

The principal's view is that emotional difficulties affect not only teachers but also the entire school community. Principals discuss the emotional strain they feel when trying to help teachers, students, and parents address their worries. Their role now is more about offering emotional comfort and mental support than about traditional forms of supervision.

"I have to manage teachers' anxiety and help them feel confident and calm." (Principal)

School supervisors have received many complaints from teachers who lack confidence in their teaching abilities. They described feelings of frustration and concern due to their inability to make regular visits to schools and conduct direct supervision. Despite experiencing emotional pressure, this has become a bridge for teachers in developing emotional resilience and professional identity. In this case, teachers act as a link between various aspects of students' learning needs, including collaborating with parents. Even though they faced challenges, the teachers' responses indicate a positive change from emotional pressure to professional resilience.

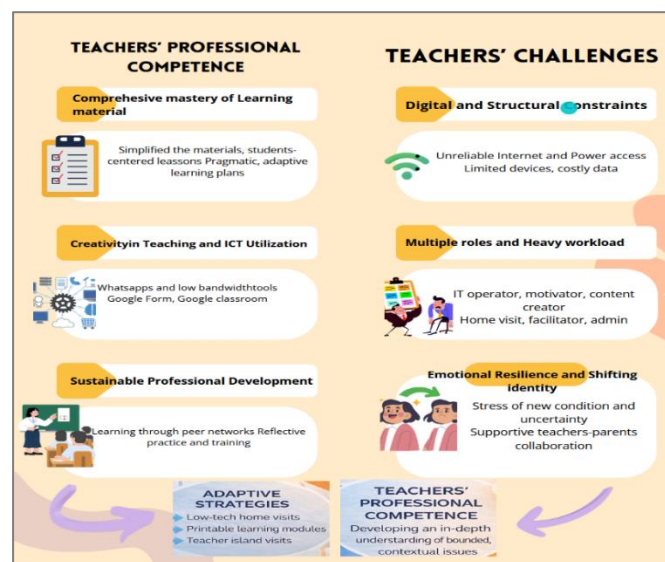


Figure: Teachers' Professional Competence and Challenges

The following figure provides a visual summary of the main findings on teachers' professional competencies and the challenges encountered in the learning process in an island context. The figure highlights three dominant competency patterns identified from the interviews: teachers' adaptive mastery of learning materials; pragmatic creativity in teaching supported by readily accessible ICT tools; and continuous professional development. On the other hand, three interrelated themes of challenge shape teachers' work: digital and structural limitations, dual roles and increased workloads, and emotional resilience amid changes in professional identity. The middle section of the image shows adaptive strategies that link competencies and challenges, describing how teachers maintain learning continuity.

DISCUSSION

Mastering learning materials is an important indicator of a teacher's professional competence. However, in an archipelagic context, teachers' mastery of subject matter need not be explicitly demonstrated in accordance with academic standards. Rather, teacher competence is reflected in the ability to analyze students' needs, identify essential content, and adapt learning objectives to prevailing conditions. Teacher competence thus serves as both a cognitive foundation for instruction and a basis for realistic, meaningful pedagogical decisions. This aligns with research findings indicating that a strong foundation of knowledge helps teachers design effective teaching strategies and facilitate meaningful learning experiences (Reinoso & Delgado-Iglesias, 2020; Santaella & Gascon, 2024).

Findings suggest that in challenging and limited conditions, teachers demonstrate their professionalism through instructional adaptation, focusing on students' needs and learning objectives (Prediger et al., 2022). In addition, teachers also prioritize essential content, simplify explanations, and maintain student engagement even with abstract or normative competencies (Baran Kaya et al., 2024; McNamara & Nolan, 2022). These findings make it clear that the conditions of island regions give a different meaning to the professional competencies that teachers practice. Teachers' competencies cannot be assessed solely based on compliance with formal standards but rather on their ability to ensure that learning remains meaningful, accessible, and understandable to students despite limitations in infrastructure and learning conditions. In such situations, a teacher's flexibility does not compromise quality but rather demonstrates professional expertise that adapts to the circumstances.

Furthermore, teachers in the islands are always devising adaptable learning opportunities to understand better and respond to the context, even though they face significant workloads and emotional stress. When teachers can exercise their competencies under limited conditions, it indicates they are performing professional work that is not only pedagogical but also emotional and relational. In other words, being a professional teacher in island areas means maintaining high-quality learning while navigating pressure, limited resources, and growing responsibilities. These findings show that teacher professional skills should be seen as adaptive skills, meaning the ability to adjust, think about things carefully, and respond in ways that match real-life situations.

Student-centered, asynchronous learning is a practical and realistic response by teachers to constrained connectivity and unequal access. This is not merely a technical change but reflects teachers' professional competence in adapting learning under pressure. In the context of an island, the use of asynchronous learning is not merely a matter of choosing a practical or efficient method, but a decision that considers whether learning can be implemented, is fair to all students, and continues effectively. This aligns with research on distance learning, which differs from planned online learning. The focus lies on the feasibility, equity, and continuity of learning under emergency conditions (Hodges et al., 2020).

Furthermore, teachers not only adapt teaching methods but also actively address students' learning needs within the context of limitations. This aligns with research findings stating that effective teaching strategies include the use of technology and the creation of interactive learning experiences (Rodriguez-Padin, 2025). In this regard, teachers' professional competence is evident in their ability to translate learning objectives into realistic weekly goals and routines that students can consistently follow. These findings also reinforce the

argument that such learning strategies are effective in reducing learning gaps caused by limitations in technology, interaction time, and feedback (Montenegro Alvarado et al., 2023).

In this study, ICT was not used to its full potential because of limited internet access and varying levels of experience with digital tools. WhatsApp was chosen as the main platform for teaching and learning since it is easy for everyone to use. This shows that teachers make thoughtful choices about technology, considering learning needs, student situations, and real-life conditions. Technology is used not just because it is available, but because it meets needs and delivers real benefits. This approach matches the TPACK framework, which emphasizes that effective technology use depends on combining content, teaching methods, and technology in a specific context (Haga, 2025).

On the other hand, teachers on the island decided to use WhatsApp and printed modules so that every student could keep learning, rather than advanced technology that some students could not access. This was a professional decision to reduce exclusion and ensure that all students have the same learning experience. This decision relates to the digital divide, where access to infrastructure and devices is unequal across regions (Mishra & Kartikeya, 2020; Sariyatun et al., 2021).

One important finding from the use of ICT is that technological proficiency does not require advanced tools or applications. Instead, it is shown through the choice and use of simple, suitable technologies that support learning, especially in areas with limited resources. This also means that teachers must constantly balance their teaching goals, technological constraints, and students' needs. They often do this while managing heavy workloads and other practical challenges. As a result, using ICT in this setting is not just a technical task, but also a matter of teaching skill, context, and professionalism.

Regarding professional development, the findings of this study indicate that teacher development during the crisis period was primarily through practice-based and reflective learning rather than through formal mechanisms such as classroom action research or academic publications. This pattern led to a shift in how professional development is understood and implemented in a limited educational environment. In this context, teachers' professional competence is not merely reflected in training outcomes or certificates, but rather in how they learn and refine their teaching methods through daily experience and collaboration with colleagues. Research findings indicate that hands-on teaching experience is crucial because it helps prospective teachers learn practical skills that cannot be acquired through theory, such as adapting teaching to diverse student needs, managing complex classroom situations, and making decisions (van Geel et al., 2023; Eckersley et al., 2018).

On the other hand, teacher professional development is dominated by peer-based learning and self-directed skill development, further strengthening the role of informal professional learning networks. This approach reflects a shift towards collaborative and distributed professional learning, where knowledge is co-constructed through shared problem-solving. These findings are consistent with research indicating that teacher learning is most effective when integrated into daily practice (Abildinova et al., 2024), supported by collaborative work and learning among teachers, and linked to teachers' professional development (Admiraal et al., 2021). However, gaps in formal professional development, such as classroom action research or scientific publications, need attention and encouragement to help teachers further develop their competencies. This reinforces the importance of context-sensitive professional development, recognizing reflection and adaptive learning as valid forms of professional growth, especially in emergencies and remote areas.

Teachers' statements about their multiple roles indicate that workload is a challenge in responding to rapid changes in the education system. Teachers argue that their professional competencies in this context include multitasking, solving technical problems, and helping to ease the psychological burden on parents and students (Choi et al., 2025; Marshall et al., 2024). This indicates that teacher professionalism is multidimensional, encompassing technical, pedagogical, and emotional competencies integrated into daily practice. Contemporary teachers are responsible not only for delivering content but also for facilitating technology use, fostering connections between schools and families, and ensuring continuity of learning under challenging circumstances. Consequently, increased workloads influence teachers' prioritization, time management, and instructional decision-making. In island regions, these challenges are intensified due to

limited infrastructure and restricted access, requiring teachers to adapt more frequently. Furthermore, the perspectives of principals and supervisors indicate that school leadership is shifting toward facilitation and realistic policy interpretation, reflecting a form of distributed leadership during times of crisis. In practical terms, this illustrates that teacher competencies cannot be separated from institutional support, as teacher effectiveness depends on how schools provide support, reduce administrative burdens, coordinate the distribution of materials, and provide guidance.

The emotional pressure teachers experience leads to low motivation to fulfill their duties, which in turn affects their identity. This study views emotional stress as a core part of teaching, especially in underserved areas, rather than just a result of tough conditions. Teachers often have little interaction with students and receive little immediate feedback, and must maintain communication with both students and parents. These challenges create a heavy emotional load that can influence how teachers teach. So, being a competent teacher is not just about teaching skills or using technology, but also about managing emotions and building relationships with students. Even when dealing with uncertainty, frustration, and feeling less connected to students, teachers still need to support learning. These findings align with the literature on how teacher identity influences major changes in teaching style. Poor student interaction and lack of response can undermine teachers' effectiveness and professional identity. In addition, teacher identity is closely related to personal beliefs, experiences, and subjectivity (Lojdova et al., 2021). Similarly, Jones and Kessler (2020) argue that teaching is an emotionally demanding profession closely tied to personal identity, but it is often misunderstood and unfairly burdened. Therefore, teachers need to be supported and valued so that they can fulfill their roles effectively. At the same time, data shows that teacher resilience is formed through peer support and reflection guided by the principal. This aligns with the concept of a community of practice that maintains professional learning through joint problem-solving and mutual support when formal training is limited. This means that emotional resilience is not an additional factor but a key factor that helps maintain competence in areas with geographical limitations.

CONCLUSION

These findings suggest a need to reconceptualize teacher professional competence as adaptive competence. Instead of simply focusing on formal standards, the important point is how well teachers respond to different situations. Therefore, the use of ICT in this context is not merely about employing advanced technology but is grounded in teachers' creativity and focused on equity and ease of access to technology. Similarly, professional development emerges as a flexible, practice-based process rooted in teachers' daily experiences, peer collaboration, and problem-solving within constrained environments. This demonstrates that conditions in island regions shape what is feasible in learning, including how teachers teach and which competencies are truly essential. This study highlights that significant demands and limited resources can shape teachers' competencies. Therefore, efforts to strengthen teachers' professional competencies in such a context must go beyond individual training and instead prioritize systemic support, including reducing administrative workload, improving infrastructure and access, and institutionalizing sustainable professional learning communities.

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