

Principal Leadership Practices for Strengthening Teacher Competence in Primary Education

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Abstract: This study examined principal leadership practices for strengthening teacher competence, the conditions that supported or constrained those practices, and the strategies used to address the constraints. A descriptive qualitative case study was conducted at a public primary school in South Sumatra, Indonesia. Participants were one principal and three classroom teachers selected purposively because of their direct involvement in teacher development activities. Data were generated through semi-structured interviews, non-participant observation, and document analysis, then analyzed through data condensation, data display, thematic comparison, and conclusion verification. Trustworthiness was enhanced through source and technique triangulation. The findings show that teacher development was sustained through an integrated set of seven leadership roles: educator, manager, administrator, supervisor, leader, innovator, and motivator. These roles were enacted through Teacher Working Group participation, internal coaching, scheduled academic supervision, assistance with instructional administration, encouragement of digital learning, collegial problem solving, and recognition of teacher effort. Enabling conditions included the principal's commitment, collegial cooperation, teacher motivation, professional learning opportunities, and basic infrastructure. Constraints involved limited funding and time, unequal digital competence, and administrative workload. The study contributes a context-sensitive model showing that principal leadership strengthens teacher competence when professional learning, supervision, organizational support, and adaptive problem solving operate as a coherent cycle rather than as separate activities.

Keywords: Academic Supervision, Instructional Leadership, Principal Leadership, Teacher Competence, Teacher Professional Development

A. Introduction

Teacher competence is a decisive component of educational quality because teachers translate curriculum, policy, and school goals into daily learning experiences (Parry & Metzger, 2023; K. Smith, 2021). In Indonesia, professional teaching is commonly understood through four interconnected domains: pedagogical, professional, social,

and personal competence. These domains require more than initial certification. Teachers must continually update subject knowledge, design responsive learning, assess student progress, communicate with families and colleagues, model professional conduct, and use emerging technologies responsibly. Rapid curricular change and the expansion of digital resources have made continuing professional learning even more important, particularly in primary schools where teachers often carry broad instructional and administrative responsibilities.

Professional development, however, does not occur only through external courses (Admiraal et al., 2021; Mlambo et al., 2021). It is shaped by workplace conditions, leadership expectations, collegial relationships, access to resources, feedback, and opportunities to experiment. Effective professional development usually involves sustained engagement, relevance to classroom problems, active learning, collaboration, feedback, and coherence with school priorities. Professional learning communities can provide these conditions when teachers regularly analyze practice, share instructional resources, observe one another, and jointly solve problems. Conversely, isolated workshops may have limited influence when teachers lack follow-up support, time for implementation, opportunities to reflect on classroom outcomes, or encouragement to adapt new ideas to the needs of their students (Sáenz et al., 2024).

School principals occupy a strategic position in this professional learning environment. Successful school leadership establishes direction, develops people, improves organizational conditions, and supports instructional improvement. Principals influence teaching through direct practices, such as classroom supervision, coaching, and feedback, and through indirect pathways, such as school culture, collaboration, trust, teacher confidence, and access to learning resources. Thus, principal leadership is not simply an administrative function (Keravnos et al., 2025). It is a mechanism for connecting organizational management with the continuous improvement of teaching, while ensuring that teacher development is aligned with school priorities and the actual challenges encountered in classrooms (Cassata & Allensworth, 2021).

Instructional leadership is especially relevant because it centers the principal's attention on curriculum, classroom practice, assessment, teacher learning, and student outcomes. Principals can support professional development by setting clear instructional expectations, organizing learning opportunities, encouraging teachers to discuss classroom problems, and ensuring that supervision leads to practical improvement. Leadership support matters because teachers are more likely to engage in professional growth when principals allocate time, communicate expectations, provide encouragement, recognize effort, and follow up the application of new knowledge. These practices transform professional development from an occasional activity into an ongoing part of the school's work culture (Abakah, 2023; McChesney & Cross, 2023).

The principal's work also extends beyond formal instructional leadership. In Indonesian school practice, the principal is often expected to function as educator, manager, administrator, supervisor, leader, innovator, and motivator. These functions are analytically distinct but operationally interdependent. As educator, the principal develops teachers; as manager, the principal plans and coordinates programs; as administrator, the principal organizes documentation and resources; as supervisor, the principal observes and provides feedback; as leader, the principal builds direction and trust; as innovator, the principal supports new methods and technologies; and as motivator, the principal sustains commitment. Viewing these roles as a connected leadership system may better explain how professional learning is enabled in schools with limited resources (Bryant & Walker, 2024).

Digital change has intensified the need for integrated leadership. Principals are increasingly expected to guide technology use, create conditions for digital experimentation, and address variation in teachers' confidence and competence. Digital leadership can strengthen technology integration when principals provide direction, infrastructure, modeling, technical assistance, and professional support. In Indonesia, digital competence is becoming inseparable from teachers' professional competence because learning materials, assessment, communication, and administration increasingly rely on digital platforms. Nevertheless, unequal access, limited experience, unstable connectivity, and differences in skill levels can create new forms of professional inequality within a school. Principals must therefore combine expectations for technology use with gradual mentoring and realistic support (Bjørndal & Ronglan, 2021; Caneva et al., 2023).

Primary schools outside major urban centers face particular challenges. Professional development budgets may be limited, training schedules can conflict with teaching duties, internet connectivity and equipment may be uneven, and teachers frequently manage extensive documentation. These constraints mean that leadership effectiveness cannot be assessed solely by the number of seminars attended. It must also be examined through the principal's ability to adapt professional learning to local needs, use internal expertise, protect time for collaboration, simplify work processes, and maintain teacher motivation. Context-sensitive leadership is therefore essential, especially where external support is intermittent (Lu & Wei, 2025; Milenova et al., 2025).

Previous studies have established associations among instructional leadership, teacher collaboration, professional development, self-efficacy, and instructional quality. However, much of this literature is quantitative and explains relationships among variables rather than the day-to-day practices through which a principal combines multiple roles in one school. Studies also tend to treat supervision, professional development, digital leadership, motivation, and administration as separate constructs. This separation leaves insufficient understanding of how these practices interact in a small primary school, how teachers experience them, and how

a principal responds when resources, time, technology, and workload constrain professional growth (Farisia et al., 2025).

This study addresses that gap through an in-depth qualitative examination of a public primary school in South Sumatra. Its novelty lies in conceptualizing the principal's seven roles as an integrated cycle of teacher development rather than a checklist of duties. The study also links enabling conditions and barriers with the practical responses used by the principal. Three research questions guided the inquiry: (1) How are principal leadership roles enacted to strengthen teacher competence? (2) What factors support and inhibit these leadership practices? and (3) What strategies are used to overcome barriers to teacher competence development? The findings are expected to offer a practical model for principals and education authorities seeking sustainable teacher development in resource-constrained primary school contexts.

B. Methods

This research used a descriptive qualitative case-study design. A qualitative approach was selected because the study sought to understand leadership practices as experienced and interpreted by school actors in their natural setting. The case was a public primary school located in Sungai Rotan District, Muara Enim Regency, South Sumatra, Indonesia. The school served a geographically dispersed community and employed 12 teachers: two civil servants, seven government contract teachers, and three honorary teachers. Nine teachers held professional educator certification, and all had at least a bachelor's degree. These characteristics made the school suitable for examining teacher development across different employment backgrounds and levels of professional experience (Imants & Van der Wal, 2020; Karlberg & Bezzina, 2022; Toropova et al., 2021). Participants were selected purposively on the basis of direct involvement in leadership and teacher development activities. They comprised the principal (P) and three classroom teachers responsible for Grades IV, V, and VI (T1, T2, and T3). The principal was the key informant because she planned, coordinated, supervised, and evaluated teacher development. The teachers were selected to provide complementary accounts of coaching, supervision, professional learning, digital innovation, motivation, and workload. Although the participant group was small, the design prioritized information-rich perspectives and triangulation across roles and data sources rather than statistical representation (Alsadaan & Ramadan, 2025).

Data were collected from February to April 2026 through semi-structured interviews, non-participant observation, and document analysis. Interview questions explored the principal's leadership roles, teacher development programs, academic supervision, professional learning opportunities, use of technology, motivational practices, supporting conditions, barriers, and corrective strategies. Interviews were conducted individually, documented in field notes and transcripts, and compared across participants. Observations focused on staff interaction, meetings, instructional

administration, available learning facilities, and evidence of technology use. Documents included the school work program, supervision schedule, teacher learning plans, professional development records, meeting notes, and training documentation. Data analysis followed an interactive process of condensation, display, interpretation, and verification. First, interview, observation, and document data were read repeatedly to identify meaningful units. Second, codes were assigned to leadership practices, competence dimensions, supporting conditions, barriers, and responses. Third, related codes were grouped into provisional categories and compared across participants and data sources. Fourth, categories were organized into themes corresponding to the research questions. Thematic interpretation remained grounded in the original accounts while allowing patterns to emerge across the data. The final thematic structure comprised integrated leadership roles, enabling and constraining conditions, and adaptive strategies for sustaining teacher development (Constantinides, 2023; Ghamrawi et al., 2024).

Trustworthiness was addressed through credibility, transferability, dependability, and confirmability. Source triangulation compared the principal's explanations with the accounts of three teachers. Technique triangulation compared interview claims with observations and documents. Analytic decisions were recorded in a coding log, and emerging themes were checked against disconfirming or less consistent evidence. Thick description of the school context, participants, and leadership practices was provided to support transferability. The researcher also retained an audit trail of interview guides, notes, coding decisions, and thematic summaries. Participant identities were represented by codes, and the reporting avoided unnecessary personal information. Participation was voluntary, and the data were used exclusively for academic purposes (Han et al., 2022; Mahapatra, 2024).

Table 1. Profile of Research Participants

Code	Position	Role	Primary information
P	Principal	Key informant	Planning, supervision, professional development, resources, and barrier management
T1	Grade IV teacher	Main informant	Instructional guidance, supervision, and teaching administration
T2	Grade V teacher	Main informant	Professional learning, collaboration, and digital learning
T3	Grade VI teacher	Main informant	Motivation, professional participation, and administrative workload

C. Results and Discussion

1. Result

The analysis produced three major findings. First, the principal strengthened teacher competence through seven mutually reinforcing leadership roles. Second, the effectiveness of these roles depended on a combination of leadership commitment,

collegial cooperation, teacher motivation, professional learning opportunities, and basic infrastructure, while being constrained by funding, time, digital inequality, and administrative workload. Third, the principal used adaptive strategies that converted external limitations into school-based learning opportunities. The findings are presented separately from the discussion so that the empirical patterns remain visible before being interpreted in relation to previous research (Edelsbrunner et al., 2025; Jensen, 2022).

Integrated Leadership Roles in Strengthening Teacher Competence

As an educator, the principal treated teacher learning as a continuous responsibility rather than an occasional event. The school facilitated Teacher Working Group activities, workshops, seminars, curriculum training, routine staff guidance, and informal mentoring. The principal emphasized that teachers needed to keep developing their instructional capacity so that classroom quality would improve. T1 reported receiving guidance on teaching methods and instructional documents, while T2 highlighted opportunities to learn more innovative approaches through seminars and the Teacher Working Group. T3 described regular encouragement to continue learning and follow educational developments. Observation and program documents confirmed that professional development was included in the school work agenda (Conradty & Bogner, 2020).

The managerial role gave structure to these learning activities. The principal planned teacher development within the school program, organized schedules, assigned responsibilities, monitored implementation, and used staff meetings to evaluate instructional problems. Teachers were invited to discuss classroom constraints and identify joint solutions. T1 described routine monitoring and instructional feedback; T2 noted that evaluation meetings were used to examine learning difficulties; and T3 observed that active participation in development activities was acknowledged. This pattern shows that teacher learning was connected to planning and evaluation rather than being implemented as an isolated program (Westbroek et al., 2020).

As administrator, the principal organized the documentation and resources required for professional work. This included school programs, supervision records, learning plans, annual and semester programs, teaching modules, assessment documents, and records of teacher training. Teachers received assistance in completing instructional administration and aligning documents with current requirements. The administrative function also involved coordinating facilities such as laptops, projectors, internet access, learning media, and meeting space. Teachers viewed this support as useful, although they also identified excessive administrative requirements as a later constraint (Creagh et al., 2025; Gibbs, 2023). Administration therefore had a dual character: it enabled professional standards when purposeful, but consumed professional learning time when documentation became too extensive.

Academic supervision was the clearest direct link between leadership and classroom competence. The principal conducted planned classroom observations, reviewed learning documents, and provided feedback after supervision. The school records indicated that academic supervision was scheduled at least twice each semester. The principal explained that supervision was intended to identify both strengths and weaknesses so that follow-up guidance could be appropriate. T1 stated that classroom supervision produced suggestions for improving instruction; T2 emphasized the evaluation and solutions provided after observation; and T3 reported that supervision helped refine teaching methods. The teachers' descriptions suggest that supervision was experienced primarily as developmental rather than punitive (Jones et al., 2023).

The leadership role was visible through modeling, communication, and relationship building. The principal emphasized discipline, responsibility, cooperation, and work commitment and sought to demonstrate these values personally. Teachers described a comfortable and harmonious work atmosphere in which the principal provided direction without preventing discussion. This relational environment mattered because teachers were more willing to share problems and seek assistance. Leadership was therefore expressed not only in decision making but also in the creation of psychological safety for professional dialogue (Hunt et al., 2021).

As innovator, the principal encouraged the use of varied methods, digital media, and simple educational applications. Observations showed emerging use of laptops, projectors, instructional videos, and digital learning materials. Teachers were encouraged to follow technology training and help colleagues who were less confident. The principal's innovation role did not involve purchasing sophisticated systems; instead, it focused on making better use of available tools and normalizing experimentation. This was particularly important because teachers differed in their digital experience (Guillén-Gámez et al., 2022).

The motivator role sustained participation across the other six roles. The principal used verbal encouragement, moral support, recognition, and opportunities for development. Teachers who participated actively in professional learning or demonstrated improvement received appreciation in staff forums. Teachers interpreted this recognition as a source of confidence rather than competition. Motivation also appeared in the principal's willingness to listen to difficulties and provide practical assistance. The evidence indicates that motivation was most effective when coupled with access, feedback, and collegial support rather than delivered as general encouragement alone (B. Smith & Wyness, 2025).

Across the seven roles, four competence domains were addressed. Pedagogical competence was strengthened through guidance on planning, teaching methods, assessment, and classroom feedback. Professional competence was developed through training, subject-related discussion, curriculum learning, and technology use. Social competence was reinforced through collaborative meetings, Teacher Working

Groups, peer assistance, and communication. Personal competence was supported through the principal's modeling of discipline, responsibility, integrity, and continuous learning. The roles were therefore not mapped one-to-one onto competence domains; most practices contributed to several domains simultaneously (Widdowson et al., 2020).

Table 2. Leadership roles, practices, and competence domains

Leadership role	Observed practices	Main competence domains
Educator	Coaching, workshops, seminars, Teacher Working Groups, mentoring	Pedagogical and professional
Manager	Program planning, scheduling, task coordination, monitoring, evaluation	Pedagogical, professional, and social
Administrator	Learning documents, supervision records, facilities, training records	Pedagogical and professional
Supervisor	Class observation, document review, feedback, follow-up	Pedagogical and professional
Leader	Modeling discipline, communication, shared problem solving, trust	Social and personal
Innovator	Digital media, varied methods, peer technology support	Pedagogical and professional
Motivator	Recognition, moral support, encouragement, development opportunities	Personal, social, and professional

Supporting and Inhibiting Factors

Five enabling conditions supported the leadership practices. The first was the principal's commitment to teacher development, demonstrated by recurring guidance, supervision, and permission to participate in external activities. The second was collegial cooperation. Teachers exchanged learning resources, discussed classroom problems, and assisted one another, especially with technology. The third was teacher motivation: participants generally expressed willingness to learn and improve. The fourth was access to professional development through Teacher Working Groups, workshops, seminars, and internal training. The fifth was basic infrastructure, including learning rooms, devices, internet access, and instructional media. None of these factors was sufficient alone; their combined presence created a workable professional learning environment (Colognesi et al., 2020).

Four constraints limited the scale and continuity of development. Limited funding meant that not every teacher could attend external training or seminars. Time was constrained by teaching schedules and additional school duties, and external training sometimes conflicted with classroom responsibilities. Digital competence was uneven, partly because teachers differed in prior exposure and confidence. Finally, administrative workload reduced the time and energy available for reading, collaborative inquiry, lesson improvement, and training participation. These constraints did not stop development entirely, but they affected who could

participate, how often activities occurred, and how consistently new knowledge was applied (Slattery et al., 2020).

Strategies for Overcoming Barriers

The principal responded to financial limitations by prioritizing low-cost, school-based development. Teacher Working Group participation was optimized because it enabled resource sharing across schools, while internal training allowed teachers who had attended external programs to disseminate knowledge to colleagues. The principal also sought cooperation with education authorities and other stakeholders when external expertise or resources were needed. This approach multiplied the value of limited training funds and reduced dependence on individually funded courses (A. C. Smith et al., 2020).

Time constraints were addressed through flexible scheduling and the integration of development into existing routines. Coaching was attached to staff meetings, peer discussion occurred around instructional problems, and supervision follow-up was conducted soon after classroom observation. Rather than waiting for large formal programs, the principal used shorter and more frequent learning opportunities. Digital inequality was addressed through mentoring, practice with available devices, and peer assistance. Teachers with stronger digital skills helped colleagues use presentations, videos, and simple applications (Hrastinski, 2021).

To reduce the burden of instructional administration, the principal provided templates, checked documents periodically, clarified requirements, and encouraged more efficient completion (Struthers et al., 2025). The intention was not to remove accountability but to prevent documentation from becoming disconnected from classroom improvement. Taken together, these strategies reveal an adaptive pattern: identify the barrier, use available internal capacity, connect the response to existing school routines, and maintain follow-up through supervision and evaluation. This pattern formed the operational cycle through which the principal sustained teacher development despite resource constraints.

Table 3. Barriers and adaptive leadership responses

Barrier	Effect on teacher development	Leadership response
Limited funding	Restricted access to external training	Teacher Working Groups, internal dissemination, stakeholder cooperation
Limited time	Training conflicts with teaching and additional duties	Flexible scheduling and short learning sessions embedded in routines
Uneven digital competence	Different levels of confidence and technology use	Peer mentoring, guided practice, and use of available devices
Administrative workload	Reduced time for reflection and professional learning	Templates, clarification, periodic checking, and reduced duplication

2. Discussion

The central finding is that principal leadership strengthened teacher competence through an integrated role system. The seven roles did not function as separate job descriptions. They formed a cycle in which the educator role established learning needs, the managerial role organized programs, the administrator role supplied documentation and resources, the supervisor role generated feedback, the leader role created direction and trust, the innovator role encouraged adaptation, and the motivator role sustained engagement. This integrated pattern extends leadership research by showing how broad role expectations can be translated into a coherent professional learning process in a small primary school (Mincu, 2022).

The finding supports the view that successful leaders set direction, develop people, improve organizational conditions, and strengthen instructional programs. It also confirms that instructional leadership becomes meaningful when principals create supportive conditions for teacher learning and participation. However, this case demonstrates that instructional leadership alone does not fully describe the work required. Classroom supervision became effective because it was supported by planning, records, facilities, relationships, communication, and motivation. In a resource-constrained context, the administrative and managerial dimensions are not peripheral tasks. They create the practical conditions under which instructional leadership can operate, while the educator and motivator roles sustain teachers' willingness to participate and apply feedback (Berkovich & Hassan, 2024).

The educator role reflected important features of effective professional development. Teacher Working Groups, internal coaching, workshops, and mentoring connected learning with immediate classroom needs. The quality of professional development depends on clear goals, active participation, feedback, opportunities to rehearse new practices, social support, and transfer into everyday teaching. In the present case, professional learning was strongest when it combined new information with discussion, classroom application, peer assistance, and follow-up supervision. This suggests that counting workshop attendance would underestimate the leadership contribution and overestimate the effectiveness of one-off events. What mattered was not merely whether teachers attended an activity, but whether the activity helped them solve instructional problems and improve subsequent practice.

The managerial and administrative roles ensured coherence. Program planning, supervision schedules, meeting routines, and instructional records connected professional learning with school priorities. Organizational change is more likely to occur when leadership practices align structures, collaboration, responsibilities, and ongoing learning. The case adds a teacher-focused perspective: planning and administration are productive when they protect learning time, clarify expectations, document progress, and facilitate feedback. They become counterproductive when paperwork expands without a clear instructional purpose (Hirsh, 2020). Therefore, the

principal's administrative role should not be measured by the volume of documents produced, but by the extent to which administrative arrangements make teacher development more organized, accessible, and responsive to classroom needs.

Academic supervision functioned as developmental coaching. Teachers described observation, feedback, and problem solving rather than inspection alone. This is important because supervision can generate compliance or anxiety if it focuses mainly on document completion, errors, or judgment. In contrast, the cycle observed here — preparation, classroom observation, feedback, agreement on improvement, and follow-up helped teachers identify strengths and areas for development. It also enabled the principal to connect general school programs with specific instructional needs. Technology-based records and communication tools could further strengthen this process, but their value depends on purposeful use (Dai et al., 2023). Digital forms should simplify evidence collection and feedback rather than add a new layer of administrative burden.

The relational leadership findings clarify why teachers accepted supervision and guidance. The principal modeled discipline, communicated expectations, listened to problems, and created a collegial atmosphere. Supportive school culture and teacher collaboration can strengthen the influence of leadership because they shape how teachers interpret direction, feedback, and change. The principal's influence in this study was not only the result of formal authority; it was carried through trust, open discussion, mutual respect, and peer assistance. This means that the same supervision schedule may produce different outcomes in schools where teachers perceive observation as threatening, communication is one-way, or professional dialogue is weak. Relational quality therefore becomes an essential condition for developmental supervision (Forslund et al., 2022).

Collaboration through Teacher Working Groups and internal sharing positioned professional development as a collective process. A school becomes a stronger professional learning community when teachers share responsibility, discuss practice honestly, exchange instructional resources, and learn from classroom experience. The school in this study displayed emerging rather than fully institutionalized professional learning community characteristics. Collaboration occurred through meetings, Teacher Working Groups, peer technology support, and joint problem solving, but it remained strongly facilitated by the principal. A longer-term goal would be to distribute leadership further by enabling teachers to lead lesson study, mentoring, digital learning, assessment improvement, and subject-based discussions. Such distribution would reduce dependence on one leader and strengthen continuity when leadership or staffing changes occur (Greany, 2020).

This qualification is important because not every principal action directly changes classroom practice. Leadership creates direction, opportunities, and conditions, but teacher engagement, peer interaction, confidence, and sustained application

determine whether those opportunities become professional learning. The positive accounts in this study should therefore not be interpreted as proof that leadership automatically produces competence. A training invitation may have little effect when the content is irrelevant, a supervision visit may produce compliance without reflection, and access to technology may remain unused without mentoring. The small sample and qualitative design also preclude claims about the magnitude of effects. The findings instead explain processes through which leadership was perceived to support development in this particular school context (Morris et al., 2020).

The innovation role was most visible in digital learning. The principal encouraged teachers to use laptops, projectors, videos, and simple applications and to help colleagues with weaker skills. Effective digital leadership requires a clear purpose, basic infrastructure, modeling, technical support, opportunities for practice, and realistic expectations. The case demonstrates that digital leadership in a rural or semi-rural primary school may begin with incremental use of existing technology rather than large-scale transformation. Small changes, such as preparing visual materials, using digital assessment tools, sharing files efficiently, or presenting learning videos, can still improve teaching when they are connected to instructional objectives. Innovation was therefore understood as practical adaptation, not merely the adoption of sophisticated devices (Lyng et al., 2021).

At the same time, unequal digital competence remained a barrier. Encouragement alone could not eliminate differences in experience and confidence. Teachers who were already comfortable with technology progressed faster, while those with limited experience needed repeated demonstrations and individual assistance. This nuance shows that digital development should be differentiated. A single training session is unlikely to meet the needs of all teachers, particularly when participants begin at different skill levels. The principal's use of peer mentoring was therefore appropriate because it provided immediate assistance in familiar language and reduced embarrassment among less confident teachers. However, peer support still needs clear targets and scheduled follow-up to prevent it from becoming informal and inconsistent (Fuller et al., 2022).

The motivator role was effective because it was embedded in substantive support. Recognition, encouragement, and moral support reinforced participation, but teachers also received access to training, feedback, and assistance. This distinction matters. Motivation without opportunity can produce frustration, while opportunity without recognition may result in low engagement. The principal's motivational practices worked because they acknowledged effort, emphasized shared responsibility, and connected improvement with the quality of student learning. In addition, a respectful approach helped teachers view development as professional growth rather than correction of personal weakness. Motivation was therefore not limited to praise; it involved creating confidence, reinforcing persistence, and ensuring that teachers had

realistic pathways for acting on the expectations communicated by the principal (Johnston et al., 2021).

The enabling conditions illustrate a resource-combination effect. Principal commitment, collegial relationships, teacher motivation, programs, and infrastructure reinforced one another. For example, internet access had limited value without teacher motivation and digital support; motivation was difficult to sustain without time and recognition; and training was less likely to influence practice without supervision. Leadership competence was enacted collectively through communication, interpersonal sensitivity, administrative organization, instructional understanding, and digital support. The present study shows that no single factor was sufficient by itself. Improvement emerged when resources, relationships, expectations, and learning opportunities were combined. This explains why schools with similar facilities may experience different levels of professional growth depending on how their leaders organize and activate available resources (Kim & Lee, 2020).

The barriers reveal why context-sensitive leadership is necessary. Budget constraints limited participation in external programs, time constraints disrupted continuity, administrative work competed with learning, and uneven technology skills complicated implementation. These findings caution against professional development policies that rely mainly on centralized workshops. Effective development requires school-level adaptation, follow-up, practice, and peer support. Collaborative professional learning can improve teaching when it is sustained and connected to classroom evidence, but such programs depend on stable structures. The current case suggests that principals can build these structures through internal training, Teacher Working Groups, supervision, mentoring, resource sharing, and flexible scheduling when formal resources are limited. Nevertheless, school-level creativity should complement rather than replace adequate institutional funding and policy support (Laufer et al., 2025).

The principal's strategies can be summarized as a four-step adaptive leadership cycle: diagnose needs and barriers, mobilize internal and external resources, embed learning in existing routines, and verify implementation through supervision and evaluation. This cycle is the study's main conceptual contribution. It explains how the seven leadership roles become operational. For example, a digital competence gap is diagnosed through observation and discussion; internal expertise and training opportunities are mobilized; practice is embedded in meetings or peer mentoring; and classroom use is reviewed during supervision (Bertram et al., 2023). The cycle can be applied to instructional planning, assessment, classroom management, and other competence areas.

Several practical implications follow. First, principals should construct an annual teacher development map based on supervision evidence, teacher self-assessment, curriculum priorities, and student learning needs. Second, each external training

activity should include a school-based dissemination and implementation plan. Third, supervision should document not only compliance but also one or two actionable instructional improvements and a follow-up date. Fourth, schools should assign teacher leaders for specific areas such as digital learning, assessment, literacy, or inclusive practice. Fifth, administrative requirements should be reviewed to eliminate duplication and ensure that documents directly support planning, assessment, or accountability.

For education authorities, the findings suggest that support should move beyond sending teachers to seminars. District-level policy can strengthen Teacher Working Groups, provide coaching for principals, fund school-based professional learning, create shared digital resources, and simplify reporting requirements. Principal development should also cover the competencies needed to organize adult learning, diagnose teacher needs, facilitate reflection, give constructive feedback, and evaluate whether professional development changes classroom practice. Mentoring and context-relevant learning are especially valuable because principals face different staffing, infrastructure, and community conditions. Strengthening principals' capacity to analyze needs and evaluate professional learning may therefore produce wider benefits than isolated administrative training. Policy support should enable schools to sustain improvement rather than depend on short-term activities (Mårtensson et al., 2023).

A further contribution concerns the meaning of teacher competence development. The evidence suggests that competence was not developed through a linear sequence in which training automatically produced improved practice. Instead, development involved repeated movement among exposure to ideas, collaborative interpretation, classroom experimentation, feedback, and revision. This process explains why the same leadership practice could support several competence domains. A supervision conversation about digital assessment, for example, could strengthen pedagogical judgment, professional knowledge, collegial communication, and confidence. Evaluating principal leadership should therefore include the quality of these learning connections and the extent to which teachers can demonstrate changes in planning, instruction, assessment, and professional interaction, not only the availability of programs. Future school evaluations could use portfolios, observation records, teacher reflections, and student work to capture these multidimensional changes (Bedel et al., 2024). The study has limitations. It examined one school and four participants, so the findings are analytically rather than statistically generalizable. The evidence focused on reported and observed leadership practices, not measured changes in teacher competence or student outcomes. The study also captured a bounded period and could not determine whether innovations were sustained over multiple academic years (Broersma & Singer, 2021). Future research should use multi-site comparative designs, include additional teachers and education supervisors, examine artifacts of classroom practice, and connect leadership processes with longitudinal indicators of teacher learning and student achievement. Despite these

limitations, the case provides a detailed account of how principal leadership operates under everyday constraints. Its contribution is not the claim that seven roles are universally sufficient, but the demonstration that professional development becomes more sustainable when these roles reinforce one another. The most influential practice was not a single program. It was the repeated connection among learning opportunities, organizational support, supervision, collegial interaction, innovation, and motivation. This integration offers a practical explanation for how principals can transform limited resources into a functioning professional learning environment (Sølvik & Roland, 2025).

D. Conclusions

This study concludes that principal leadership strengthened teacher competence when seven roles: educator, manager, administrator, supervisor, leader, innovator, and motivator were enacted as an integrated professional learning cycle. The educator role opened access to coaching, Teacher Working Groups, workshops, and mentoring; managerial and administrative roles organized programs, schedules, documents, and facilities; supervision connected learning with classroom feedback; leadership created trust and shared responsibility; innovation encouraged practical use of digital media; and motivation sustained teacher participation. These practices supported pedagogical, professional, social, and personal competence simultaneously rather than in isolation. Their effectiveness depended on the principal's commitment, collegial cooperation, teacher motivation, professional learning opportunities, and basic infrastructure. Limited funding and time, uneven digital competence, and heavy administrative workload reduced participation and continuity. The principal responded by prioritizing low-cost school-based development, disseminating external training internally, arranging flexible learning opportunities, using peer mentoring, coordinating stakeholder support, and simplifying instructional administration. The main practical implication is that primary schools should not treat training, supervision, administration, and motivation as separate programs. They should begin with evidence of teacher needs, mobilize internal expertise, embed professional learning within routine school activities, and verify classroom application through constructive follow-up. Education authorities can reinforce this cycle by funding school-based learning, strengthening Teacher Working Groups, developing principal coaching skills, providing differentiated digital support, and reducing duplicative reporting. Because the study involved one school and four participants, the findings offer contextual understanding rather than statistical generalization. Future studies should compare schools with different resources and leadership arrangements, involve broader participant groups, and examine changes in classroom practice, teacher competence, and student outcomes over time. Overall, sustainable teacher development emerged not from a single intervention but from coherent leadership that connected learning opportunities, organizational support, collegial relationships, and adaptive problem solving, and focused support for teachers working in similarly constrained school contexts.

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