



School Principals' Strategic Leadership in Implementing Teacherpreneurship in the Digital Era: A Case Study in Primary Schools in Aceh Tamiang District, Indonesia

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ABSTRACT

This study investigates the strategic leadership of school principals in executing teacherpreneurship within the digital age in primary schools in Aceh Tamiang District, Indonesia. Teacherpreneurship, which merges teaching expertise with entrepreneurial skills, is vital for enhancing educational innovation, advancing digital literacy, and cultivating teacher creativity. The implementation of teacherpreneurship at the primary level is constrained by poor digital competence, insufficient infrastructure, and lack institutional support, notwithstanding its significance. This research utilized a qualitative case study methodology across two primary schools, incorporating interviews, observations, and document analysis to investigate principals' practices in the creation, implementation, and evaluation of teacherpreneurship programs. The findings reveal that principals' strategies comprise three primary components: (1) strategic formulation, which includes the design of innovation-driven programs and the assessment of teacher capacity needs; (2) strategy implementation, encompassing collaborative leadership, professional development initiatives, digital innovation facilitation, and stakeholder engagement; and (3) strategy evaluation, centred on performance monitoring, barrier identification, and the refinement of innovation programs. The research suggests that teacherpreneurship can substantially improve educational quality when bolstered by visionary leadership, sufficient capacity-building, and digital learning infrastructure. Recommendations encompass enhancing systematic digital training, cultivating innovative ecosystems, and incorporating teacherpreneurship into school development strategies.

1. Introduction

The rapid progression of digital technology has significantly transformed the worldwide educational framework, altering the roles, obligations, and expectations of teachers (Mushadi et al., 2025). In the 21st century, teachers are perceived not merely as conveyors of knowledge, but as dynamic facilitators, architects of learning experiences, and catalysts for innovation. The incorporation of digital tools, online learning platforms, artificial intelligence, and immersive technologies like virtual and augmented reality has broadened the scope of conventional

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education(Arief et al., 2025). Consequently, educators must exhibit robust pedagogical expertise and cultivate digital fluency, innovative problem-solving abilities, and adaptable thinking to address the varied requirements of students in an evolving environment(SHOWUNMI et al., 2024).

This transition has led to the emergence of teacherpreneurship, a hybrid role that integrates the educator's mission with an entrepreneurial attitude(Kadarisman et al., 2025). A teacherpreneur is an educator who transcends traditional classroom boundaries to develop, innovate, and market educational concepts, products, and services that yield both instructional and financial benefits(Sayehvand et al., 2025). This may encompass the creation of digital learning resources, educational applications, online courses, consulting services, or novel pedagogical approaches that can be disseminated worldwide. Teacherpreneurship encapsulates creativity, self-efficacy, and leadership, enabling educators to serve as catalysts for change within educational systems(Sayehvand et al., 2025).

This paradigm motivates educators to adopt an entrepreneurial mindset—recognizing deficiencies in the educational ecosystem, devising solutions for tangible difficulties, and executing sustainable innovations that improve learning outcomes(Haniva et al., 2025). By doing so, teacherpreneurs enhance their personal and professional development while also benefiting the wider educational community through the promotion of cooperation, creativity, and lifelong learning. Institutions and governments, acknowledging this transition, are increasingly prioritizing professional development programs that enhance entrepreneurial competences among educators, including digital literacy, project management, networking, and marketing skills(Ajayi, 2021).

The execution of teacherpreneurship in Indonesia, especially at the primary school level, is inconsistent(Arruti & Paños-Castro, 2020). Numerous educators continue to depend on traditional pedagogical approaches, have insufficient technology proficiency, and possess a restricted understanding of the economic prospects associated with educational innovation(Feriady et al., 2020). Initial observations in Aceh Tamiang District revealed inadequate teacher innovation, limited utilization of digital learning resources, and feeble self-development efforts among teachers(Feriady et al., 2020). Despite a school initially thriving due to an innovative teacherpreneur, its development deteriorated upon the teacher's reassignment(Keyhani & Kim, 2021).

Addressing the problems of implementing teacherpreneurship and the critical role of leadership necessitates comprehension of how school management directly influences teachers' ability to innovate(Lasekan et al., 2020). The discrepancies noted in the implementation of teacherpreneurship throughout Indonesia—especially in areas like Aceh Tamiang—stem not only from restricted technological access or teachers' insufficient entrepreneurial awareness but also from the differing levels of leadership efficacy within schools(Listiningrum et al., 2020). When administrators neglect to offer strategic direction, resources, and motivation, teacherpreneurial projects often stall, resulting in diminished innovation and professional development among teachers(Mahendra et al., 2019). In contrast, when educational leaders implement progressive and supportive leadership strategies, they may convert even resource-constrained settings into centers of innovation and collaboration(Maldonado Briegas et al., 2021). Consequently, the principal's job serves as the essential connection between policy objectives for educational innovation and the practical execution of teacherpreneurial practices inside the school environment(Pech et al., 2021).

The school principal's job plays an important role in creating and fostering an environment that promotes innovation and professional development within educational institutions. The principle, as the pivotal leader in the school, establishes the organizational culture, vision, and receptiveness to change. Leadership theory, as emphasized by (Leithwood & Slegers, 2006), strategic, transformational, and distributed leadership are essential elements in cultivating an innovative educational environment. Transformational leaders motivate and enable educators by conveying a

distinct vision, offering intellectual stimulation, and acknowledging individual efforts. Distributed leadership decentralizes decision-making, fostering cooperation, shared responsibility, and teacher autonomy—crucial elements for teacher-driven innovation.

The principal's capacity to integrate different leadership styles significantly influences teachers' motivation, creativity, and openness to innovative pedagogical and technical methods. When principals foster trust, offer professional development opportunities, and recognize innovation, teachers are more inclined to adopt entrepreneurial thinking and participate in teacherpreneurial endeavors, including the creation of educational products, the integration of technology into instruction, and collaboration across networks to disseminate innovative practices (Tonich, 2021).

However, executing teacherpreneurship projects offers significant obstacles in locations with inadequate digital infrastructure, such as Aceh Tamiang. In these situations, strong leadership becomes even more important. Principals must serve as change agents, strategically using available resources, developing connections with outside groups, and advocating for investments in technology and the development of skills (Banwo et al., 2022). Moreover, they should encourage a growth mentality among educators, promoting innovation even when resources are limited. Overcoming infrastructure challenges can be aided by leadership tactics such as mentoring, collaborative community projects, and the gradual implementation of new technologies.

The principal's leadership is not solely administrative; it is transformative, facilitating schools to evolve into hubs of innovation, cooperation, and ongoing enhancement. In areas such as Aceh Tamiang, where digital accessibility is limited, effective leadership is crucial in reconciling aspirations with execution, thereby fostering teacherpreneurship in resource-limited settings (Corrigan & Merry, 2022).

This study aims to analyse the strategies employed by school principals to execute teacherpreneurship in primary schools within a digital framework, concentrating on the processes of strategic formulation, implementation, and evaluation, to comprehend how principals formulate and implement leadership strategies that foster teacher creativity, digital proficiency, and entrepreneurial mindset. The study also analyses the facilitating and hindering elements that affect the effectiveness of teacherpreneurship efforts, including leadership style, institutional policy, digital infrastructure, and teacher motivation.

2. Methodology

This research employed a qualitative case study methodology to examine School Principal Strategic Leadership in Implementing Teacherpreneurship in the Digital Era in Primary Schools in Aceh Tamiang District. The qualitative approach was used to facilitate a comprehensive, contextually shaped understanding of the platform's application throughout the teacher performance management process, involving planning, organizing, executing, and regulating functions.

2.1 Research Setting and Participants

The research was conducted in two primary schools in Aceh Tamiang Regency, SD Negeri Cinta Raja and SD Negeri Muka Sungai, chosen for several critical attributes to examine leadership styles, primary methodologies, and the development of teacherpreneurship in the contemporary digital landscape. The participants included the school principal and teachers engaged in innovative activities. Purposeful sampling guaranteed that significant responders with pertinent experience would provide complete and thorough insights (Creswell & Inoue, 2024).

2.2 Data Collection Techniques

The data for this study were gathered using many complementary methods to ensure thoroughness and validity. Semi-structured interviews, lasting around 60 to 90 minutes, were performed with school principals and teachers to investigate their experiences, perceptions, and methods concerning the implementation of teacherpreneurship. These interviews facilitated investigative flexibility while preserving a structured thematic focus. Secondly, non-participant observations were conducted in diverse educational environments—such as classrooms, staff meetings, and instances of digital device usage—to obtain direct insight into actual practices, behavioral patterns, and the school's culture of innovation without disrupting ongoing activities. Third, an examination of documents was performed by examining school programs, lesson plans, teacher-generated digital learning resources, and other pertinent information. The triangulation of interviews, observations, and document analysis yielded a thorough comprehension of the planning, execution, and support of teacherpreneurship techniques inside the school environment.

2.3 Data Analysis Procedures

The data analysis employed an interactive model comprising three primary steps: data reduction, data presentation, and conclusion verification. These three processes are interconnected and occur concurrently throughout the research process.

3. Results

The findings of the study demonstrate significant differences in how educational institutions adopt teacherpreneurship in the digital phase. Specifically, the findings demonstrate that the principal's leadership approach is instrumental in influencing the effectiveness of teacherpreneurship initiatives. Schools led by principals who champion innovation and digital transformation exhibit greater levels of preparedness, adaptability, and faculty engagement in entrepreneurial endeavours. Conversely, institutions that adhere to traditional or conservative pedagogical methods often fall behind, demonstrating a limited capacity to incorporate digital tools and innovative instructional strategies. This disparity underscores the crucial role of a principal's vision and perspective in cultivating a school culture that promotes teacher-led innovation and enduring professional development.

3.1 Strategic Planning for the Implementation of Teacherpreneurship.

The results obtained from interviews, observations, and document analysis indicate that the strategic planning phase constitutes the essential basis for the execution of teacherpreneurship in elementary schools. According to the NVivo coding data, three primary nodes appeared during this phase:

- Strategic Vision in accordance with Institutional Mission and Vision.
- Empowerment of Teachers in Innovative Design
- Constraints in Human Resources and Preparedness for Digital Transformation

The principal showed a significant commitment to including innovation-focused ideals in the school's core vision. This approach prioritizes teachers as sources of ideas, not only as people who follow instructions. The school's vision and mission explicitly incorporate the integration of innovation and the utilization of technology. In fact, this vision is put into action through planned educational programs that include professional development, workshops, and activities focused on digital innovation. Meeting minutes and observations in the field show that teachers are actively involved in creating work plans and building new learning models. The "Innovation-Based Strategic

Vision" node had twelve references pertaining to the school's vision, training programs, and collaborative teaching methods.

Nevertheless, analysis reveals that the strategic planning process has not yet completely incorporated the principles of teacherpreneurship. Despite the execution of digital training and workshops, these initiatives remain unofficial and are not integrated into the school's mission or regular programs. The school's vision primarily focuses on religion and character development, without specifically prioritizing innovation or teacher entrepreneurship.

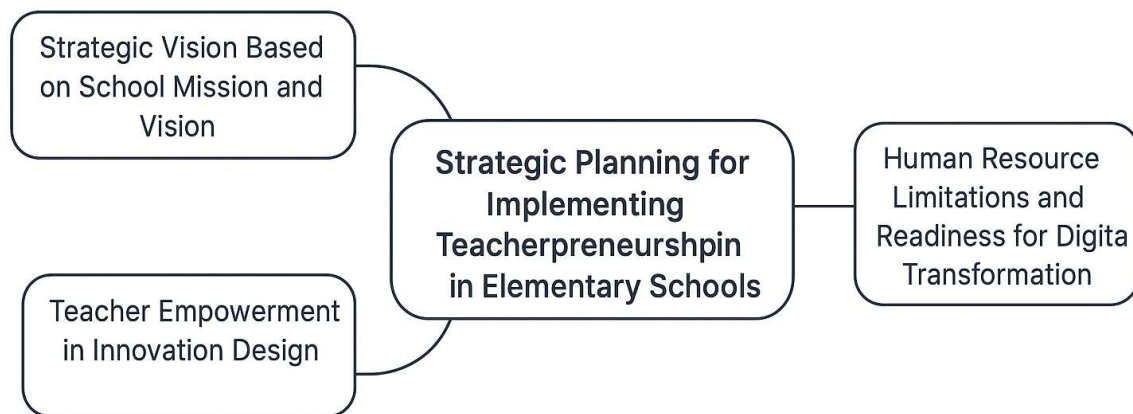


Figure.1 concept map linking vision, empowerment, and digital readiness

Schools with strong strategic vision, engaged leadership, and structured digital efforts are better positioned to execute teacherpreneurship successfully. In contrast, schools with low strategy coherence and minimal teacher empowerment struggle to build a lasting innovation culture.

3.2 The Role of Teachers as Teacher Entrepreneurs

The examination of interviews, observations, and document analyses reveals that the execution of teacherpreneurship in primary schools is based on a meticulously organized strategic planning phase, which then directs operational practices within each institution. Three fundamental characteristics emerged from the NVivo study at the strategic planning level: an innovation-oriented strategic vision, teacher empowerment in innovation design, and digital preparedness in the context of human resource limitations. Principals who successfully integrated innovation into their school visions shown enhanced efficacy in stimulating teacher creativity. For example, School SA intentionally integrated innovation and technology into its mission, promoting teachers to function as idea generators rather than implementers. This vision was implemented through organized school programs, including training, workshops, and digital innovation activities, guaranteeing active teacher involvement in developing work plans and devising educational innovations.

Conversely, other institutions, like SDN Cinta Raja, shown diminished strategic coherence. Despite the introduction of digital platforms such as Canva and Google Forms, teacherpreneurship has not been properly included into the school's vision or institutional policies. The focus persisted predominantly on character education instead of entrepreneurial innovation.

During the implementation phase, the majority of educators in the participating schools exhibited advancements in creating digital instructional material, formulating creative learning modules, and participating in professional development initiatives. These efforts demonstrate a growing recognition of innovation as a fundamental component of contemporary pedagogical practice. Nonetheless, teacher engagement in the commercialization of their goods or participation in

innovation competitions is limited, as the majority of creative outputs are generated only for internal school purposes.

At SDN Cinta Raja, educators proficiently employed digital resources for instructional purposes but shown a lack of creativity in producing unique educational products or innovations. The deficiency in production was chiefly ascribed to insufficient facilities and minimal motivational support, which hindered instructors' capacity to convert digital adoption into entrepreneurial practice.

These findings indicate that although teachers' digital competency is increasing, the entrepreneurial and creative aspects of teacherpreneurship remain insufficiently developed. Institutions that integrate a distinct strategic vision, collaborative teacher empowerment, and digital institutional support demonstrate enhanced advancement in the implementation of teacherpreneurship. In contrast, schools lacking robust strategic planning and adequate resources encounter difficulties in maintaining innovation and fostering an entrepreneurial culture among educators..

3.3 Evaluation of Teacherpreneurship Implementation

The evaluation phase identified three primary NVivo nodes: Reflection and Evaluation According to Best Practices, Collaborative Feedback, and Lack of a Formal Evaluation System. These criteria jointly demonstrate the diverse levels of reflection, feedback systems, and institutional coherence in assessing teacherpreneurship efforts among educational institutions.

3.3.1. Reflective and Participatory Evaluation Practices

At SD Negeri Muka Sungai Kuruk, the principal exhibited a systematic and methodical approach to evaluation through ongoing monitoring, incorporating teacher journals, program review sessions, and reflective dialogues. Feedback was delivered immediately and constructively, acting as a foundation for enhancing teacher training and innovative initiatives. The evaluation procedure was inclusive and transparent, enabling instructors to feel esteemed and acknowledged as active participants in their professional growth. Reflective evaluation was conducted via monthly forums, where teachers presented their innovations to colleagues. This method not only improved collaborative learning but also developed a culture of transparency and collective advancement. The principal underscored that evaluation extended beyond administrative ratings to include teacher enthusiasm for learning as an important success indicator.

3.3.2. Reflective and Participatory Evaluation Practices.

Conversely, SDN Cinta Raja demonstrated inconsistent evaluation processes. Despite the principal's organization of regular internal meetings, a structured feedback mechanism to communicate teachers' progress or areas for enhancement was absent. Program documentation and reflections were restricted to meeting notes, with minimal indication of definitive follow-up measures. Principal AN characterized evaluation as a collaborative reflective process. NVivo analysis identified persistent themes, including "Principal Monitoring" and "Teacher Feedback," suggesting that in contexts with feedback systems, teachers emphasized the significance of peer feedback as a valuable learning instrument. Both underscored that feedback might emanate from colleagues and students, proposing a more dynamic and learner-centred model of reflection: when more participatory, they exerted a greater influence on teacher performance and innovation.

3.3.3 Traditional Administrative Evaluation

At SD Negeri Muka Sungai Kuruk, the principal exhibited a systematic and methodical approach to assessment through ongoing oversight, incorporating teacher diaries, program review sessions, and reflective dialogues. Feedback was delivered immediately and constructively, acting as a foundation for enhancing teacher training and innovative initiatives. The evaluation procedure was inclusive and transparent, enabling instructors to feel esteemed and acknowledged as active participants in their professional growth. Reflective evaluation was conducted via monthly forums, where educators showcased their innovations to colleagues. This method not only improved collaborative learning but also developed a culture of transparency and collective advancement. The principal underscored that evaluation extended beyond administrative ratings to include instructors' enthusiasm for learning as a crucial success indicator.

In contrast, at SD Negeri Alur Manis, the evaluation method was predominantly administrative and compliance-focused, emphasizing the verification of lesson plans (RPP) rather than the assessment of creative practices. The NVivo node "Traditional Administrative Evaluation" was predominant, signifying a limited and procedural understanding of evaluation.

4. Conclusions

This study finds the strategic leadership of principals is essential for the realization of teacherpreneurship in the digital age. The process involves three interrelated phases: strategic formulation, execution, and evaluation, each influencing teachers' ability to innovate and adapt proactively. Institutions with explicit innovation-driven aspirations, engaged educator participation, and digital preparedness demonstrate enhanced advancement in integrating teacherpreneurship. Effective leaders promote engagement via training, digital initiatives, and collaborative planning; nonetheless, entrepreneurial outputs predominantly remain internal because to constrained infrastructure and motivation. Evaluation methods that prioritize contemplation, cooperation, and ongoing feedback are more effective in fostering teacher innovation than conventional administrative assessments. Effective leadership that is visionary, interactive, and digitally proficient is crucial for fostering a sustained culture of innovation in educational institutions. Enhancing digital capacity, integrating teacherpreneurship into school initiatives, and implementing reflective assessment methods can substantially promote educational innovation and teacher professionalism in the digital era.

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