

Entrepreneurial competence of primary school administrators in Thailand

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Abstract

The objectives of this research were as follows 1) To examine the consistency and alignment of the indicator model of entrepreneurial competencies among primary school administrators in Thailand with empirical data. 2) To investigate the core phenomena, conditions, strategies, and consequences associated with the development of entrepreneurial competencies among primary school administrators in Thailand. The sample consisted of 430 primary schools, selected using a multi-stage sampling method. Data were collected using a five-point Likert scale questionnaire. The data analysis involved basic statistical analysis, confirmatory factor analysis (CFA), and theoretical analysis of the core phenomena using the grounded theory research method.

The study identified six key components of entrepreneurial competencies among primary school administrators in Thailand: 1. Innovative and creative thinking 2. Achievement motivation 3. Entrepreneurial social skills 4. Entrepreneurial management knowledge 5. Risk management for competitive opportunities 6. Entrepreneurial leadership. The model fit analysis indicated that the indicator model for entrepreneurial competencies among primary school administrators in Thailand demonstrated strong consistency with empirical data, with the following fit indices: $\chi^2 = 880.397$, $df = 813$, $\chi^2/df = 1.0829$, P-Value = 0.0501, RMSEA = 0.014, SRMR = 0.018, CFI = 0.996, TLI = 0.995

The investigation of the core phenomena, conditions, strategies, and consequences further revealed that the core entrepreneurial competencies align with the six identified components. There were two causal conditions contributing to the emergence of entrepreneurial competencies. Four strategic approaches were identified to enhance these competencies. Additionally, there were two contextual conditions and two intervening conditions influencing the implementation of these strategies. The consequences of developing entrepreneurial competencies were observed across three areas: 1. The educational institutions 2. Administrators and personnel 3. The community.

Keywords

Entrepreneurial Competencies, Primary School Administrators, School Administrators

1. Introduction

Basic education serves as the foundation for national development, with the primary goal of ensuring that students receive a quality education aligned with national standards. It aims to foster learners who are knowledge-seekers, innovative creators, and responsible citizens who contribute to the strength of the nation. One of the key missions outlined in the Basic Education Development Plan is to develop school administrators, teachers, and

educational personnel to possess the necessary expertise to deliver education that supports national development directions.

Developing entrepreneurial competencies is one of the 21st-century skills that has gained increasing attention and is now incorporated into educational policies and practices. The study of educational approaches for fostering entrepreneurial competencies plays a vital role in enhancing the understanding of school administrators and relevant stakeholders regarding concepts, strategies, and best practices drawn from both international and domestic contexts.

School administrators, as leaders of educational institutions, play a crucial role in ensuring educational quality and have a significant influence on the outcomes of school management. They are the driving force behind educational reform efforts and the successful implementation of school visions, as outlined in the 2017 Revised Basic Education Core Curriculum. To fulfill these responsibilities, school administrators must possess new attributes and competencies that align with the rapidly changing environment and prepare them to address future challenges.

Entrepreneurial competence can be defined as the ability to guide creative processes towards innovation and change, particularly by identifying new opportunities and taking calculated risks. In today's world, marked by social transformation and economic competition, entrepreneurial competence among school administrators is essential for enhancing the education system's capacity to adapt and remain competitive.

At the same time, developing these competencies among school principals is crucial (Demirbilek & Çetin, 2021). School administrators must think outside the box, possess influential leadership capabilities, foster creative thinking, and generate innovative solutions to manage increasing social complexity. They must also transform their schools into entrepreneurial organizations capable of driving innovation and sustainable development. Successful school administrators inspire teachers to translate educational policies into effective classroom practices, ultimately enhancing the overall quality and effectiveness of school management.

In other words, school administrators must have the courage to seize opportunities for school development and transformation while simultaneously managing risks associated with change. Primary schools, as a fundamental stage in the basic education system, play a pivotal role in laying the groundwork for future educational quality. These schools are crucial for implementing government policies aimed at strengthening the nation by equipping children and youth with the necessary competencies to contribute to economic, social, and environmental development. This, in turn, enhances Thailand's global competitiveness.

Given this context, the researcher recognizes the importance of studying entrepreneurial competencies among primary school administrators to enhance their knowledge, skills, and abilities, enrich their professional experiences, and raise the overall quality of primary schools. This preparation is essential for addressing contemporary organizational challenges and enhancing organizational efficiency in the future.

2. Research Objectives

1. To examine the consistency and alignment of the **indicator model for entrepreneurial competencies** among primary school administrators in Thailand with empirical data.

2. To investigate the **core phenomena, causal conditions, strategies, and consequences** associated with the development of **entrepreneurial competencies** among primary school administrators in Thailand.

3. Research Methodology

This study employed a Mixed Methods Research approach, conducted in two phases:

Phase 1: Quantitative Study : The first phase involved a **quantitative study** to examine the consistency and alignment of the **indicator model for entrepreneurial competencies** of primary school administrators in Thailand with empirical data.

Population and Sample

The population consisted of 12,090 primary schools in the Northeastern region of Thailand. The sample comprised 430 primary schools, determined using a sample size criterion based on the number of parameters in the factor analysis (Hair et al., 2010). The study used a sample size of 10 participants per parameter, resulting in 430 sample schools to cover 43 parameters.

The sample was selected using a multi-stage sampling method, employing:

- Cluster random sampling based on school administrator positions, and
- Simple random sampling to select participants within each cluster.

Each school contributed two respondents:

- One school administrator, and
- One teacher,
resulting in a total of 860 respondents.

Research Instrument

The primary research instrument was a questionnaire, utilizing a five-point rating scale. The overall reliability of the questionnaire was assessed using Cronbach's alpha coefficient, which yielded a value of 0.967, indicating high reliability.

Data Collection

Data were collected through postal mail, with respondents receiving a QR code to access the online questionnaire via Google Forms. The QR code was also distributed via email. Once responses were received, the data were verified for completeness before statistical analysis.

Data Analysis

Quantitative data analysis for Phase 1 consisted of the following steps:

1. Confirmatory Factor Analysis (CFA) was conducted to test the goodness-of-fit between the proposed structural model and the empirical data. Factor loadings for each sub-variable were also estimated.
2. The model fit was assessed and adjusted according to the criteria proposed by Wiratchai (2005) and Taksino (2016).
3. The key fit index used for hypothesis testing was the Chi-Square Statistic.

Phase 2: Qualitative Study

The second phase involved a qualitative study to explore the core phenomena, causal conditions, strategies, and consequences associated with the development of entrepreneurial competencies among primary school administrators in Thailand.

Research Sites

The qualitative study focused on two exemplary primary schools selected based on the entrepreneurial competencies of their administrators. Selection criteria for the two schools included:

1. Schools where administrators have received national-level awards for effective school management.
2. Schools where administrators have received awards for innovative school leadership in enhancing learning processes and value creation.
3. Schools where administrators or the schools themselves have received awards related to entrepreneurship or value creation in education, with demonstrated success in applying innovative management strategies at the national level.

Research Instruments

The qualitative data collection tools included:

- Document analysis
- Non-participant observation
- In-depth interviews
- Semi-structured interview guides
- Field note forms

Data Collection Process

Field data collection was conducted in two rounds, using:

- Non-participant observation, and
- Interviews with:
 - 2 school administrators
 - 4 teachers
 - 1 school board member
 - 2 parent representatives

Data Analysis

The qualitative data were analyzed using a multiple case study approach, integrating data from in-depth interviews and non-participant observations to capture key phenomena.

- All interviews were transcribed immediately after completion, and field notes were recorded to capture observed phenomena.
- Data were analyzed using content analysis to identify emerging concepts.
- Relationships between concepts were explored through analytic induction, and the interview data were interpreted to form working hypotheses.
- The analysis began by segmenting the data into related units or categories using the coding process (Strauss & Corbin, 1998).

4. Research Findings and Discussion

4.1 Quantitative Study: Examination of the Model Fit for Entrepreneurial Competency Indicators of Primary School Administrators in Thailand with Empirical Data

1) Results of Pearson Correlation Coefficient Analysis, KMO, and Bartlett's Test

The analysis of relationships among the 43 entrepreneurial competency indicators of primary school administrators under the Office of the Basic Education Commission revealed that all pairs of indicators demonstrated positive correlations with statistical significance at the 0.01 level. The correlation coefficients ranged from 0.509 to 0.730.

Preliminary data suitability was assessed prior to factor analysis using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), which yielded a value of 0.989. This value, approaching 1, indicates a very high suitability for factor analysis (Supamas Angsuchoti, 2011). Furthermore, Bartlett's Test of Sphericity yielded a value of 16,785.735, with statistical significance at $p < 0.01$. These results confirm that the data exhibited adequate intercorrelation among variables, supporting the suitability for factor analysis (Hair et al., 2010).

2) Structural Validity of the Entrepreneurial Competency Model for Primary School Administrators in Thailand

The structural validity of the entrepreneurial competency model was tested using Confirmatory Factor Analysis (CFA). The model fit indices, evaluated according to the criteria proposed by Prakittya Taksino (2016), were as follows:

- Chi-Square (χ^2) = 880.397
- Degrees of freedom (df) = 813
- $\chi^2/df = 1.0829$
- P-Value = 0.0501
- Root Mean Square Error of Approximation (RMSEA) = 0.014
- Standardized Root Mean Square Residual (SRMR) = 0.018
- Comparative Fit Index (CFI) = 0.996
- Tucker-Lewis Index (TLI) = 0.995

These results indicate that the measurement model demonstrates a good fit with empirical data, as shown in Table 1 and Figure 2.

Fit Index	Criterion	Analysis Result	Interpretation
χ^2 - Test	Non-significant P> 0.05	$\chi^2 = 880.397$, df = 813, $\chi^2 / df = 1.0829$	passed
χ^2 / df	< 2.00	1.0829	Good Fit
RMSEA	≤ 0.05	0.014	Good Fit
SRMR	≤ 0.08	0.018	Good Fit
CFI	≥ 0.95	0.996	Good Fit
TLI	≥ 0.95	0.995	Good Fit

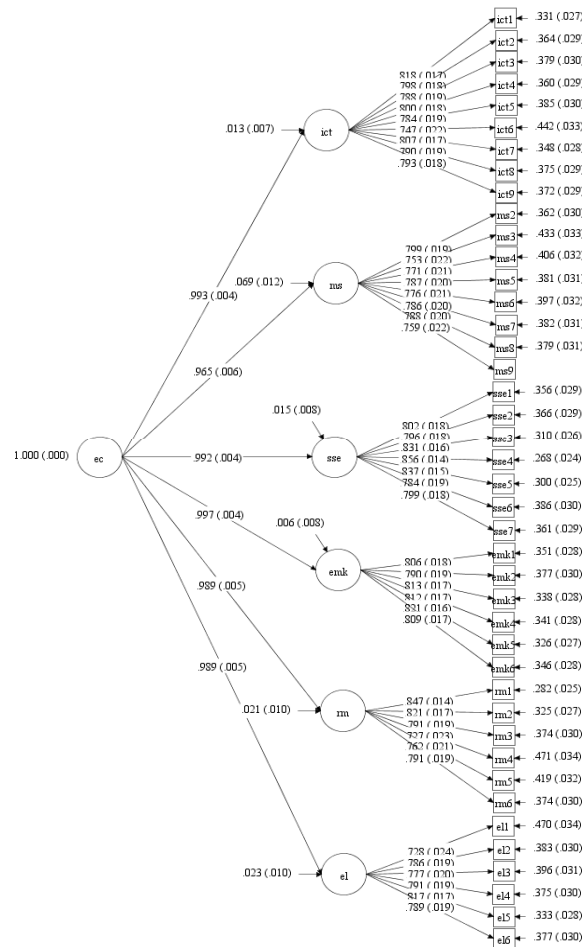


Figure 2: Measurement Model of the Components and Indicators of Entrepreneurial Competencies for Primary School Administrators in Thailand

4.2 Qualitative Study: Core Phenomenon, Causal Conditions, Strategies, and Consequences Related to the Development of Entrepreneurial Competencies among Primary School Administrators in Thailand

1) Characteristics of the Core Phenomenon: Entrepreneurial Competencies of Primary School Administrators

- **Entrepreneurial Management Literacy:** This refers to administrators' ability to acquire and apply knowledge and experiences necessary for entrepreneurial management, including strategic planning, organizational network management, efficient resource allocation, human resource management, financial and budget management, and the use of communication and public relations technology to achieve organizational success.
- **Innovative and Creative Thinking:** This is the process by which administrators encourage personnel to think creatively, seek new perspectives, and flexibly select the best working methods. Administrators foster collaborative learning among staff, facilitate reflective discussions, and encourage co-creation of innovations. The use and evaluation of innovations are continuously assessed to inform further development.
- **Entrepreneurial Social Skills:** These are demonstrated through administrators' ability to interact effectively with others, build positive relationships, manage emotions, and work collaboratively. Administrators demonstrate effective communication, decision-making, and problem-solving skills while promoting similar relationship-building skills among personnel, particularly in fostering strong connections with the community.
- **Risk Management for Competitive Advantage:** This involves defining the risk context within the school, enabling administrators and staff to identify and assess risks to determine appropriate options. Risks are carefully monitored and reviewed, and clear communication about risk management processes is provided to staff. Effective risk management enhances the school's ability to adapt to uncertainties and seize competitive opportunities.
- **Entrepreneurial Leadership:** This competency reflects administrators' leadership attributes, competencies, and proactive vision. Administrators set shared goals, promote proactive working cultures, foster entrepreneurial organizational culture, demonstrate self-confidence and perseverance, and proactively seize competitive opportunities to drive organizational success.
- **Achievement Motivation:** Administrators inspire personnel to achieve success and gain social recognition. They cultivate responsibility among staff, foster career advancement opportunities, and create challenging work environments. Administrators ensure that appropriate compensation and recognition are provided to support personnel's stability and

motivation, thereby fostering a positive work environment aligned with organizational goals.

These findings highlight the challenges faced by small primary schools, which often struggle with resource limitations. In response, administrators must leverage entrepreneurial competencies to explore innovative educational technologies, foster community collaboration, and creatively utilize available resources to enhance learning. This aligns with the ideas of Demirbilek and Çetin (2021), who emphasize that entrepreneurial school leaders play a pivotal role in improving educational quality and fostering entrepreneurial mindsets among teachers, even within public school systems.

2) Causal Conditions Contributing to the Development of Entrepreneurial Competencies

Through fieldwork observations and interviews with school administrators, teachers, and relevant stakeholders, the following causal conditions were identified:

1. **Entrepreneurial Leadership:** Administrators demonstrated entrepreneurial leadership by combining entrepreneurial management knowledge with the ability to motivate and inspire staff to work happily and effectively.
2. **Innovation Promotion:** Administrators encouraged collaborative innovation development to create value-added products within the school.

These findings suggest that entrepreneurial competencies emerge when administrators possess a thorough understanding of management practices and actively lead school transformation efforts. Entrepreneurial school leaders create challenging environments that promote staff creativity, innovation, and value creation, thereby strengthening educational quality. This aligns with Bradley S. Smith (2016), who noted that entrepreneurial leadership involves creating something from nothing, blending broad leadership skills with entrepreneurial capabilities to steer schools toward success.

3) Strategies Emerging from Entrepreneurial Competencies

The following strategies were identified through field observations and interviews:

1. **Enhancing Entrepreneurial Knowledge and Mindsets among Personnel** to support value creation.
2. **Fostering Collaborative Educational Networks** involving the school, community, and external agencies.
3. **Encouraging Creative Thinking and Innovation Development** by providing opportunities for personnel to propose and implement new ideas.
4. **Creating Opportunities for Challenging Educational Management** to foster entrepreneurial practices within the school.

Contextual and Intervening Conditions Influencing Strategy Implementation

- **Contextual Conditions:**
 1. Collaboration with community networks.
 2. The general school environment.

- Intervening Conditions:
 3. Changes in policy direction by higher-level authorities.
 4. Staff work behavior and organizational culture.
 5. School-based entrepreneurship promotion activities.

These findings emphasize that collaborative partnerships with the community, entrepreneurs, and external agencies enhance educational quality. Schools can develop innovative products and services through creative collaboration, leveraging local knowledge and resources. This aligns with Yemini, Addi-Racciah, and Katarivas (2014), who highlighted that engaging stakeholders to pursue shared entrepreneurial visions helps transform these visions into reality. Alfirevic et al. (2018) similarly stressed that entrepreneurial school leaders drive creative problem-solving, relationship management, risk-taking, and opportunity-seizing, all of which are essential for effective school management.

4) Consequences of Entrepreneurial Competency Strategies

Field observations and interviews identified the following consequences:

- School-Level Outcomes:
 1. Creation of innovative products and value-added school innovations for external markets.
 2. Establishment of learning communities that promote entrepreneurial mindsets among students and staff.
- Administrator and Staff Outcomes:
 3. Staff experienced increased motivation and morale, leading to improved work performance.
- Community Outcomes:
 4. Communities actively participated in school management, exchanging knowledge and sharing experiences to enhance school operations.

These outcomes suggest that comprehensive strategy implementation fosters value creation, collaborative educational networks, innovation development, and entrepreneurial learning environments. Schools, students, and communities co-develop innovative products and services, reinforcing mutual learning and community-school collaboration. This supports educational quality improvement, strengthens teacher motivation, and fosters professional pride and dedication among educators. These findings align with Basmin Mattayang et al. (2019), who emphasized that entrepreneurial school leaders demonstrate clear communication, strong interpersonal skills, and creative problem-solving abilities that contribute to school innovation and performance improvement.

5. Conclusion

This study developed and validated a model of entrepreneurial competencies for primary school administrators in Thailand using Confirmatory Factor Analysis (CFA). The goodness-of-fit indices for the measurement model met the established criteria, indicating that the model demonstrated a good fit with empirical data.

The findings provided theoretical insights through an in-depth exploration of the core phenomenon and the construction of clear conceptual frameworks, ultimately leading to a grounded theory explaining the entrepreneurial competencies of outstanding primary school administrators in Thailand. Triangulation techniques were applied by integrating document analysis to enhance the reliability and validity of the findings.

The study identified that entrepreneurial competencies of primary school administrators in Thailand consist of six key components:

1. Entrepreneurial Management Literacy
2. Innovative and Creative Thinking
3. Entrepreneurial Social Skills
4. Risk Management for Competitive Advantage
5. Entrepreneurial Leadership
6. Achievement Motivation

The quantitative study in Phase 1 confirmed these components through empirical validation across primary schools in Thailand.

In addition, two causal conditions were identified, contributing to the development of entrepreneurial competencies among primary school administrators. These competencies gave rise to four key strategies implemented by entrepreneurial school leaders.

The study also identified three major consequences arising from the application of these entrepreneurial competencies:

1. School-Level Outcomes: Improvements in school management innovation and enhanced value creation within the school.
2. Administrator and Personnel Outcomes: Enhanced motivation, professional commitment, and work performance among administrators and school personnel.
3. Community Outcomes: Stronger school-community partnerships, increased community engagement in school management, and collaborative development of educational innovations to benefit both the school and the community.

These findings provide a comprehensive understanding of how entrepreneurial competencies contribute to school development, educational quality improvement, and sustainable community collaboration within the context of Thai primary schools.

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