

ความต้องการจำเป็นในการพัฒนาการบริหารวิชาการของโรงเรียนมัธยมศึกษา กัมพูชาตามแนวคิดทักษะความเป็นผู้นำด้านนวัตกรรม

THE PRIORITY NEEDS FOR DEVELOPING ACADEMIC MANAGEMENT OF CAMBODIAN SECONDARY SCHOOLS BASED ON THE CONCEPT OF INNOVATION LEADERSHIP SKILLS

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษา 1) สภาพปัจจุบันและสภาพที่พึงประสงค์ของการบริหารวิชาการ และ 2) ความต้องการจำเป็นในการพัฒนาการบริหารวิชาการของโรงเรียนมัธยมศึกษา กัมพูชาตามแนวคิดทักษะความเป็นผู้นำด้านนวัตกรรม การศึกษาเชิงปริมาณครั้งนี้ใช้การสุ่มตัวอย่างแบบหลายขั้นตอนและแบบตามความสะดวกเพื่อเลือกตัวอย่างโรงเรียนมัธยมของรัฐ 94 แห่งในกัมพูชา ผู้ให้ข้อมูล คือ ครูและผู้บริหารโรงเรียน จำนวน 463 คน เครื่องมือวิจัยคือแบบสอบถามแบบคู่ที่มีมาตราส่วน Likert 5 ระดับ การวิเคราะห์ข้อมูลโดยใช้ความถี่ ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และดัชนีความต้องการจำเป็น ($PNI_{modified}$) ผลการวิจัยพบว่า การเรียนการสอนมีความต้องการจำเป็นสูงสุด โดยมีสภาพปัจจุบันอยู่ในระดับปานกลางและสภาพที่พึงประสงค์อยู่ในระดับสูง การพัฒนาหลักสูตรมีความต้องการจำเป็นต่ำที่สุด โดยมีสภาพปัจจุบันอยู่ในระดับปานกลางและสภาพที่พึงประสงค์อยู่ในระดับสูง เมื่อพิจารณาองค์ประกอบทักษะความเป็นผู้นำด้านนวัตกรรม ด้านวิสัยทัศน์และกลยุทธ์ ด้านนวัตกรรมมีความต้องการจำเป็นสูงสุด โดยมีสภาพปัจจุบันอยู่ในระดับปานกลางและสภาพที่พึงประสงค์อยู่ในระดับสูง ด้านการยอมรับและการสนับสนุนนวัตกรรมมีความต้องการจำเป็นต่ำที่สุด โดยมีสภาพปัจจุบันอยู่ในระดับปานกลางและสภาพที่พึงประสงค์อยู่ในระดับสูง เมื่อพิจารณาองค์ประกอบย่อย ด้านการตระหนักรู้วิสัยทัศน์ด้านนวัตกรรม การคิดเชิงกลยุทธ์ และการบริหารความเสี่ยงมีค่า $PNI_{modified}$ สูง ในขณะที่ด้านความเป็นผู้นำแบบอย่าง ความเป็นผู้นำอย่างกล้าหาญ และการส่งเสริมวัฒนธรรมความไว้วางใจมีค่า $PNI_{modified}$ ต่ำ

คำสำคัญ: ความต้องการจำเป็น การบริหารวิชาการ ทักษะความเป็นผู้นำด้านนวัตกรรม ประเทศกัมพูชา

Abstract

This research aims to study 1) the current and desired practices of academic management and 2) the priority needs for developing academic management of Cambodian secondary schools based on

the concept of innovation leadership skills. This quantitative study used multistage random and convenience sampling to choose a sample of 94 public secondary schools in Cambodia. Respondents included teachers and school administrators, accounted for 463. A dual-response questionnaire with a five-point Likert scale served as the instrument. The data were analyzed using frequency, percentage, mean, standard deviation, and modified priority needs index (PNI_{modified}). Results revealed that teaching and learning were the highest priority needs, with moderate and high levels in current and desired practices. Curriculum development was the lowest priority need, with a moderate level in the current practice and a high level in the desired practice. In terms of innovation leadership skills dimensions, innovation vision and strategy were the highest priority need, with a moderate level in the current practice and a high level in the desired practice. Innovation recognition and support were the lowest priority need, with a moderate level in the current practice and a high level in the desired practice. Regarding innovation leadership skills subdimensions, realizing innovation vision, strategic thinking, and managing risks had high PNI_{modified}, while leading by example, leading courageously, and promoting a culture of trust had low PNI_{modified}.

Keywords: Priority Needs, Academic Management, Innovation Leadership Skills, Cambodia

Background

In the idea economy, in which ideas are traded, anyone with an idea can contact a business or a talented entrepreneur to implement the innovation [1]. The wealthiest nations' citizens now understand that their economies are based on innovation [2]. Companies in the idea economy are particularly interested in graduates with creative ideas [3]. Therefore, a nation must educate its people on the essential innovative skills they need for national development.

To make the vision of the upper middle income and high-income country in 2030 and 2050, respectively, into reality, Cambodia needs to equip young people with the necessary skills that produce innovations or make changes. In other words, education should mold young people for innovation leadership [4]. Secondary level is a transition to higher education. It is necessary to prepare students for innovation

leadership skills before they go to the university. More importantly, the Cambodian framework for general and technical education curriculum promotes innovation and leadership skills. Creativity and innovation as well as leadership skills are among the eight competencies that students are required to have [5]. As the policies support students to have innovation and leadership skills, secondary schools are required to develop students with innovation leadership skills and to become innovation leaders.

Innovation leaders must shape alternate futures rather than simply addressing current problems in normative ways [4]. In this study, innovation leadership skills, by its operational definition, are skills that an individual or a leader himself uses or influences others to stimulate innovations or make changes. Several scholars suggested innovation leadership skills that everyone or leaders must have. Innovation leadership skills can be summarized into three categories and 15 skills: 1) innovation vision and strategy, including realizing innovation vision, strategic thinking, managing risks; 2) innovative thinking, including developing empathy for others, demonstrating curiosity, opportunity exploration, assaulting assumptions, proactive thinking, idea generation, Idea championing, idea application; 3) innovation recognition and

support, including leading courageously, leading by example, promoting a culture of trust, and recognizing the innovators [6-9]. In light of educational management, academic management plays a crucial role in developing these skills.

In nature, academic management can be categorized into three functions: curriculum development, teaching and learning, and measurement and evaluation.

Previous studies paid attention to different end results of the students, including creative and innovative thinking skills [10][10], innovator competencies [11-13], and innovative leadership [14] with different means such as school management and academic management. However, this study argues that being an innovator is not sufficient, and innovators need leadership skills. That is why the concept of innovation leadership skills emerges. As Tucker [6] claims, everyone needs to have six innovation leadership skills mentioned above.

In contrast to adult leadership in positions, researchers [15] urged for research on leadership in secondary school students. Most importantly, they argued, it is important to make a distinction between imposed ideals and emergent realities by examining student leaders in terms of "who and what we would like them to be" rather than "who and what they are." They claimed that youth leadership prioritizes "mutual, shifting, and emerging" leadership and stresses "the group, the moment, and the situation." Contrary to conceptions of adult leadership that emphasize "knowledge via experience," this idea can be referred to as "wisdom in spontaneity" [16].

Young people's leadership contributes to civic education or renewal, which is a process that depends on a fresh wave of student voice [17], as well as to social and cultural interactions and community services.

As existing studies concentrated on the innovator's abilities rather than the innovator with leadership skills, and literature highlights the importance of and calls for young people leadership, especially secondary school students, this study aims to study the priority needs for developing Cambodian secondary schools' academic management based on the concept of innovation leadership skills.

Research Objectives

1. To study current and desired practices of academic management of Cambodian secondary schools based on the concept of innovation leadership skills
2. To study priority needs for developing academic management of Cambodian secondary schools based on the concept of innovation leadership skills

Conceptual Framework of the Study

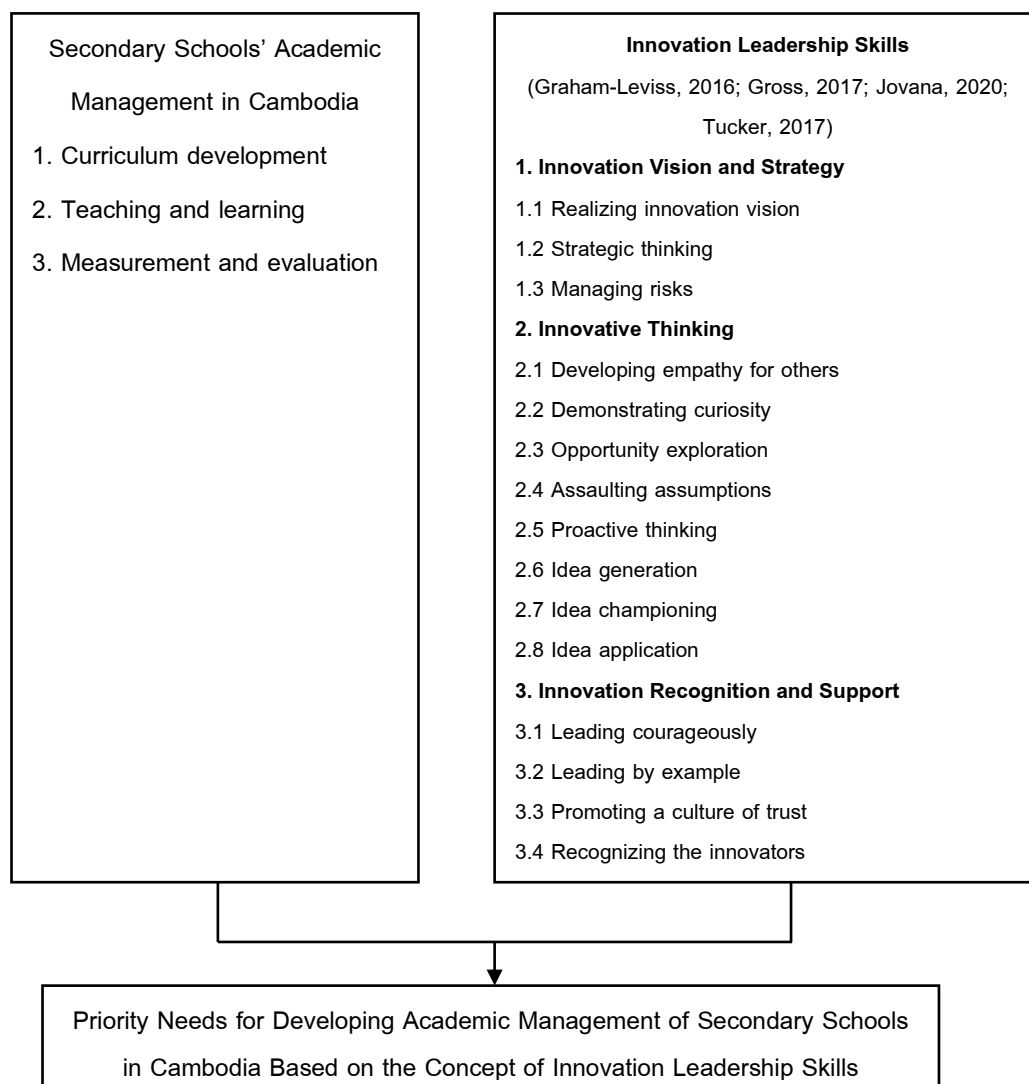


Figure 1 Conceptual framework of the study

Methods

A sample of 94 public secondary schools was selected using multistage and convenient sampling from the capital and eight provinces in seven regions throughout the kingdom (central = 50 schools and the rest = 44 schools). Respondents, including school directors, vice school directors, and teachers, accounted for 463 (male = 69%). More than half of the respondents (69%) were between 31 and 50. More than half of the respondents (67%) held bachelor's degrees (master's = 21%; associate's = 4%; doctoral degree = 0.43%; others = 8%). About half of the respondents (55%) served for 6 and 20 years in the current position, about one-third (33%) worked for more than 20 years, and the rest (12%) served for five years or less.

The research instrument was the survey questionnaire, consisting of two parts. Part 1 is the checklist format's demographic data (e.g., gender, age, education level, position, and work experience).

Part 2 is about needs assessment articulating “what is” (current practice) and “what should be” (desired practice) in a dual-response format. The respondents were questioned to score on a five-point Likert scale (from 1 = lowest level to 5 = highest level). For example, a sample question regarding curriculum development was “1. At what level does your school identify learning outcomes in the curriculum related to innovation leadership skills as follows: 1.1 Realizing innovation vision, 1.2 strategic thinking...etc.” Prior to the try-out, the questionnaire instrument was administered to five content experts to measure content validity using the Item Objective Congruence (IOC) index. As a result, IOC indices of each item was 1 (IOC > 0.5). Then the questionnaire instrument was tested with 30 respondents (including two school directors, a vice school director, and 27 teachers) from eight schools. The reliabilities were in the range of 0.981-0.990 in the current practice and 0.984-0.987 in the desired practice, which is beyond the acceptable limit of Cronbach’s alpha coefficient ($\alpha = 0.7$).

Data were collected via both onsite and online protocols. The participants were asked to read the instruction (including research ethical-related issues) carefully to understand and decide whether they volunteered to participate in the study. The returned questionnaires were regarded as their voluntary participation. Onsite data collection was permitted by the parent ministry and approved by the school directors.

Data were analyzed by descriptive statistics—frequencies, percentages, mean (\bar{x}), and standard deviation (SD) with Statistical Package for the Social Sciences (SPSS) version 28. Modified Priority Needs Index (PNI_{modified}) was calculated to measure a gap in the needs assessment. PNI_{modified} is calculated by a formula [18]: $PNI_{\text{modified}} = (I - D)/D$, where “I” refers to “Importance” or desired practice and “D” refers to “Degree of Success” or current practice. The greater the value of PNI_{modified} , the higher the priority needs. Data interpretation of the mean score was as follows: 4.51 – 5.0 (highest level), 3.51 – 4.50 (high level), 2.51 – 3.50 (moderate level), 1.51 – 2.50 (low level), and 1.00 – 1.50 (lowest level).

Results

Results are presented in two aspects: academic management and innovation leadership skills.

Table 1 Current practice, desired practice, and the priority needs of academic management based on the concept of innovation leadership skills in the overall aspect (n = 463)

Academic Management Based on the Concept of Innovation Leadership Skills	Current Practice		Desired Practice		Priority of the Need	
	\bar{x}	SD	\bar{x}	SD	PNI_{Modified}	Rank
	Academic Management	3.18	-	4.22	-	
1. Curriculum Development	3.20	0.827	4.21	0.866	0.317	3
2. Teaching and Learning	3.17	0.820	4.22	0.852	0.333	1
3. Measurement and Evaluation	3.18	0.819	4.24	0.852	0.332	2

Note. Data were collected both online (42.55 %) and on-site (57.45%).

Table 1 shows that the current and desired practices of academic management based on the concept of innovation leadership skills in the overall aspect were at the moderate level ($\bar{X} = 3.18$, $SD = 0.822$) and the high level ($\bar{X} = 4.22$, $SD = 0.857$), respectively. For the current practice, curriculum development was scored the highest ($\bar{X} = 3.20$, $SD = 0.827$), while teaching and learning were rated the lowest ($\bar{X} = 3.17$, $SD = 0.820$). For the desired practice, measurement and evaluation were scored the highest ($\bar{X} = 4.24$, $SD = 0.852$), while curriculum development was rated the lowest ($\bar{X} = 4.21$, $SD = 0.866$). Regarding the priority needs, teaching and learning were the highest priority ($PNI_{\text{modified}} = 0.333$), while curriculum development was the lowest priority ($PNI_{\text{modified}} = 0.317$).

Table 2 Current practice, desired practice, and the priority needs of academic management based on the concept of innovation leadership skills classified by innovation leadership skills (n = 463)

Academic Management Based on the Concept of Innovation Leadership Skills	Current Practice		Desired Practice		Priority Needs	
	\bar{X}	SD	\bar{X}	SD	PNI_{Modified}	Rank
1. Innovation Vision and Strategy	3.05	0.792	4.14	0.879	0.360	1
1.1 Realizing innovation vision	3.01	0.783	4.14	0.852	0.375	1
1.2 Strategic thinking	3.07	0.781	4.17	0.849	0.357	2
1.3 Managing risks	3.05	0.812	4.11	0.936	0.349	3
2. Innovative Thinking	3.18	0.824	4.22	0.864	0.324	2
2.1 Demonstrating curiosity	3.30	0.813	4.31	0.817	0.306	12
2.2 Developing empathy for others	3.14	0.816	4.20	0.862	0.338	4
2.3 Opportunity exploration	3.17	0.826	4.24	0.832	0.337	5
2.4 Assaulting assumptions	2.96	0.810	3.94	1.008	0.332	8
2.5 Proactive thinking	3.21	0.814	4.25	0.846	0.322	9
2.6 Idea generation	3.25	0.841	4.28	0.848	0.318	10
2.7 Idea championing	3.26	0.852	4.27	0.851	0.311	11
2.8 Idea application	3.19	0.821	4.26	0.843	0.332	7
3. Innovation Recognition and Support	3.28	0.842	4.28	0.829	0.307	3
3.1 Leading courageously	3.34	0.850	4.33	0.818	0.297	14
3.2 Leading by example	3.33	0.865	4.31	0.834	0.296	15
3.3 Promoting a culture of trust	3.30	0.838	4.31	0.814	0.305	13
3.4 Recognizing the innovators	3.14	0.814	4.19	0.852	0.333	6

Note. Data were collected both online (42.55 %) and on-site (57.45%).

As shown in Table 2, the current practice, regarding components of innovation leadership skills, innovation recognition and support were scored the highest ($\bar{X} = 3.28$, $SD = 0.842$), while innovation vision and strategy were rated the lowest ($\bar{X} = 3.05$, $SD = 0.792$). For the desired practice, innovation recognition and support were scored the highest ($\bar{X} = 4.28$, $SD = 0.829$), while innovation vision and strategy were

rated the lowest ($\bar{x} = 4.14$, $SD = 0.879$). Regarding the priority needs, innovation vision and strategy were the highest priority ($PNI_{\text{modified}} = 0.360$), while curriculum development was the lowest priority ($PNI_{\text{modified}} = 0.307$).

Conclusions and Discussions

This study yielded new insight into the needs assessment of academic management in developing innovation leadership skills of the students at the secondary level in the public sector. The results show that academic management that facilitates innovation leadership skills in the students is currently practiced at a moderate level. This result is in line with [10] and [14], which focused on a similar end result of student learning – innovative leadership, but at the primary level. It can be explained that academic management (i.e., curriculum development, teaching and learning, and measurement and evaluation) did not sufficiently strive to develop students' innovation leadership skills, especially teaching and learning, because it was found to be the highest priority of the need compared to the other two, consistent with [10]. Teaching and learning are critical driving factors of quality education, and the key actor is the teacher. A high-quality teaching workforce—the foundation of all high-performing education systems—is the single most critical factor in boosting student learning [19]. In their study on the teaching system in Cambodia, they found three key findings: 1) the highly qualified students are not enticed into a teaching career, 2) preservice education not producing graduates with solid content knowledge or exposure to a student-centered learning environment, and 3) teacher performance having been hampered by unproductive incentives, an evaluation system disconnected from classroom realities, and a lack of learning opportunities and best practice sharing with peers. They also suggested three policy pillars to improve teaching in Cambodia. They included making teaching a more attractive profession, enhancing teacher preparation, and promoting more robust classroom performance.

The research findings revealed that academic management for developing innovation leadership skills regarding innovation vision and strategy was the highest priority of need compared to innovative thinking and innovation recognition and support, respectively. The findings may explain that academic management was not paid attention adequately to developing students' innovation vision realization, strategic thinking, and risk management. Innovation vision is a new concept in the Cambodian context, and the concept is not sufficiently spread among educational actors at the practitioner level. School administrators and teachers do not even hear about the concept of innovation. Since education reform in 2014 led by Minister of Education ChuonNaron Hang, Cambodian schools can be divided into two types: traditional and new generation schools (NGS). As most of the study sample were traditional schools—only seven respondents from two new generation schools participated in this study—the focus on new concepts of student learning outcomes is limited. Unlike the NGS, traditional schools adopt lecturing methods rather than newly emerged ones.

To demonstrate the realization of the innovation vision, innovation leaders must outline the institution's innovation strategy, provide members with clear instructions, and ensure everyone is on board [8]. At the student level, student leaders can exercise this skill in the student council set; however, not all

schools apply the same student council structure, and some do not have it in practice. Student council leaders can grasp opportunities for helping their low-performing students and managing the school's disciplines by thinking strategically and, at the same time, managing risks that may happen. In leading an organization, defining a clear innovation strategy or making a change is a vital skill for innovation leaders [7].

To develop strategic thinking, student leaders need to create or participate in a cross-functional committee, perform knowledge of SWOT (strengths, weaknesses, opportunities, and threats) analysis, broaden learning in areas considered strategic (i.e., areas in line with the shared vision of innovation), involve their members throughout the organization in the strategic planning process, and develop a multi-year strategy that encompasses the steps for themselves and members to take in order to achieve the shared vision [9].

Graham-Leviss also highlighted some activities that innovation leaders can exercise risk management: listing a minimum of eight ideas for new initiatives and benchmark best practices for each and then identifying five opportunities that may be immediately implemented within the organization; identifying, documenting, and planning for risks as part of creating strategic alternatives; starting without knowing all of the answers and adjusting when needed; setting a time limit for evaluating a particular situation to prevent overthinking decisions; considering the downside risk of each decision and stop analyzing and then make the decision if being able to live with the consequences [9].

Recommendations

The key findings of the current study were the priority needs in teaching and learning and the moderate level of teaching and learning in the existing condition. Therefore, the following recommendations are based on these key findings.

Recommendations for practice

1. Ministry of Education, Youth and Sport (MoEYS) should have a training and development plan on new teaching and learning methods, especially experiential learning such as project-based learning and problem-based learning, for school administrators and teachers and have incentive programs for teaching performance because this study found that teaching and learning were at the moderate level of current practice and the first priority of need.

2. School directors should regularly conduct internal supervision on teaching and learning for developing students' innovation leadership skills focusing on innovation vision and strategy as well as innovative thinking and provide creative feedback for teachers with support from the MoEYS as the current study revealed that teaching and learning for developing students' innovation vision and strategy and innovative thinking were ranked in the first and second priority of the need.

3. School directors should extend school networks, including best-practiced schools, local organizations, and communities, and engage them in the teaching and learning process to implement project-based learning since this study yielded the moderate level in the current practice and the first priority need of teaching and learning.

4. Teachers should be self-directed learners who independently tailor teaching lessons based on students' needs and should participate in the community of practice with teaching peers, with support from the MoEYS and school directors because the present study indicated that teaching and learning were firstly prioritized to improve.

Recommendations for future research

1. Future research should focus on teaching and learning design to develop students' innovation vision and strategy as the current study found that teaching and learning and innovation vision and strategy were the top priority of need.

2. Further studies should propose approaches for teaching and learning to develop students' innovation vision and strategy because the current study showed that teaching and learning and innovation vision and strategy were the top priority of need.

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