The Innovative Leadership for Administrators as Perceived by Faculty Members in Hainan Dongfang New Silk Road College

Zhang Xuetao[1]
E-mail: 64609630013@rpu.ac.th
Laddawan Petchroj[2]
E-mail: lapetc@rpu.ac.th

Abstract

The objectives of this study were: 1) to examine the innovative leadership of administrators as perceived by faculty members at Hainan Dongfang New Silk Road College, and 2) to compare these perceptions across gender, age, educational level, and work experience. The sample consisted of 57 faculty members selected through stratified random sampling. The research instrument was a five-point Likert scale questionnaire, validated by three experts (IOC = 0.67-1.00) and demonstrating a reliability coefficient of 0.83. Data were analyzed using percentage, mean, standard deviation, t-test, and one-way ANOVA with LSD.

The findings revealed that faculty members rated the overall innovative leadership of administrators at a high level. Among the four dimensions, innovative vision received the highest mean score, followed by innovative teamwork participation, digital skills, and continuous learning adaptability, respectively. Comparative analyses showed no significant differences in perceptions when classified by gender, age, or educational level. However, work experience revealed a significant difference in the dimension of digital skills at the 0.05 level, with faculty members having 1-5 years or experience rating administrators significantly higher than those with 6-10 years of experience.

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[1] Student, Master of Education (Educational Administration), Rajapruk University

[2] Advisor, Master of Education (Educational Administration), Rajapruk University

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Introduction

As globalization accelerates, educational exchanges and cross-border cooperation become more common. As an important city of the "Belt and Road" initiative, Hainan Province faces unprecedented opportunities and challenges in its education. According to UNESCO statistics, more than 6 million international students were studying abroad in 2021, of which Chinese students account for a considerable proportion (Ministry of Education of the People's Republic of China, 2022). As an important part of Hainan Province, Hainan Dongfang New Silk Road College (hereinafter referred to as "New Silk Road College") shoulders the important task of cultivating high-quality talents with an international vision and innovation ability. Since its establishment, the New Silk Road College has been committed to building an international and modern education platform to provide intellectual support for the economic and social development of Hainan and even the whole country.

The ability of leaders to inspire prodigious action in themselves and those around them during periods of idea generation and innovation is known as innovation leadership. Innovative leaders may encourage those around them to make their big aspirations and creative ideas a reality. Leaders are creative visionaries with big aspirations and new ideas. The sustainable development objectives can be achieved without compromising the resources required for future generations. It only concentrates on the expansion of resources to meet future needs over the long term. It is crucial to strike a balance between these, because without sound leadership direction, social, human, and cultural progress cannot occur. (Gayathri, 2024) The concept of innovative leadership might be a viable alternative to contemporary leadership for solving current problems effectively. Scholars have emphasized the dynamic nature of innovative Leadership, noting that it is particularly relevant in complex and rapidly changing environments such as higher education (Anderson et al., 2014; Denti & Hemlin, 2012). Innovative leadership for administrators in this era must

have digitization skills to inspire employees to be innovative so that they can perform higher, as it has been proven that leaders who have digital capabilities have a positive effect on innovative work behavior. Leaders must not only be able to command employees but also serve and motivate their subordinates. Leaders must be able to synthesis, communicate and embrace all colleagues.

The leadership style in today's digital era is more towards the use of information technology, which is developing on a large scale. All management activities can be monitored digitally, making it easier for leaders to do assessments or evaluations when something goes wrong. Digital leadership does not refer to someone who is an expert in assembling computers, operating computers, or programming, but someone who can lead organizations or companies using information and communication technology in the digital era to achieve organizational goals. Digital leadership is described as a leadership style resulting from a combination of transformational leadership style and the use of digital technology. In addition, digital leaders must also be able to innovate and collaborate with either elements of the organization or other stakeholders to find solutions. Therefore, digital leadership is required in the ongoing digital transformation process to manage changes and utilize technology quickly in various sectors, including the government sector. The same as in universities' human resources management, which consists of lecturers and educational staff, a leader who has the capability to carry out digital transformation is needed to achieve organizational success.

As one of the important higher education institutions in Hainan Province, the development of the innovative leadership of the New Silk Road College is not only related to the long-term development of the college itself, but also directly affects the process of education reform in Hainan Province and even the whole country. According to the "14th Five-Year Plan for the Development of Education in Hainan Province" issued by the Hainan Provincial Department of Education, by 2025, Hainan Province will strive to realize the higher education pilot zone and further promote the connotation-based development of higher education (Outline of the 14th Five-year

Plan for National Economic and Social Development of Hainan Province and the Long-Term Goals for 2035). In this setting, Administrators' awareness of innovative leadership at the New Silk Road College will become an essential indicator for assessing college development quality and educational reform efficacy. New Silk Road College (2024) in Hai Nan Province of China has 5 departments and 6 majors they are Software Technology, E-commerce, Digital Media Art Design, New Energy Material Application Technology, Dance Performance, and Recreational Sports. According to the December 2024 Year-end report, the problems in the leadership team management of New Silk Road College are summarized and analyzed. The analysis of New Silk Road College reveals a significant gap in the innovative leadership capabilities of its leaders, particularly in areas such as vision, talent development, learning to adapt, digital skills leadership, and teamwork and coordination of leadership across departments. This deficiency hampers the academy's ability to create and implement effective innovation strategies. Innovative leadership is crucial for university administrators. It is not only a necessary ability to cope with educational reforms, but also the key to improving the school's comprehensive strength and social influence. By continuously cultivating and practicing innovative leadership, university administrators can lead the school to achieve outstanding development in the new era.
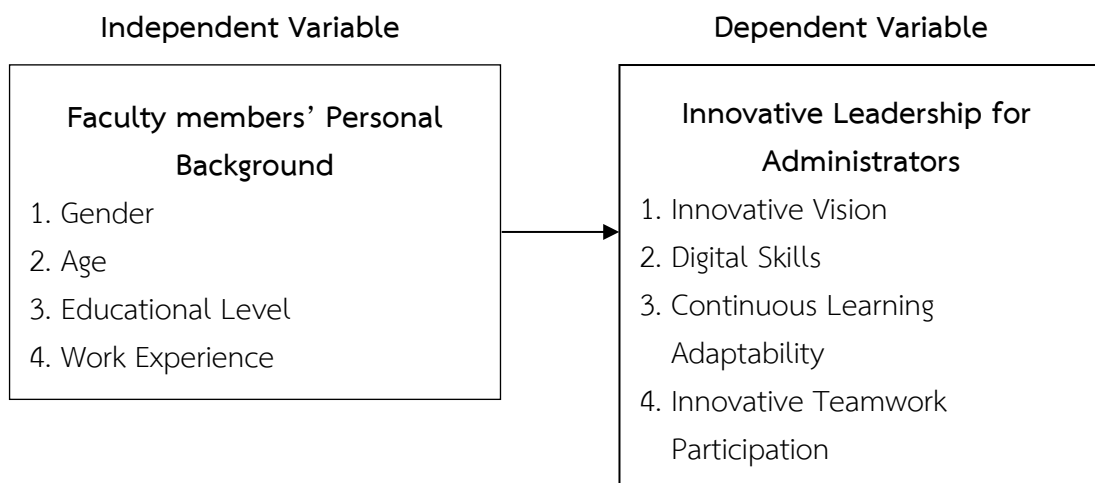
Research Objectives

1) To study the innovative leadership of administrators as perceived by faculty members in Hainan Dongfang New Silk Road College.

2) To compare innovative leadership of administrators as perceived by faculty members in Hainan Dongfang New Silk Road college, when classified by gender, age, educational level, and work experience.

Research Hypothesis

Innovative Leadership of administrators as perceived by faculty members in Hainan Dongfang New Silk Road college is different when classified by gender, age, educational level, and work experience.

Conceptual Framework

The dependent variable, innovative leadership, is conceptually based on the work of Puttitaweesri et al. (2024), specifically their study, "Exploring Challenges and Factors Influencing Teachers' Digital Innovative Leadership in Education' and the research by Fu (2025), "The Guidelines for Administrators in Innovative Leadership Development in Guangdong Dance and Drama Vocational College, Guangdong".

Independent Variable

Dependent Variable

Faculty members' Personal Background	Innovative Leadership for Administrators
1. Gender 2. Age 3. Educational Level 4. Work Experience	1. Innovative Vision 2. Digital Skills 3. Continuous Learning Adaptability 4. Innovative Teamwork Participation

Figure 1 Conceptual Framework

Research Methodology

Research Design

The research selected respondents from Hainan Dongfang New Silk Road College. In selecting the 57 respondents, the researcher used stratified random sampling according to majors, following Krejcie and Morgan's table (1970) to determine the sample size for a given population and selected by simple random sampling (Krejcie and Morgan, 1970 as cited in Petchroj et al., 2019).

The research instrument was a questionnaire for collecting data was a questionnaire which was checked for validity by three experts. It had a questions value of 0.67-1.00, and reliability by Cronbach' alpha coefficient at 0.83 Interview form included a concluding question about adjustment in the management.

This study will use a questionnaire survey to collect data, using a quantitative research method.

The researcher distributes questionnaires via WeChat to faculty members to understand their views on the innovative leadership of administrators. This study focuses on 57 faculty members from the Hainan Dongfang New Silk Road College. Through data analysis, according to faculty members' views on innovative leadership for administrators, the latest ideas for innovative leadership for administrators are proposed.

Results

1) Analysis results of the research on "The Innovative Leadership for Administrators as Perceived by Faculty Members in Hainan Dongfang New Silk Road College", according to Table 1.

Table 1 Mean, standard deviation, meaning, and rank of the innovative leadership of administrators as perceived by the faculty members at New Silk Road College overall

(n=57)

Aspects	Innovative Leadership	$\overline{\mathbf{X}}$	SD	Meaning	Rank
1	Innovative Vision	4.34	.58	high	1
2	Digital Skill	4.29	.64	high	3
3	Continuous Learning Adaptability	4.27	.59	high	4
4	Innovative Teamwork Participation	4.30	.64	high	2
	Total	4.30	.57	high	

From Table 1, it was revealed that the faculty members' opinions on the innovative leadership of administrators were overall in high level ($\overline{\mathbf{X}}$ = 4.30, SD= .57). When considering each aspect are high level, the highest aspect was Innovative Vision in high level ($\overline{\mathbf{X}}$ = 4.34, SD = .58), followed by Innovative Teamwork Participation, Digital skill, and Continuous Learning Adaptability.

2) The comparison of the Innovative Leadership for Administrators as Perceived by Faculty Members, classified by gender, age, educational level, and work experience

Table 2 The innovative leadership for administrators as perceived by faculty members classified by gender

(n=57)

Aspects	Innovative Leadership	Male $\overline{X}$	Male SD	Female $\overline{X}$	Female SD	t	Sig.
1	Innovative Vision	4.40	.62	4.27	.53	.85	.40
2	Digital Skill	4.27	.69	4.32	.58	-.32	.75
3	Continuous Learning Adaptability	4.33	.59	4.19	.61	.83	.41
4	Innovative Teamwork Participation	4.27	.70	4.33	.56	-.33	.74
	Total	4.32	.60	4.27	.54	.25	.81

From Table 2, it was revealed that the innovative leadership of administrators as perceived by the faculty members at New Silk Road College classified by gender shows no difference in total and all aspects.

Table 3 The innovative leadership for administrators as perceived by Faculty members, classified by educational level

(n=57)

Aspects	Innovative Leadership	Educational Level				t	Sig.
		Bachelor		Master			
		$\bar{\mathbf{X}}$	SD	$\bar{\mathbf{X}}$	SD		
1	Innovative Vision	4.44	.61	4.27	.56	1.10	.28
2	Digital Skill	4.30	.73	4.29	.58	.06	.96
3	Continuous Learning Adaptability	4.26	.65	4.27	.56	-.06	.95
4	Innovative Teamwork Participation	4.31	.68	4.29	.61	.12	.90
	Total	4.33	.63	4.28	.53	.31	.76

From Table 3, it was revealed that the innovative leadership of administrators as perceived by the faculty members at New Silk Road College, classified by educational level, shows no difference in total and all aspects.

Table 4 Mean and standard deviation of the innovative leadership for administrators as perceived by faculty members classified by age

(n=57)

Aspects	Innovative Leadership	Age					
		Less than 30 years old		31-40 years old		More than 40 years old	
		$\bar{\mathbf{X}}$	SD	$\bar{\mathbf{X}}$	SD	$\bar{\mathbf{X}}$	SD
1	Innovative Vision	4.30	.55	4.28	.65	4.48	.53
2	Digital Skill	4.39	.47	4.16	.72	4.32	.73

Table 4 (Con.)

Aspects	Innovative Leadership	Less than 30 years old		31-40 years old		More than 40 years old	
		$\overline{\mathbf{X}}$	SD	$\overline{\mathbf{X}}$	SD	$\overline{\mathbf{X}}$	SD
3	Continuous Learning Adaptability	4.27	.58	4.26	.57	4.28	.67
4	Innovative Teamwork Participation	4.31	.57	4.15	.72	4.47	.61
	Total	4.32	.51	4.21	.62	4.39	.61

From Table 4, it revealed that the mean and standard deviation of the innovative leadership of administrators as perceived by the faculty members at New Silk Road College, overall classified by age, the highest is the group of more than 40 years old ($\overline{\mathbf{X}}$ = 4.39, SD.=.61), follow by the groups of less than 30 years old and 31-40 years old.

Table 5 The analysis of variance of the innovative leadership of administrators as perceived by the faculty members at New Silk Road College, classified by age

(n=57)

Aspects	Innovative Leadership	Sources of Variance	SS	df	MS	F	Sig.
1	Innovative Vision	Between Groups	.45	2	.22	.65	.53
		Within Groups	18.50	54	.34		
		Total	18.95	56			

Table 5 (Con.)

Aspects	Innovative Leadership	Sources of Variance	SS	df	MS	F	Sig.
2	Digital Skill	Between Groups	.60	2	.30	.71	.49
		Within Groups	22.47	53	.42		
		Total	23.07	56			
3	Continuous Learning Adaptability	Between Groups	0.004	2	.002	.01	.99
		Within Groups	19.71	53	.37		
		Total	19.72	56			
4	Innovative Teamwork Participation	Between Groups	.91	2	.45	1.11	.34
		Within Groups	21.99	54	.41		
		Total	22.90	56			
	Total	Between Groups	.29	2	.15	.44	.65
		Within Groups	18.01	54	.33		
		Total	18.35	56			

From Table 5, the analysis of variance of the innovative leadership of administrators as perceived by the faculty members at New Silk Road College, classified by age, shows no difference in total and all aspects.

Table 6 Mean and standard deviation of the innovative leadership of administrators as perceived by the faculty members at New Silk Road College overall, classified by work experience

(n=57)

Aspects	Innovative Leadership	Work Experience					
		1-5 years		6-10 years		More than 10 years	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1	Innovative Vision	4.41	.55	4.11	.69	4.42	.53
2	Digital Skill	4.48	.48	3.88	.79	4.34	.61
3	Continuous Learning Adaptability	4.38	.60	4.11	.60	4.24	.59
4	Innovative Teamwork Participation	4.42	.59	4.04	.71	4.33	.63
	Total	**4.42**	**.53**	**4.03**	**.65**	**4.33**	**.54**

From Table 6, it revealed that the mean and standard deviation of the innovative leadership of administrators as perceived by the faculty members at New Silk Road College overall, classified by work experience, the highest is the group of years 5-1 ($\bar{X}$ = 4.42, SD=.53), followed by more than 10 years and 6-10 years.

Table 7 The analysis of variance of the innovative leadership of administrators as perceived by the faculty members at New Silk Road College, classified by work experience

(n=57)

Aspects	Innovative Leadership	Sources of Variance	SS	df	MS	F	Sig.
1	Innovative Vision	Between Groups	.96	2	.48	1.44	.25
		Within Groups	17.99	54	.33		
		Total	18.95	56			
2	Digital Skill	Between Groups	3.11	2	1.55	4.20*	.02
		Within Groups	19.96	54	.37		
		Total	23.07	56			
3	Continuous Learning Adaptability	Between Groups	.62	2	.31	.88	.42
		Within Groups	19.10	54	.35		
		Total	19.72	56			
4	Innovative Teamwork Participation	Between Groups	1.23	2	.61	1.53	.23
		Within Groups	21.67	54	.40		
		Total	22.90	56			
	Total	Between Groups	1.30	2	.65	2.05	.14
		Within Groups	17.06	54	.32		
		Total	18.35	56			

*Statistically significant at the level of .05

From Table 7, it revealed that the analysis of variance of the innovative leadership of administrators as perceived by the faculty members at New Silk Road College, classified by work experience, Digital skill showed a significant difference at .01, in the aspects of Innovative vision, and continuous Learning Adaptability showed no difference.

Table 8 The pair difference of the item Digital skill by the faculty members at Work experience

(n=57)

Innovative Leadership		Work Experience		
		1-5 years	6-10 years	More than 10 years
Digital skill	$\bar{\text{X}}$	4.48	3.88	4.34
1-5 years	4.48	-	.60**	0.14
6-10 years	3.88			-.46*
More than 10 years	4.34			-

*Statistically significant at the level of .05

**Statistically significant at the level of .01

Table 8 revealed the pairwise differences in digital skills among teachers in different work experience groups. It shows how faculty members with different levels of work experience, 1-5 years, 6-10 years, and more than 10 years, rated administrators on their digital skills, showing a statistically significant difference between faculty with 1-5 years of experience was .60**, and a statistically significant difference between faculty with more than 10 years of experience was -.46*.

Discussion

1) The results showed that the aspect of innovative vision was at the highest level. Regarding the dimension of innovative vision, faculty members generally consider the overall level to be the highest. Among them, aspects such as "administrators aligning faculty work with long-term vision" and "administrators actively fostering organizational learning networks to support innovation" receive higher scores, while "administrators actively promoting collaboration to drive innovative solutions that enhance educational outcomes" scores relatively lower.

2) The results of comparison founded that these was not different when classified by gender, age, education level, but it of statistically significant at .05, revealed that faculty regard administrators' ability to analyze institutional data for strategic decision-making as crucial. During the ongoing digital transformation in education, leaders use data to identify development challenges, optimize resource allocation, predict risks, and shift from experience-based to science-driven management. Data transparency also enhances internal and external collaboration, supporting sustainable school development. Ellen (2013) in "Improving College Leadership: From Data to Decisions" highlights that data encompass observations of teaching quality and classroom content. Leaders can use data to create a culture of continuous learning for both staff and students, guiding improvements and collaborative research.

3) According to the research results in Table 8, there is a significant digital skills gap related to work experience. Teachers with 6-10 years of experience show "low points" across multiple dimensions, likely due to career burnout or transitional adaptation phases. Zhou (2001) in "Causes and Solutions of Professional Crisis among Middle-Aged Teachers" notes that mid-career teachers often struggle to adapt to rapidly evolving educational ideas and technology due to entrenched teaching philosophies. Guo (2014), in "A Survey on Mental Health and Stress Sources of Young Faculty in Vocational Colleges", highlights that young faculty members prioritize career development and that universities should foster a relaxed, democratic environment, listen to their input, and alleviate pressure to support their growth.

Recommendation

First, to implement an innovative vision effectively, institutions must establish a closed-loop system from strategic planning to execution, breaking down long-term goals into actionable annual and quarterly tasks. Cross-departmental collaboration and special funding are key to supporting joint innovation and overcoming execution gaps. As Chen (2022) suggests, administrators should follow a "consensus-execution-feedback" model: build shared understanding through clear goal setting (e.g., using SMART principles),

translate vision into individual responsibilities, and use dynamic feedback and data tracking to adapt strategies and drive collective progress.

Second, tiered digital training should be provided for administrators, with practical support from tech-savvy staff and a senior-led digital strategy team to improve efficiency through toolkits and early-warning systems. Liu (2024) emphasized that flexible working models can optimize teachers' schedules and enhance autonomy, as long as teaching quality is maintained.

Third, to enhance adaptability, institutions should implement biannual simulations of emergency scenarios--such as policy changes or technological updates-- to strengthen administrators' rapid response skills. A closed-loop system for collecting and rewarding teachers' innovation suggestions should also be established, linking their participation to performance evaluations to drive both responsiveness and creativity. Liu (2023) emphasized that professional adaptability also depends on a culture of continuous learning. Instead of relying solely on top-down training, vocational colleges should promote self-directed learning by creating supportive environments, setting up relevant systems, and embedding independent learning into institutional culture.

Fourth, establish a hierarchical delegation system that assigns non-core tasks to teacher teams with a trial-and-error budget, while building knowledge-sharing platforms to connect career development with contribution value. Optimize team structures by forming senior advisory groups and mentoring plans to improve digital skills and management. Li (2024) highlights that managers should create a supportive, inclusive work environment that promotes resource sharing, open communication, and tolerance for failure to enhance trust, cohesion, and intrinsic motivation among employees.

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