

Good Management System of Rajabhat University Administrators According to the BCG Model Goals

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Abstract

This article aims to presents the good management system of Rajabhat University administrators according to educational BCG model goals that facilitates implementation. The study proceeds the process of Ethnographic Delphi Futures Research (EDFR) by reviewing those concepts and putting processes including opinion and brainstorming from the various groups in higher educational expert, synthesizing ideas and analysis to reach consensus of the goodness management system as goal educational BCG model.

Keywords: Good Management System, Rajabhat University Administrator,
BCG Model

Introduction

The BCG model has been Thailand's sustainable development goal relies on the strength-basis of the country to enhance highly owned valued and upgrade goods and services toward the production chain with innovative technology forward

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sustainable economic growth through income opportunities, wealthy distribution, simultaneously conserve the resource base, cultural diversities, and balancing bio-diversities. Those consist of bio-economy, circular- economy, and green economy. As a policy maker, the Ministry of Higher Education, Science, Research, and Innovation manipulated strategic-driven development linked to higher education in four approaches (Office of the Educational Policy Council, 2021). First, develop new generation entrepreneurs, second create the human resource that supports the useability of knowledge, technology, and innovation to develop the economy at the local, third increasing research scientists, engineers, and technicians to develop technology of knowledge, innovation, fourth develop the knowledge and update personal skills in the industrial to respond technological changes in the global. Rajabhat Universities must have thus good management system to manage curriculum to meet occupation needs, develop academic personnel, and create a body of knowledge in all fields namely, maintaining the arts, culture, and innovative transfer to the local and community.

Therefore, administrators of Rajabhat Universities must determine the organizational structure and other elements of the management systems to follow the educational BCG model policy. Essentially, these approaches align with the development goal sets to achieve the desired outcomes.

Research Objective

To study the Rajabhat University Administrators' good management system according to the BCG model goals from brainstorming consensus of experts.

Review Literature

Concept of BCG Model Policy

BCG model policy, Thailand's strategy of economic development related to higher education and the management system of Rajabhat University inevitable, following Sustainable Development Goals (SDGs), the guidelines for the members of the UN at a conference on September 25, 2015, in America (Office of the Higher Education Commission, 2008). As a member, Thailand also led this guideline to make

the national strategic development "called the BCG model" or Bio-Economy, Circular-Economy, and Green-economy model by the Ministry of Higher Education, Science, Research and Innovation. The strategy consisted of four approaches: first, conduct knowledge, technology, and innovation to sustainable resource-based and biodiversity balance between conservation, restoration, and utilization, Community capacity building to develop a resources management system and sustainable consumption. Second, strongly basis communities' development from capital resources, identity, creativity, and use the modern technology to benefit bio-diversity and culture-diversity toward goods and services chain in higher value. Along with spatial development with transfer knowledge, opportunities accesses, food security, health, and energy. Third, industrial development to enhance sustainable competitiveness in manufacturing and service sectors. To continue growing from raising production efficiency with knowledge, technology, and innovation, reducing losses, recycling resources, and up to value add as the circular economy, raise to standard quality, security and healthy. Fourth, emphasis on creating international standards of production and environment friendly in each sector, including

- 1) Restructure production in agriculture towards diverse and high-value.
- 2) Emphasis is placed on the capacity to develop stable medical innovations, increasing the health quality and medical services to link with regional value chains.
- 3) Focus on energy, materials, and biological chemistry, value add in agricultural products with technology and innovation used in waste materials from economic activities to energy security at all levels.
- 4) Push the new tourism model by adjusting tourism to green and higher value, promote sustainable and environmental preserve tourism, etc.

In addition, these also need to develop investment opportunities and create a market with a business model by applying the principles of the circular economy to drive towards sustainability and increase competitiveness and the new economy, promoting research, technology, and innovation to create new products and services from reusing waste. Create knowledgeable manpower to drive the circular economic approach through training courses and awareness of sustainable production and consumption. To mitigate the global context of changing impact, building access opportunities, and building immunity, necessarily strengthen response and invest in

high-speed technology or artificial intelligence systems and molecular sensory to develop agriculture, food, health, precision medicine, and future food products.

The concept of the Rajabhat University management system

In addition to the performance of learning, transferring, training, cultural inheriting, and creating academic advancement and knowledge under the National Education Act 2004. Rajabhat University also emphasizes long-life learning to build people's knowledge, morality, and ethics, as well as the culture in their together lives. As the regulatory agency, the Ministry of Higher Education, Science, Research and Innovation provides the policies to 38 Rajabhat Universities for management approaches to keep change adapting. They also prepared a 20-year strategic plan (2017 - 2036) to produce teacher and local development and enhance educational quality. However, each one has its strategy namely, improving the learning curriculum diversely, and interpolating knowledge professional and technical to prepare customized people for the work.

Thereby, administrators' educational management in each Rajabhat university must be at least two missions. First, the eliminating obstacles and problems arise, second, produce quality graduates knowingly technology, skilled and research competently and academic services to local economic development and social security. Graduates are important to driver development under the action plan of Bio-Economy, Circular-Economy, and Green-Economy or BCG Model according to the government's guidelines of Thailand 4.0 era (Thanatrakul, 2020, Online).

At the level of implementation, it has the missions including 1) promote academics, high professional, teacher-generated, and qualifications. 2) Focus on the research for the use of biological resources to value add, spread a circular economy, and be non-toxic. 3) Adjustment, transferring, and technological development and service in many sciences to society. 4) Maintaining local arts and culture to create soft power spread to society and generate income sustainable.

Rajabhat Universities must participate in various projects in the implementation, including the project of raising quality, safety, and local food

standards (Street Food/Community Enterprise). The project of Community Energy, Smart Grid and Energy Trading Platform (ETP), and the project of driving economic development with the BCG model in spatially integrated agriculture are based. The project of the large data warehouse in the agricultural sector to increase production efficiency and production-marketing balancing, develop village agricultural volunteers and young smart farmers to the modern skills and knowledge to generate income. The project of livelihood of sticky rice farmers with modern agriculture on the Mekong Basin Cultural Route (BCG-Naga Belt Road), and the project of Clean and Circular Energy: C-Energy. These must be the manpower development for the project of the university to tambon (U2T) to establish the BCG economy. In that area, necessary to re-skill, up-skill to keep up with the pace of new technology changes in the biorefinery industry. They will be responsible to responsibility both the main and secondary agencies concerning the context of areas and administration. Administrators therefore must understand the project mission concerning the university context in responsible for driving Thailand's development as the BCG model according to the cabinet resolution. However, there are 4 missions viz, first, providing higher education, professions, excellent graduates, and teachers in academy produce, to have morality and quality consistent with the Nation's graduate plan. Second, study and research conducted for local development according to the royal initiative project. Third, providing academic services to society to strengthen communities, a sense of democracy, morality, and ethics establishment, cooperation and assistance among universities, communities, and local organizations, the other organizations both domestic and international, sustainable local development with folk and modern technology for occupations. Fourth, preserving arts and culture strengthens knowledge and values understanding, awareness, and pride in local and national cultures. In addition, there must develop a management system for digital information organizations and green universities, along with the transformational leadership to proactive work. These important issues to the operation have four areas; 1) digitalization and agile management systems of

the Rajabhat Universities, 2) information systems to their linkage in 38 places, 3) infrastructure and outside agencies linkage to help support policy and sources and income 4) potential development and advance personnel careers of Rajabhat Universities.

The concept of Educational Administrator

A trait of educational administration means administration and/or management that refers to the two areas of operation scope both general management and educational management. In higher education, academics namely Sararatana (2003), Ngamsa-ad (2007), and Phianphayrun (2011) defined in managerial condition, educational administrators thus have the role of planning, organizing, controlling, and maintaining their system to manage the operational process efficiently. And also, to manage academics, and establish relationships with the community and others to relate. While, Pickersgill, Barneveld & Bearfield (1998) defined educational administrators in both the scope of general and educational tough toward the viewpoint that the two things must intersect. But, McInnis (1998) does not quite agree, his view on academic management is different, the general management involves managing academics who are employees of the organization and can enable growth. Bossu, Brown & Warren (2019) agree with McInnis, they showed the various management by suggesting that the administrators must able to manage and enhance academic capacities, improve curriculum, create skills for the learner, especially technological skills, and establish innovations for society. Adams (2016) expressed the concept of a management role as It is a managerial role in academic capacities to the public benefits from their professional quality, according to the national policy, whether in the context of a business or changing perspective towards the public interest. Whitchurch (2017) and Padro (2018) remarked educational administration that must have a clear identity from the roles and responsibilities, namely, academic promoting, development, and innovation including identity to related human resources and its aspects, and student building to the public. Especially, the true demand for workforces in the higher skills of technology, and science in every field. Nevertheless, the management system must

also policy response by designing a structural administration or management to establish an environment to work well and leads the new skills and knowledge from transfer and self-building with quality. Normally, educational management was related to the management of human resources, paradigms changing in learning especially, in participating good governance among socioeconomic and politics changing in accelerations rate at the present. As defined, it seems that the Rajabhat University administrators necessarily consist of the management of higher education institutions outside the Rajabhat group.

Methodology

This study used the Ethnographic Delphi Futures Research (EDFR) to conducting with three steps, step one prepares and define groups of expert totals of 19 people, specify and divide into the executive of the unit work in both the general education and the universities, the executives of Rajabhat University, the executives of government agencies, private organizations, state enterprises, and the person who involved driving the BCG model policy. This step was an open interview to get the answers to trends, and perspectives of strategy of Rajabhat Universities, then classify the most likely trend. The data from step one was taken to design the approximate questionnaire of the Likert Rating Scale for analysis in step two, and to find consensus by the median mod interquartile range (Q1 - Q3) and analysis to confirm the consensus in step 3 as in Table 1

Table 1 Methodology in the study

Step	Process	Results
1	1. Prepare and define executive grouping 2. EDFR Interviews 3. Analysis and Synthesis	The most probable perspective

Table 1 (Continue)

Step	Process	Results
2	Establish instrument, the questionnaire measurement of the Likert scale and statistics for finding consensus	The future perspective data and approximate questionnaire of the Likert scale for finding consensus
3	<p>1. Establish questionnaire tools to show feedback data by statistics to find the consistency, this score follower;</p> <p>Median</p> <p>4.50 – 5.00 = Most Consistent</p> <p>3.50 – 4.49 = Very Consistent</p> <p>2.59 – 3.49 = Moderate Consistent</p> <p>1.50 – 2.49 = less Consistent</p> <p>1.00 - 1.49 = Least Consistent</p> <p>Difference between Median and Mod > 1.5</p> <p>Interquartile range (Q1 -Q3) > 1.50</p> <p>2. Consensus Confirmation</p>	Consensus of goods management system as BCG model goals of Rajabhat Universities Administrators.

Research Results

The overall analysis of perspectives data of 19 experts in 4 groups from step 1 appears in table 2

Table 2 Overall perspectives data of expert in step 1

Administrator Groups	Number/Person	Overall Perspective data
Group of experts in general educational institution and Universities	5	Using technology to manage academic, produce graduates to meet market needs, etc., and the global economy and society change consistently, including the management system to show the strengthen and sustainable organization and implementation following the BCG Model policy goals.
Group of Rajabhat University executives	7	An education management system meets the goals of the BCG model. To produce graduates to meet the knowledge needs, social services, transferring development with a flexible system effective according to the principles of good governance and able to carry out within the resources limitation.
Executive Groups of government, private and enterprises agency	5	The goods management system means management to teaching and learning development to hybrid graduate features. Flexibility in management able to drive the development the country's

		progress under good governance and manage according to reality.
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Table 2 (Continue)

Administrator Groups	Number/Person	Overall Perspective data
Group of driver BCG Model	2	There is an educational management system for comprehensive local development.

Step 2 Design the questionnaire and measurements from dialogue data of experts from step 1 to be the future perspective accordant with consensus and then analyze the consistency trend.

Step 3 The result of the analysis showed the statistical feedback consensus of a good management system of Rajabhat University administrators following BCG model goals.

The feedback data of 4 groups, 19 experts, and consensus confirm consistency trend with the median, mod, and difference between median and mod (Med-Mod) and interquartile range (IQR). The perspective of a good management system of Rajabhat University is shown in Table 3.

Table 3 Statistical Analysis of Result' s good management system of Rajabhat University According to BCG Model Goals

Good Management System of Rajabhat University According to BCG model goals	Statistical Consistency Level
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1. Necessarily, each agency has clear structural management, operational roles and able to exchange information or knowledge which each other.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00

Table 3 (Continue)

Good Management System of Rajabhat University According to BCG model goals	Statistical Consistency Level	
2. Downsizing, merging, and/or disbanding groups, tasks, and some duties that overlap or are unnecessary within agencies and organizations.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 4-5
	IQR	= 1.00
3. Organizations, agencies, and work groups should be operated under an authority framework and duties completely under the regulation.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00
4. Policies determination must be consistent with the policy of the nation, and ministry, and under the mission of the university.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00
5. Rules, criteria, and regulations of a university must be flexible.	Median	= 5
	Mod	= 5

	Med-Mod = 0
	Q1-Q3 = 5-5
	IQR = 0.00

Table 3 (Continue)

Good Management System of Rajabhat University According to BCG model goals	Statistical Consistency Level
6. Reduce operational procedures to be concise and fast, using technology as a management tool.	Median = 5 Mod = 5 Med-Mod = 0 Q1-Q3 = 5-5 IQR = 0.00
7. Executives know and understand the risks in the era of change and development towards a new thing, and must know how to manage within limitations under changing contexts dynamically.	Median = 5 Mod = 5 Med-Mod = 0 Q1-Q3 = 4-5 IQR = 1.00
8. Executives must recruit knowledgeable and abilities personnel to manage and be able to cooperate with executives in all divisions.	Median = 5 Mod = 5 Med-Mod = 0 Q1-Q3 = 5-5 IQR = 0.00

9. Reforming the budget system to ensure efficiency due to the decreasing income from fewer students, to reduce unnecessary expenses, and to generate income from utilizing university resources to a high value.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00

Table 3 (Continue)

Good Management System of Rajabhat University According to BCG model goals	Statistical Consistency Level	
10. Limitation of budget no obstacle to structural administration and operations.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 4-5
	IQR	= 0.00
11. Develop all management systems to be efficient and have a growing technology.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00
12. Search, promote, and create modern technology to utilize management and operations.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00

13. Recruiting personnel with knowledge and abilities, that meet the mission and support teamwork to achieve goals.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 4-5,
	IQR	= 1.00

Table 3 (Continue)

Good Management System of Rajabhat University According to BCG model goals	Statistical Consistency Level	
14. New public management utilizing, focus on efficiency, effectiveness, and responding to graduate user needs.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00
15. Administrators must use all resources of the university in worthwhile and beneficial.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00
16. Reforming rules, and regulations into a systematic process directed on a goal, has an objective key result (OKRs) both in the short term and in the long term consistent with change.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00

17. Executives decentralize approval and command to lower to make decisive decisions under the duties scope of agency and/or assigned mission.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 4-5
	IQR	= 1.00

Table 3 (Continue)

Good Management System of Rajabhat University According to BCG model goals	Statistical Consistency Level	
18. Creating a system to supervise and verify accuracy, and precise practice clearing.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00
19. Supporting and promoting the ability to work integrated with agencies in both government and private sectors.	Median	= 5
	Mod	= 5
	Med-Mod	= 0
	Q1-Q3	= 5-5
	IQR	= 0.00

Table 3, found that 19 experts confirm the issues of the good management system of Rajabhat University in 19 factors. Results of the analysis found the consensus in all issues consistent at the highest level Therefore, a good management system of Rajabhat University should be;

1. Clear structural management, and operational roles and can exchange information or knowledge with each other.

2. Downsizing, merging, and/or disbanding groups, tasks, and some duties that overlap or are unnecessary within agencies and organizations.

3. Organizations, agencies, and work groups should be operated under an authority framework and duties completely under the regulation.

4. Policies determination must be consistent with the policy of the nation, and ministry, and under the mission of the university.

5. Rules, criteria, and regulations of a university must be flexible.

6. Reduce operational procedures to be concise and fast, using technology as a management tool.

7. Executives know and understand the risks in the era of change and development towards a new thing, and must know how to manage within limitations under changing contexts dynamically.

8. Executives must recruit knowledgeable and abilities personnel to manage and be able to cooperate with executives in all divisions.

9. Reforming the budget system to ensure efficiency due to the decreasing income from fewer students, to reduce unnecessary expenses, and to generate income from utilizing university resources to a high value.

10. Limitation of budget no obstacle to structural administration and operations.

11. Develop all management systems to be efficient and have a growing technology.

12. Search, promote, and create modern technology to utilize management and operations.

13. Recruiting personnel with knowledge and abilities, that meet the mission and support teamwork to achieve goals.

14. New public management utilizing, focus on efficiency, effectiveness, and responding to graduate user needs.

15. Administrators must use all resources of the university in worthwhile and beneficial.

16. Reforming rules, and regulations into a systematic process directed on a goal, has an objective key result (OKRs) both in the short term and in the long term consistent with change.

17. Executives decentralize approval and command to lower to make decisive decisions under the duties scope of agency and/or assigned mission.

18. Creating a system to supervise and verify accuracy, and precise practice clearing.

19. Supporting and promoting the ability to work integrated with agencies in both government and private sectors.

Conclusion and Discussions

A good management system of the University in various issues accords an academic perspective such as planning for recruiting with qualifications, knowledge, abilities, and expertise, and supports cutting-edge academic operations including the policies and efficient personnel management systems to respond to strategic development to an educational institution. These concepts were proposed by many academics such as Saratana (2003), Ngamsa-at (2007), and Phianphayun (2011). As well as Pickersgill, Barneveld & Bearfield (1998) also believe that management systems are general and educational. While McInnis (1998), and Bossu, Brown & Warren (2019) emphasize encouraging personnel to seek knowledge, it means re-skill, up-skill, and new-skill to keep up with changes in technology. Whitchurch (2017) and Padro (2018) clarify the management in each part, such as the system for fair assessment consistent with a job description. Especially, the process personnel in the comfort zone, which the pattern to competency and performance assessment to keep up with the global rapid change to establish awareness of diligent work and public interest. Therefore, the 19 issues above should be able to respond to

development and driving according to the duties of Rajabhat University as an agency under the BCG Model policy.

Recommendations

1. It should be studied in the other issues or the other features to beneficially utilize the higher educational administration.

2. This study emphasizes the good management system of Rajabhat University. In fact, may have many limitations. and different from the general university. Therefore, studying good management systems at a general university probably provides benefits to managing systems in higher education.

3. The issues of the good management system from this study will be useful in practice if the above issues can be concretely implemented.

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