MANAGEMENT INNOVATION AFFECT SERVICE EFFICIENCY FOR CHINESE STUDENT IN MASTER OF MANAGEMENT PROGRAM, MANAGEMENT INNOVATION

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ABSTRACT

The purpose of this research was to study management innovations that affect service efficiency for Chinese student, Master of Management Program in Management Innovation. This research is a quantitative research. 100 Chinese students from the Master of Management Program in Management Innovation formed the sample group using a simple random sampling. The research tool was a questionnaire. The frequency, percentage, mean, and standard deviation of the data should be analyzed using descriptive statistics. Using multiple regression analysis, inferential statistics examine the data.

The results of the research found that management innovation can predict 73.30% of service efficiency for Chinese students enrolled in master's programs. The examining independent variables that have an effect on dependent variables found that innovation management in curriculum and instruction has the greatest effect, followed by general management, independent study standards, admissions, and registration and evaluation, in order that there has a statistically significant influence on Chinese students service efficiency for Chinese students in Master of Management Program, Management Innovation statistically significant at 0.05

Keywords: Management Innovation, Service Efficiency, Service for Chinese Students

INTRODUCTION

1. Introduction

Efficiency in education services (OECD, 2017) is crucial for higher education institutions, particularly when it comes to serving a large number of students, including Chinese international students. It is important to respond quickly and accurately to their needs and ensure that the services provided meet their requirements. In the case of higher education institutions, which are organizations associated with a large number of students, providing quality services to students must be emphasized, especially to Chinese international students, in order to attract more students, improve the institution's reputation in the international education market, and ultimately provide a high-quality education (OECD, 2020) to students.

1.1 Objective

To improve efficiency in services providing for Chinese students. Master of Management Program Management Innovation (Rajabaht Suansunandha University, n.d.).

1.2 Research scope

1.2.1 Content Scope

This research focuses on management innovations that affect service efficiency for Chinese students enrolled in the Master of Management Program in Management Innovation.

1.2.2 Population scope

The population of this study is Chinese students who are enrolled in the Master of Management Program in Management Innovation formed the sample group. It is important to note that the population scope is limited to Chinese students (Rajabaht Suansunandha University, n.d.).

1.2.3 Geographical scope

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a. Conceptual framework

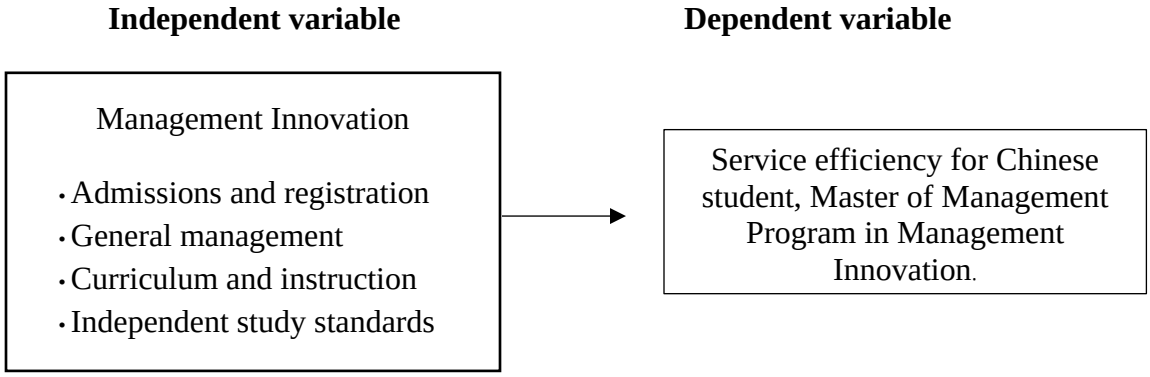

Figure 1: Conceptual framework
Sorce: (Juana-Espinosa, Berbegal-Mirabent, & Ribeiro-Soriano, 2018), (Liu & Liu, 2017)

RESEARCH METHODOLOGY

2. Research methodology

2.1 Research design

This research is a quantitative research will involve the collection of numerical data using structured instruments such as questionnaires. The study will analyze the management innovations that affect service efficiency for Chinese student in the Master of Management Program in Management Innovation.

2.2 Population and samples

2.2.1 Population

Population refers to Chinese students from the Master of Management Program in Management Innovation Rajabaht Suansunandha University Thailand (Rajabaht Suansunandha University, n.d.).

2.2.2 Samples

A sample group of 100 Chinese students from the Master of Management Program in Management Innovation was selected using a simple random sampling method, which means that each member of the population has an equal chance of being selected.

The sample size was determined using the Taro Yamane formula (Yamane, 1973) with a 95% confidence level and a margin of error of 0.05 for the sample group, as follows:

Using the formula $n = \frac{N}{1+N(e)^2}$

n = sample size

N = study population size

e = is the margin of error (set at 5% or 0.05)

the sample size for this study is calculated as follows:

$$n = \frac{133}{1+133(.05)^2}$$

$$n = 100$$

2.3 Instrumentation

The research tool used to collect data is a questionnaire, which applied theories, concepts, and related research on management innovations that affect service efficiency for Chinese student, Master of Management Program in Management Innovation. To defining each variable and creating the questionnaire. Then checked the quality of the questionnaire and set scoring criteria. The development process of the research questionnaire includes the following steps:

1. Study theories, documents, and related research to create data for questionnaire development. Then, ask for opinions and additional suggestions from the advisor.
2. Synthesize the text obtained from the study of documents and related research, then write them into operational definitions that are measurable and clear.
3. Create a questionnaire based on the components and behaviors identified in the operational definitions.
4. Evaluate the questionnaire and modify it according to the suggestions of three experts. These experts will assess the congruence index of each item with the research objectives (Index of Item Objective Congruence: IOC) to evaluate the quality of the questionnaire. They will also check the content validity by examining the consistency between the components and behaviors identified.

2.4 Testing quality of research instrument

This research used a questionnaire to examine the content validity of the text in each question to ensure that they aligned with the objectives of the study. The questionnaire was reviewed by three qualified individuals to assess the clarity of the language and the congruence of the questions with the objectives (Index of Item Objective Congruence: IOC), where an acceptable index value must be 0.60 or higher. The scoring criteria were as follows:

+1 Means the question is clearly aligned with the objective and can be used to measure it accurately.

0 Indicates uncertainty about whether the question can measure the objective.

-1 Indicates that the question is not aligned with the objective and cannot be used to measure it accurately.

After that, the IOC for each question was calculated using the following formula:

$$\text{IOC} = \frac{\sum R}{N}$$

Where IOC refers to the index of item objective congruence between the content of the question and the objectives of the study.

R refers to the score given by each qualified individual.

ΣR refers to the sum of scores given by each qualified individual for each question.

N refers to the number of qualified individuals.

An acceptable index value must be 0.50 or higher. And selected questions with an IOC value of 0.50 or higher for use in the study, all of which were evaluated by the three qualified individuals and found to have content validity that covered all aspects of the objectives, with an IOC value ranging from 0.80-1.00.

2.4.1 Content validity

The instrument has been revised based on expert feedback, the content validity could be assessed using the Index of Content Validity (IOC) method, as described in my previous response. The IOC could be calculated by obtaining ratings from experts on the relevance of each item in the instrument to the content domain being measured, and then dividing the sum of the ratings for each item by the maximum possible sum of ratings for that item.

2.5 Data collection

This research collected data by using an online questionnaire with a sample group of 100 people, while keeping backup data in case of incomplete or inaccurate responses at a rate of 10%. The data was collected in two ways:

1. Collected the data by directly sending the questionnaire to the sample group.
2. Due to the COVID-19 pandemic situation, collected data online from customers selected as a sample group based on the online questionnaire via email, and WeChat application. Then checked the accuracy and completeness of the questionnaire and recorded. After processing the data and analyzing various statistics, the results were recorded

2.6 Data Analysis

This research makes inferences about the population based on the sample data, then inferential statistics such as multiple regression analysis (Gujarati & Porter, 2009). Multiple regression analysis can be used to examine the relationships between the dependent variable and multiple independent variables and test hypotheses about the population.

RESULTS AND FINDINGS

3. Results and Findings

3.1 Testing the reliability of the questionnaire

To verify the accuracy and reliability of the questionnaire (DeVellis, 2016), will provide a preliminary test of the questionnaire consisting of 30 sets under the same conditions as when the questionnaire is used to collect actual data, in order to test data collection, understanding, and

communication of question meanings to the sample group.And also analyze to find the reliability of the questionnaire in various aspects using the Internal Consistency Method by considering the corrected item total correlations, which should be at least 0.20, as well as the concept of Cronbach's alpha as a measure of internal consistency reliability was introduced by (Cronbach,1951) in his article on the internal structure of tests in Psychometrical, which should be greater than 0.70, to indicate the consistency between the questions in each aspect, as shown in Table 3.1

Table 3.1: Results of reliability analysis (Reliability)

Variables	Number of questions	Reliability Cronbach's Alpha (n=30)
1. Admissions and registration	5	0.905
2. Independent study standards	5	0.912
3. General management	6	0.935
4. Curriculum and instruction	3	0.905
5. Service efficiency for Chinese student	4	0.939
Total	**23**	**0.969**

The results of the reliability analysis from Table 3.1 show that the reliability for the questions in each section range from 0.905 to 0.939, and the overall reliability is 0.969 (n = 30). Additionally, the questionnaire has been reviewed and its content has been confirmed to be appropriate. Therefore, it can be concluded that the questionnaire is suitable for use in collecting data for research.

3.2Results of the Opinion Level of Factors Service efficiency for Chinese student, Master of Management Program in Management Innovation.

Results of Data Analysis on the Opinion Level of Service efficiency for Chinese student Factors. Analyzing the data on Admissions and registration, Independent study standards, General management, and Curriculum and instruction. The results are presented as averages, standard deviations, and data interpretation in Table 3.2

Table 3.2: Average and standard overall deviation of service efficiency for Chinese students.

Service efficiency for Chinese students overall	Level of opinion			
	$\bar{\times}$	S.D.	Level	Sequence
1. Admissions and registration	4.02	0.608	High	2
2. Independent study standards	4.03	0.611	High	1
3. General management	3.90	0.642	High	3
4. Curriculum and instruction	3.86	0.736	High	4
Total	**3.95**	**0.571**	High	

From Table 3.2, the average and standard deviation values of opinions regarding service efficiency for Chinese students were found to be high, with an average value of 3.95 when considered across all aspects. When considering each aspect individually, found that the aspect with the highest average value was Independent study standards, with an average value of 4.03, followed by Independent study standards with an average value of 4.02, General management with an average value of 3.90, and Curriculum and instruction with an average value of 3.86, in order.

3.3 Hypothesis test results

The statistical test used to test the hypothesis was Multiple Regression Analysis, with independent variables selected using the Stepwise technique at a 95% confidence level. The null hypothesis (H0) was rejected when Sig had a value less than 0.05, as shown in Tables 4.9 - 4.10.

The results of the hypothesis testing on the research hypothesis regarding the management innovations that affect service efficiency for Chinese student, Master of Management Program in Management Innovation. of factors on service efficiency for Chinese students are as follows:

Research hypothesis 1: The management innovation factors related to Admissions and registration (X1) affects service efficiency for Chinese students.

Research hypothesis 2: The management innovation factors related to Independent study standards (X2) affects service efficiency for Chinese students.

Research hypothesis 3: The management innovation factors related to General management (X3) affects service efficiency for Chinese students.

Research hypothesis 4: The management innovation factors related to Curriculum and instruction (X4) affects service efficiency for Chinese students.

The statistical hypotheses can be written as follows:

H0: management innovation factors including Admissions and registration (X1), Independent study standards (X2), General management (X3), and Curriculum and instruction (X4) have an effect on service efficiency for Chinese students.

H1: management innovation factors including Admissions and registration (X1), Independent study standards (X2), General management (X3), and Curriculum and instruction (X4) do not have an effect on service efficiency for Chinese students.

The statistical test used to test the hypothesis is Multiple Regression Analysis, by selecting independent variables into the regression equation using the Stepwise technique at a confidence level of 95%, rejecting the null hypothesis (H0) when Sig is less than 0.05. The results of the test are shown in Tables 3.3-3.4

Table 3.3: The correlation coefficients between factors influencing management innovations that affect service efficiency for Chinese students

Factor	X1	X2	X3	X4	Y
X1	1.000				
X2	0.699*	1.000			
X3	0.689**	0.757	1.000		
X4	0.590**	0.612*	0.764**	1.000	
Y	0.624**	0.637**	0.762**	0.731**	1.000

* *Statistically significant 0.05*

** *Statistically significant 0.01*

X1 represents Admissions and registration
X2 represents Independent study standards
X3 represents General management
X4 represents Curriculum and instruction
Y represents service efficiency for Chinese students.

Table 3.4: Model Summary

R	R^2	Adjust R^2	SE	Durbin-Watson
0.858	0.737	0.733	0.375	1.848

From Table 3.4, Shows the relationship between all dependent variables and independent variables, found that the Adjusted R^2 value 0.733 means that 73.30% of the variance in the dependent variable can explained by the independent variable, management innovations that affect service efficiency for Chinese students in the Master of Management Program in Management Innovation.

Table 3.5: Analysis of Variance (ANOVA)

Source of variation	SS	Df	MS	F	Sig.
Regression	80.877	3	26.959	192.177	0.000*
Residual	28.898	206	0.140		
Total	109.775	209			

** Statistically significant 0.05*

The analysis of multiple regression for service efficiency factors for Chinese students includes Admissions and registration, Independent study standards, General management, and Curriculum and instruction. Tested the hypothesis of the multiple regression model using the Stepwise method. The analysis of the relationship between dependent and independent variables revealed an Adjusted R^2 value of 0.733, which indicates that 73.30% of the variance in service efficiency for Chinese students can be explained by the four factors.

The ANOVA results from Table 3.5 showed that the F-value is 192.177, and the Sig. value is 0.000, which is less than 0.05. This implies that at least one factor significantly affects innovation in the service efficiency for Chinese students. When analyzed the relationship between each independent variable and the dependent variable separately.

The independent variables tested were Admissions and registration, Independent study standards, General management, and Curriculum and instruction. The results revealed that only three factors significantly influenced service efficiency for Chinese students. These factors are Curriculum and instruction (Sig. = 0.000), General management (Sig. = 0.000), and Admissions and registration (Sig. = 0.020). These factors have a significance level of 0.05 or less, indicating that they have a significant impact on service efficiency for Chinese students. The regression equation can be written as follows:

$$\hat{Y} = 0.572(X4) + 0.268(X3) + 0.140(X1)$$

From the regression equation, found that the factors that positively affect service efficiency for Chinese students are Curriculum and instruction, General management, and

Admissions and registration. All of these variables, Curriculum and instruction had the strongest positive correlation with 0.572. This means that on average, an increase of 1 unit in Curriculum and instruction will result in a 0.572-unit increase in service efficiency for Chinese students. General management had a coefficient of 0.268, which means that on average, an increase of 1 unit in General management will result in a 0.268 increase in service efficiency for Chinese students. Admissions and registration had a coefficient of 0.140, which means that on average, an increase of 1 unit in Admissions and registration will result in a 0.140-unit increase in service efficiency for Chinese students.

CONCLUSION

4. Conclusion

4.1 General information

the research findings that management innovation variables can predict 73.30% of service efficiency for Chinese students enrolled in master's programs. The examining independent variables that have an effect on dependent variables found that innovation management in curriculum and instruction has the greatest effect, followed by general management, independent study standards, admissions, and registration and evaluation, in order that there has a statistically significant influence on Chinese students service efficiency for Chinese students in Master of Management Program, Management Innovation statistically significant at 0.05

DISCUSSION

5. Discussion

the research has identified several independent variables that have a significant impact on service efficiency. The finding that innovation management in curriculum and instruction has the greatest effect suggests that this is a key area for improving service efficiency for Chinese students in this program. The other identified independent variables, including general management, independent study standards, admissions, and registration and evaluation, are also important factors that have a statistically significant influence on service efficiency for these students.

Management innovation in general management, curriculum and instruction, and independent study standards can all have a significant impact on service efficiency for Chinese students.

In the area of curriculum and instruction, innovative management practices can involve the use of technology, data analytics, and personalized learning approaches to optimize the use of resources and improve student outcomes. Effective management in this area can also help to ensure that courses are designed and delivered in a way that maximizes student engagement and learning (Sitthiwarongchai, C. et al. 2017).

In general management, innovative approaches to resource allocation, communication, and collaboration can help to optimize organizational efficiency and streamline processes. Effective management practices in this area can also help to reduce bureaucracy, increase transparency, and improve decision-making.

Finally, in the area of independent study standards, innovative management practices can involve the development of streamlined guidelines and standards for independent study projects, as well as effective support and feedback mechanisms. Effective management in this area can help

to ensure that students are able to pursue their interests and develop their skills efficiently and effectively.

SUGGESTIONS

6. Suggestions

Firstly, the high prediction rate of 73.30% suggests that management innovation affect service efficiency for Chinese students. This finding the importance of academic institutions to make innovative management practices to enhance the Curriculum and instruction learning experience for students.

Secondly, the identification of independent variables that have an effect on dependent variables that can provides a roadmap for academic institutions to focus efforts on key areas for improvement. The finding that innovation management in curriculum and instruction has the greatest effect highlights the importance of incorporating innovative approaches to teaching and learning. Additionally, the other identified independent variables, such as general management, independent study standards, admissions, and registration and evaluation, are also important factors that should be considered when implementing management innovation practices.

In conclusion, the research findings underscore the importance of management innovation in enhancing service efficiency for Chinese students enrolled in Master of Management Program in Management Innovation. The identification of independent variables that have an effect on dependent variables provides actionable insights that can improve efficiency in services to Chinese students Curriculum and instruction, providing efficient and effective services to Chinese students requires an understanding of their cultural differences, effective communication strategies, and the use of technology tools to streamline processes. By adapting to these differences, online services, translating materials, building a strong network, offering personalized services, and using data analytics, you can improve service delivery and build strong relationships with Chinese students. These strategies can lead to higher satisfaction rates, increased retention, and better outcomes for Chinese students studying abroad.

Overall management innovation in admissions and registration, general management, curriculum and instruction, and independent study standards can all contribute to improved service efficiency for Chinese students, leading to higher levels of satisfaction and success. By optimizing resources, minimizing bureaucracy, and leveraging technology and data analytics, academic institutions can enhance their capacity to deliver high-quality educational programs and services to Chinese students.

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