

FACTORS AFFECTING THE EFFICIENCY OF ACADEMIC SERVICES TO SOCIETY IN HIGHER EDUCATION INSTITUTIONS IN THAILAND

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ABSTRACT

This research investigated the influence of four innovative factors as Policy Support, Project Management and Workflow Systems, Competence and Expertise of Personnel, and Community Needs on the Efficiency of Academic Services to Society. The study focused specifically people who participants in academic service programs by collage of innovation management Suansunandha University in Ranong Province. A quantitative survey approach was employed to collect data from personnel and stakeholders involved in academic service activities.

The result found that all factors significantly influenced service efficiency. Notably, Competence and Expertise of Personnel and Community Needs were identified as the strongest and most critical predictors. These findings underscore that while institutional support provides the mandate, the efficiency and success of academic services are ultimately determined by the capability of the staff and the relevance of the service to the community's actual requirements.

Keywords: Academic Services Efficiency, Policy Support, Personnel Competence, Project Management, Community Needs

INTRODUCTION

Academic services constitute a critical mission for Higher Education Institutions in Thailand, serving as a primary mechanism for knowledge transfer and societal development, which is essential for national competitiveness and avoiding the middle-income trap. However, In Thailand often face challenges in effectively maximizing the impact of these services due to issues like operational inefficiencies, disjointed management, and a perceived gap between university output and community needs (Jariyachamsit & Sitthiwarongchai, 2023).

This research aims to investigate the influence of administrative, organizational, and personnel factors on the efficiency of academic services to society, providing model to enhance performance and ensure genuine social impact.

OBJECTIVE

To study factors Affecting Efficiency of Academic Services to Society.

1.2 Research scope

1.2.1 Content Scope

This research investigates the influence of administrative, organizational, and personnel factors on the efficiency of academic services to society. The study will culminate in a performance enhancement model designed to maximize these services' genuine social impact of people who participants in academic service programs by collage of innovation management Suansunandha University in Ranong Province. The research will be conducted during the year 2025.

1.2.2 Population scope

Research Data used in this study were obtained from people who participants in academic service programs by collage of innovation management Suansunandha University in Ranong Province.

1.2.3 Scope of area

Ranong Province Thailand.

1.3 Conceptual framework

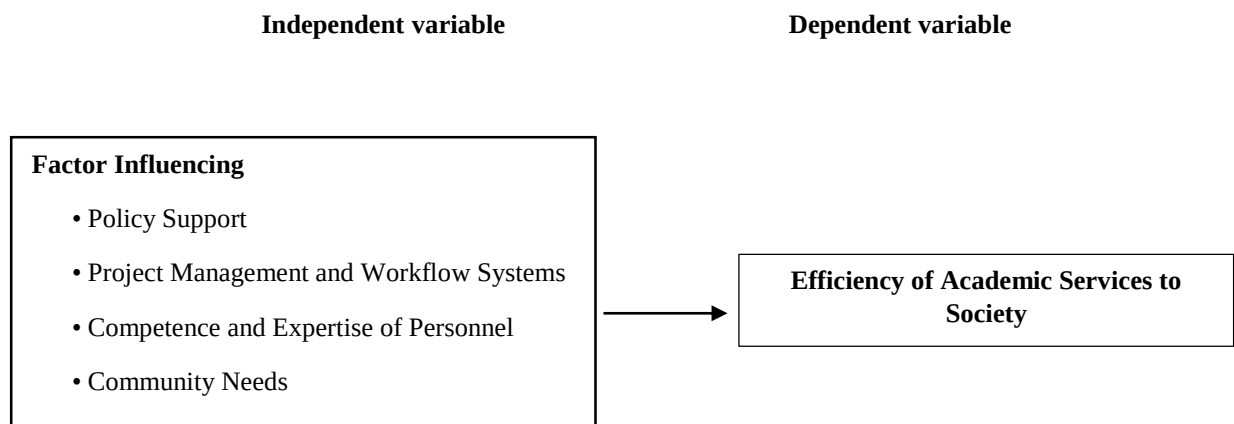


Figure 1: Conceptual framework

Source: (Alvarez-Sández et al., 2023)

METHODOLOGY

2. Research methodology

2.1 Research design

This study adopts a quantitative research approach, which entails explaining phenomena through the collection of numerical data analyzed using mathematical techniques, particularly statistics. Professional quantitative research hinges on accurate data. Thus, the questionnaire design, population selection, sampling strategies, and data collection were methodically structured to ensure reliability (Creswell & Creswell, 2023).

2.2 Population and samples

2.2.1 Population

The population in this study consists of participants involved in academic service activities implemented by the College of Innovation and Management, Suan Sunandha Rajabhat University, within Ranong Province (Suan Sunandha Rajabhat University, n.d.).

2.2.2 Samples

A sample group of 1,180 participants who engaged in academic service programs organized by the College of Innovation and Management, Suan Sunandha Rajabhat University, in Ranong Province, was selected through a simple random sampling method, ensuring that each individual in the population had an equal probability of selection.

The sample size was determined using the Taro Yamane formula (Yamane, 1973) with a 95% confidence level and a margin of error of 0.025 for the sample group, as follows:

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

n = sample size
N = study population size
e = is the margin of error (set at 2.5% or 0.025)

the sample size for this study is calculated as follows:

$$n = \frac{1180}{1+1180(.25)^2}$$
$$n = 299$$

2.3 Instrumentation

The research tool used to collect data is a questionnaire, which applied theories, concepts, and related research on factors influencing Efficiency of Academic Services to Society. 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

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 0.50 or higher. The scoring criteria were as follows:

The IOC for each question was calculated using the following formula:

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

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 (Rovinelli & Hambleton, 1977), as described in my previous response. The IOC could be calculated by obtaining ratings

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%.

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 validate the questionnaire's accuracy and reliability (DeVellis, 2016), a preliminary test with 30 sets will be conducted under conditions similar to actual data collection. This aims to assess data collection, comprehension, and communication of question meanings within the sample group. Furthermore, an analysis will be performed to gauge the questionnaire's reliability using the Internal Consistency Method. This analysis will consider corrected item total correlations, ideally at least 0.20, and Cronbach's alpha, introduced by Cronbach (1951) as a measure of internal consistency reliability. A Cronbach's alpha greater than 0.70 is indicative of consistency among the questionnaire items within 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. Policy Support	4	0.996
2. Project Management and Workflow Systems	5	0.998
3. Competence and Expertise of Personnel	5	0.999
4. Competence and Expertise of Personnel	4	0.997
5. Community Needs	5	0.996
Total	23	0.997

The results of the reliability analysis from Table 3.1 show that the reliability for the questions in each section range from 0.996 to 0.999, and the overall reliability is 0.997 (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.

3.2 Results of the Opinion Level of Factors Influencing Efficiency of Academic Services to Society.

Results of Data Analysis on the Opinion Level Factors Influencing Efficiency of Academic Services to Society. Analyzing the data on Policy Support

Project Management and Workflow Systems, Competence and Expertise of Personnel and Community Needs. The results are presented as averages, standard deviations, and data interpretation in Table 3.2

Table 3.2: Average and standard overall deviation of Factors Influencing Efficiency of Academic Services to Society.

Factors Influencing Efficiency of Academic Services to Society overall	Level of opinion			
	$\bar{x}$	S.D.	Level	Sequence
1. Policy Support	3.51	0.790	High	1
2. Project Management and Workflow Systems	3.50	0.802	High	4
3. Competence and Expertise of Personnel	3.51	0.793	High	3
4. Community Needs	3.50	0.794	High	2
Total	3.50	0.788	High	

From Table 3.2, the average and standard deviation values of opinions regarding the Factors Influencing Efficiency of Academic Services to Society were found to be at a high level overall, with an average value of 3.50 and a standard deviation of 0.788. When considering each factor individually, it was found that the aspect with the highest average value was Policy Support ($\bar{X}$ = 3.51, S.D. = 0.790), followed by Community Needs ($\bar{X}$ = 3.50, S.D. = 0.794), Competence and Expertise of Personnel ($\bar{X}$ = 3.51, S.D. = 0.793), and Project Management and Workflow Systems ($\bar{X}$ = 3.50, S.D. = 0.802), respectively. These results indicate that respondents expressed a high level of opinion across all dimensions related to the Factors Influencing Efficiency of Academic Services to Society.

3.3 Hypothesis test results

Hypothesis 1: Policy Support (X1) influences Efficiency of Academic Services to Society.

Hypothesis 2: Project Management and Workflow Systems (X2) affects Efficiency of Academic Services to Society.

Hypothesis 3: Competence and Expertise of Personnel (X3) impact Efficiency of Academic Services to Society.

Hypothesis 4: Community Needs (X4) influences Efficiency of Academic Services to Society.

The statistical hypotheses can be stated as:

H0: Policy Support (X1), Project Management and Workflow Systems, Competence and Expertise of Personnel (X3), and Community Needs (X4) collectively affect Efficiency of Academic Services to Society.

H1: Policy Support (X1), Project Management and Workflow Systems, Competence and Expertise of Personnel (X3), and Community Needs (X4) do not collectively affect Efficiency of Academic Services to Society.

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 Efficiency of Academic Services to Society

Factor	X1	X2	X3	X4	Y
X1	1.000				
X2	0.499*	1.000			
X3	0.189**	0.457	1.000		
X4	0.390**	0.112*	0.464**	1.000	
Y	0.124**	0.301**	0.150**	0.421**	1.000

* Statistically significant 0.05

*** Statistically significant 0.01*

X1 represents Policy Support.

X2 represents Project Management and Workflow Systems.

X3 represents Competence and Expertise of Personnel.

X4 represents Community Needs.

Y represents Efficiency of Academic Services to Society.

Table 3.4: Model Summary

R	R²	Adjust R²	SE	Durbin-Watson
0.988	0.976	0.976	0.125	1.865

From Table 3.4, Shows the relationship between all dependent variables and independent variables, found that the Adjusted R² value 0.976 means that the variance in the dependent variable can explained by the independent variable, that affect Efficiency of Academic Services to Society.

Table 3.5: Analysis of Variance (ANOVA)

Source of variation	SS	Df	MS	F	Sig
Regression	187.988	4	46.997	192.177	0.000*
Residual	4.621	294	0.016		
Total	192.609	298			

** Statistically significant 0.05*

The multiple regression analysis explored factors affecting Efficiency of Academic Services to Society: Policy Support (X1), Project Management and Workflow Systems (X2), Competence and Expertise of Personnel (X3), and Community Needs (X4). Using the Standard method, the analysis revealed an Adjusted R² value of 0.976, indicating that 97.6% of the variance in Efficiency of Academic Services to Society can be explained by the independent variables that affect Efficiency of Academic Services to Society.

ANOVA results (*F*-value = 192.177, Sig. = 0.000 < 0.05) confirmed an overall significant impact of at least one factor on Efficiency of Academic Services to Society. Specifically, information regarding the individual significance of each factor (X1 to X4) is missing from the tables provided (it would be in a separate Coefficient table), so the subsequent sentence in the original text about individual factors cannot be accurately derived. Specifically, Community Needs, Competence and Expertise of Personnel, and Policy Support significantly influenced their adaptations (Sig. = 0.000, Sig. = 0.000, Sig. = 0.020, respectively), highlighting their substantial impact below the 0.05 significance level. These findings underscore the significant influence of these factors on Efficiency of Academic Services to Society. The regression equation can be written as follows

$$Y^{\wedge} = \text{Constant} + 0.572(X4) + 0.268(X3) + 0.140(X1)$$

Factors Affecting the Efficiency of Academic Services to Society in Higher Education Institutions in Thailand include Community Needs ($X4$), Competence and Expertise of Personnel ($X3$), and Policy Support ($X1$). Community Needs holds the strongest correlation (standardized coefficient) at 0.572, signifying a significant influence on their choice. Competence and Expertise of Personnel follows with a correlation of 0.268, indicating a partial impact. Policy Support displays a correlation of 0.140, reflecting a moderate influence on their adaptations.

CONCLUSION AND FUTURE WORK

4. Conclusion and future work

This study successfully investigated the relationship between administrative, organizational, and personnel factors and the Efficiency of Academic Services to Society within Higher Education Institutions. The findings affirm that service efficiency is not determined by a single element but is a complex, multi-dimensional outcome resulting from the strategic interplay of organizational support, process maturity, human capital, and stakeholder engagement.

The critical importance of Competence and Expertise of Personnel, which emerged as the strongest and most consistent predictor of service efficiency. This highlights a fundamental truth: while Policy and Executive Support provides the necessary mandate and resources, and robust Project Management and Workflow Systems provide the structure, the final measure of efficiency relies on the capability, readiness, and motivation of the faculty and staff delivering the services. Furthermore, the significant role of Community Participation and Needs confirms that true efficiency is achieved only when the service is relevant and aligned with the actual needs of the recipients, ensuring that project success translates directly into positive societal impact. In synthesis, the study provides a validated, four-factor framework that allows administrators to move from general administrative compliance to a targeted, evidence-based strategy for enhancing community engagement and service delivery outcomes.

Discussion

5. Discussion

The discussion of the results shows that the quality of university services to the community is most heavily influenced by the competence and expertise of the staff who do the work, and how well the service matches the real needs of the (Compare et al., 2024). These factors are more critical than having just a clear policy or good management systems, though those elements are still necessary foundations. This finding supports existing theories that public services are best delivered when focusing on human capital and genuine co-production with the community. However, a key limitation is that our data was collected at only one point in time, meaning we can show a strong connection, but we cannot definitively prove cause-and-effect—a challenge that future, longer-term research should aim to solve.

Suggestions

6. Suggestions

Based on the finding that personnel competence and community participation are paramount for service efficiency, university administrators should prioritize targeted training for staff in specialized service-related skills and must institutionalize co-design and feedback mechanisms with the community to ensure project relevance. For future research, it is crucial to move beyond correlation to causal modeling and longitudinal studies to definitively prove how executive support and systems lead to better performance. Additionally, other researchers should conduct detailed, comparative studies across different university types and cultures to refine the framework and provide context-specific recommendations.

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