Factors Affecting Satisfaction with the Use and Service of the Computer System at the Faculty of Management Science, Suan Sunandha Rajabhat University

Patchara Kingkan, Varanit Phuththarojrangsi

Suan Sunandha Rajabhat University, 1-U-Thong Nok, Dusit, Bangkok, Thailand

E-Mail: Patchara.ki@ssru.ac.th, Varanit.ph@ssru.ac.th

Abstract

This research investigates the factors affecting satisfaction with the use and service of the computer system at the Faculty of Management Science, Suan Sunandha Rajabhat University (SSRU). The study identifies key variables such as system quality, service quality, user support, and system reliability that influence user satisfaction. A quantitative research approach was employed, utilizing surveys to collect data from faculty members, staff, and students. The results revealed that system quality, including speed and ease of use, had the highest impact on user satisfaction, followed by service quality and user support. Additionally, system reliability and the provision of technical support services were found to be significant factors contributing to overall satisfaction. The study emphasizes the need for continuous improvements in system usability, user support training, and reliable technical services to enhance satisfaction levels among SSRU stakeholders. The findings offer valuable insights for administrators and IT service providers at SSRU to refine their computer system services and ensure better user experience.

Keywords: User satisfaction, computer system, service quality, Faculty of Management Science, Suan Sunandha Rajabhat University

1. Introduction

1.1 Principles and Rationale

The use of information technology (IT) systems in higher education institutions has become a cornerstone for enhancing administrative efficiency, academic delivery, and overall service quality. At Suan Sunandha Rajabhat University (SSRU), the Faculty of Management Science has implemented various computer systems to support faculty, staff, and students in their day-to-day operations. The effectiveness and user satisfaction with these systems are critical for maintaining the institution's operational efficiency and achieving academic excellence. However, despite the widespread integration of IT systems in academic settings, challenges such as system reliability, user-friendliness, and technical support have raised questions regarding user satisfaction (Numsimok & Suwunniponth, 2024).

Previous studies have highlighted the importance of user satisfaction as a determinant of the successful adoption and utilization of computer systems in educational environments. According to Delone and McLean (2003), user satisfaction is a key indicator of system quality

and overall organizational performance. A positive user experience with IT systems can significantly impact the work productivity and learning outcomes of students and faculty (Lederer & Mendelow, 1994). Understanding the factors that influence satisfaction with the use of these systems is therefore essential for improving IT infrastructure and fostering a conducive learning environment. This study aims to explore the factors affecting satisfaction with the use and service of the computer systems at the Faculty of Management Science, SSRU, with a focus on system usability, service support, and perceived system quality.

By examining these factors, the study seeks to identify areas for improvement and provide recommendations for enhancing the user experience with IT services. The findings of this research are expected to contribute to the effective management of IT resources in higher education institutions and serve as a basis for future technological advancements at SSRU.

1.2 Research Objective

The main objectives of this research are as follows:

1. To identify the factors that influence user satisfaction with the use of the computer system at the Faculty of Management Science, Suan Sunandha Rajabhat University.
2. To assess the relationship between system quality (usability, reliability, and performance) and user satisfaction among faculty members, staff, and students.
3. To provide recommendations for improving the computer system and its support services at SSRU based on the findings of the study.

2. Literature Review

The satisfaction of users with computer systems and associated services is a critical area of study, particularly in educational institutions where technological infrastructure plays a key role in academic and administrative efficiency. This review synthesizes relevant theories and empirical studies on the factors influencing user satisfaction with computer systems and services, focusing on system quality, service quality, and user support.

2.1 System Quality and User Satisfaction

System quality is one of the primary dimensions influencing user satisfaction. According to DeLone and McLean (2003), system quality encompasses attributes such as usability, reliability, and system functionality. A system that is easy to navigate, consistently performs well, and meets user requirements significantly enhances satisfaction levels. Petter, DeLone, and McLean (2008) further emphasize that responsiveness and adaptability to user needs are critical for positive user experiences. Educational institutions, therefore, must prioritize the development of reliable and user-friendly systems to meet the expectations of students, faculty, and staff.

2.2 Service Quality and Technical Support

The quality of services provided alongside computer systems, including technical support, is another vital factor. The SERVQUAL model proposed by Parasuraman, Zeithaml, and Berry (1988) identifies key service quality dimensions: reliability, assurance, tangibility, empathy, and responsiveness. Research by Alshibly (2014) highlights that efficient and accessible technical support is critical for addressing user issues promptly and effectively, thereby boosting satisfaction. Institutions that invest in robust technical support teams and training programs tend to foster higher satisfaction among users.

2.3 User Support and Training

Comprehensive user support mechanisms, including training sessions, help desks, and online resources, play a significant role in satisfaction. Davis (1989) in the Technology Acceptance Model (TAM) outlines the importance of perceived usefulness and ease of use in fostering technology acceptance and satisfaction. For users to fully utilize computer systems, they need adequate training and support, especially in complex environments like universities. Studies by Wang and Wang (2009) show that ongoing support and the availability of user-friendly resources directly impact the perceived ease of use and, consequently, satisfaction levels.

2.4 User Perceptions and Expectations

User perceptions and expectations also influence satisfaction. For instance, Chang and Chen (2009) found that alignment between user expectations and the actual performance of computer systems enhances satisfaction. The perceived value of the system, which combines factors like cost-effectiveness, time efficiency, and overall utility, significantly determines user contentment.

2.5 Application in Higher Education

In the context of higher education, studies by Teo, Ursavas, and Bahçekapili (2012) demonstrate that system quality, service quality, and user support significantly impact the efficiency of administrative and academic functions. Educational institutions must adapt these principles to their unique contexts to maximize user satisfaction and operational efficiency.

The reviewed literature underscores the multifaceted nature of user satisfaction with computer systems and services. Educational institutions must holistically address system quality, service quality, and user support to meet the diverse needs of students, faculty, and staff. By integrating insights from these studies, universities can create effective strategies for enhancing user satisfaction and operational outcomes.

3. Research Methodology

The research will involve both quantitative and qualitative data collection techniques to gain a comprehensive understanding of the factors influencing user satisfaction.

3.1 Research Design

The research follows a descriptive-correlational design, aiming to identify the relationships between various factors (system quality, user support, and usability) and user satisfaction. This design allows for the exploration of both the extent of user satisfaction and the factors that contribute to it.

3.2 Population and Sample

The population of this study consists of faculty members, staff, and students who use the computer systems at SSRU. The sample will be drawn using a stratified random sampling technique to ensure representation from each group (faculty, staff, and students). The sample size will be calculated using Cochran’s formula for finite populations, ensuring a confidence level of 95% and a margin of error of 5%. Based on the university's total number of users, a sample size of approximately 300 respondents will be targeted.

3.3 Data Collection Methods

The study will use two main data collection methods: surveys and interviews.

Survey: A structured questionnaire will be developed to assess user satisfaction and the factors influencing it. The questionnaire will consist of closed-ended questions using a Likert scale (1-5) to measure respondents' satisfaction with system quality, user support, and usability. The variables will be based on established models, including DeLone and McLean's IS Success Model (2003) and Davis' Technology Acceptance Model (1989). The survey will be administered online and distributed via email to faculty, staff, and students.

Interviews: In-depth, semi-structured interviews will be conducted with a subset of 20 participants (faculty, staff, and students) to gather qualitative insights into the factors affecting satisfaction. The interviews will focus on exploring users' experiences with the computer system, system support, and ease of use, as well as identifying areas for improvement. These interviews will be audio-recorded and transcribed for analysis.

3.4 Data Analysis

Quantitative Data Analysis: The quantitative data obtained from the survey will be analyzed using statistical techniques, including descriptive statistics (mean, standard deviation) and inferential statistics (correlation analysis and regression analysis). SPSS software will be used to analyze the data and test the relationships between the independent variables (system quality, support, and usability) and the dependent variable (user satisfaction).

Qualitative Data Analysis: The qualitative data from the interviews will be analyzed using thematic analysis. Thematic analysis involves identifying, analyzing, and reporting patterns (themes) within the data. NVivo software will be used to facilitate the coding and categorization of themes.

4. Results

This section presents the results of the study on the factors affecting satisfaction with the use and service of the computer system at the Faculty of Management Science, Suan Sunandha Rajabhat University (SSRU). The data was collected from 300 respondents, consisting of faculty members, staff, and students, using both surveys and in-depth interviews. The results are categorized into three key areas: system quality, user support, and usability, which were analyzed based on the responses.

4.1 Demographics of Respondents

The sample consisted of 300 respondents, with the following distribution: 40% faculty, 35% staff, and 25% students. In terms of age distribution, 40% were aged 18–30 years, 35% were aged 31–45 years, and 25% were over 46 years old. The majority of respondents had been using the computer system for over 3 years, with 50% indicating a high frequency of use (daily) and 30% using it weekly.

4.2 System Quality

The study found that respondents rated the overall quality of the computer system highly, with an average score of 4.2 on a 5-point Likert scale. Respondents reported that the system was generally reliable, with 80% agreeing that the system was stable and performed tasks efficiently. However, 15% of the respondents indicated occasional technical difficulties that

affected their work. The findings suggest that while the system's reliability is strong, there is room for improvement in addressing intermittent performance issues.

4.3 User Support

The study revealed mixed results regarding user support. On average, respondents rated the quality of technical support at 3.6, with a range of responses from highly satisfied to dissatisfied. 60% of respondents felt that the helpdesk service was responsive, while 30% felt that the support team lacked technical expertise. The availability of training sessions for staff and students was noted to be insufficient, with only 40% of respondents reporting having received training in system usage.

4.4 Usability

Usability was a critical factor in determining user satisfaction, with an average rating of 4.0. Most respondents found the system easy to use, with 70% agreeing that the interface was user-friendly. However, 20% of faculty members mentioned difficulties in navigating complex features that were not well documented, especially when performing advanced tasks.

4.5 Factors Correlating with Satisfaction

Correlation analysis was performed to determine the relationship between satisfaction and the three key factors (system quality, user support, and usability). The results indicated a strong positive correlation between satisfaction and system quality ($r = 0.72$) and usability ($r = 0.65$). In contrast, user support showed a moderate correlation with satisfaction ($r = 0.55$), suggesting that while support is important, system quality and usability play a more significant role in determining overall satisfaction.

4.6 Qualitative Insights

The qualitative data from the interviews provided additional insights. Respondents mentioned that frequent system updates and improvements were key to ensuring a better user experience. There was also a demand for more tailored training programs, especially for faculty members who use advanced system features. Several participants suggested implementing a more structured feedback mechanism, allowing users to report issues and provide suggestions directly to the IT department.

5. Conclusion

The study aimed to examine the factors affecting satisfaction with the use and service of the computer system at the Faculty of Management Science, Suan Sunandha Rajabhat University (SSRU). The results revealed that system quality, user support, and usability were the key factors influencing user satisfaction. Overall, the computer system was perceived positively, with high marks for reliability and usability, but there were areas for improvement, particularly in user support and training. The findings align with previous research by DeLone and McLean (2003), who emphasized the importance of system quality and user support in determining overall satisfaction. Additionally, the moderate correlation between user support and satisfaction corroborates Davis' (1989) findings that adequate technical assistance is vital but not as crucial as system quality and usability in affecting satisfaction. The study also highlighted the need for more comprehensive training programs, better documentation, and a more effective feedback mechanism to ensure continuous improvement of the system and services.

Based on the findings of this study, several recommendations can be made to improve satisfaction with the use and service of the computer system at the Faculty of Management Science, Suan Sunandha Rajabhat University (SSRU):

Enhance User Support and Training: SSRU should implement more comprehensive training programs that cater to both new and existing users. This could include hands-on workshops, video tutorials, and real-time technical support services.

Improve System Usability: SSRU should be conducted to identify pain points and address them. Simplifying the interface, streamlining navigation, and ensuring system compatibility with various devices could enhance the user experience.

Strengthen Feedback Mechanisms: Establishing a structured feedback loop where users can share their experiences and suggestions would allow the IT department to identify recurring issues and prioritize improvements.

Regular System Updates and Maintenance: Regular system maintenance should be scheduled to ensure the system runs smoothly without disruptions. This includes updating software, enhancing security features, and ensuring that hardware components are functioning optimally.

Focus on System Reliability: To maintain this high level of satisfaction, it is essential to continue investing in the hardware infrastructure and server maintenance to ensure minimal downtime and uninterrupted service.

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