TECHNIQUES FOR INSTALLING SOFTWARE PACKAGES TO INCREASE WORK

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ABSTRACT

The Office of General Education and Innovative Electronic Learning is an office whose assignments, set by Suan Sunandha Rajabhat University, Thailand, include organizing general education courses. This consists of organizing teaching, activities, quizzes, and examinations. In each of these, marks are given and processed, and would contribute to the final grades of students. A software is thus important in facilitating works of the members of staff and instructors in these courses. It facilitates information searches, research, and organizations of quizzes and examinations. Therefore, there is a need to develop an software to improve the performance effectiveness of the Office.

The sample of this study consisted of 30 members of staff working on the general education subjects. Questionnaires were used to collect data, which were analyzed using percentages, mean values, and standard deviations.

Results

1. In terms of the general information of the 30 responders, 13 (42 per cent) were male and 17 (57 per cent) were female.

2. The effectiveness of the software currently being used were assessed using questionnaires about user satisfaction.

Suggestions

1. In conducting a research project, an enquiry should be made to an office related to the subject of the study regarding its needs, to ensure that the results from the study could be of practical use, and to ensure that no projects with overlapping contents are being conducted.

2. There should be training sessions for members of staff, so they could install programs to increase their performance effectiveness and facilitate the organization of general education courses. This would accelerate their workflow.

3. The program should be up-to-date to maximize its effectiveness

Techniques for installing software packages to increase work

INTRODUCTION

The Office of General Education and Innovative Electronic Learning is an office in Suan Sunandha Rajabhat University, Thailand, responsible for organizing general education courses. The courses consist of lectures, learning activities, and examinations.Each component could yield marks that would be processed and contribute to the final grades of the students. The computers and software are important components for the provision of services, both for the members of staff and for the students, allowing them to browse relevant materials, conduct research, and take quizzes and examinations for their general education courses. Therefore,

there is a need to improve the effectiveness of the computers and their software, to maximize the performance and effectiveness of the Office.

Objectives

1. To improve the effectiveness of the services and the degree of convenience to the users
2. To evaluate the user satisfaction in the software installation service

METHODOLOGY

This study on techniques for using software to increase operational effectiveness was conducted in The Office of General Education and Innovative Electronic Learning, Suan Sunandha Rajabhat University. The study method is as follows.

2.1. Population and Sample

The population of this study consisted of the 28 members of staff of The Office of General Education and Innovative Electronic Learning, 13 (42 per cent) of which were male and 15 (58 per cent) of which were female.

2.2. Materials

The study tool was a set of questionnaires developed by the author, for the purpose of evaluating the effectiveness of the installed software and gathering users' opinions and suggestions. Each questionnaire consisted of 2 parts.

Part 1 collected personal information, including the responders' role in the University and the office they affiliated with. This part of the questionnaire contained blank space for the responders to fill in their answers.

Part 2 collected opinions on the performance of the software in increasing productivity. This part consisted of check lists and rating scales, divided into 5 levels. The rating score descriptions were as follows:

5 indicates a *strongly positive* opinion on the effectiveness of the software in increasing productivity.

4 indicates a *positive* opinion on the effectiveness of the software in increasing productivity.

3 indicates a *neutral* opinion on the effectiveness of the software in increasing productivity.

2 indicates a *negative* opinion on the effectiveness of the software in increasing productivity.

1 indicates a *strongly negative* opinion on the effectiveness of the software in increasing productivity.

2.3. Study Location

Building 34 of The Office of General Education and Innovative Electronic Learning

2.4. Study Duration

Between October 2021 and August 2022

2.5. Statistics used to analyze data

Standard deviations (Phengsawat, 2008: 296) are the square root of the variance, mathematically defined as follows.

$$SD. = \sqrt{\frac{n\sum x^2 - (\sum x^2)}{n(n-1)}}$$

where S.D. is the standard deviation

$\sum x$ is the sum of the scores

$\sum x^2$ is the sum of the square scores

n is the sample size

USED TECHNOLOGY

Google Forms is one of Google's educational applications used for creating fillable forms and questionnaires online. The forms are stored in Google Drive, a cloud-based storage. Multiple users can simultaneously work on the online forms, which can be distributed through emails or as links that can be distributed on social media. Answers can be displayed as charts or tables both online and offline.

THEORY

Millet (1954: 4) have expressed his view on efficiency, defining efficiency as results of operations that lead to human satisfaction and to profits.

Simon (1960: 80) expressed a similar view to Millet's, suggested that a highly efficient operation could be discerned from the relationship between the input and the output. Thus, from this view, the efficiency was the difference between the output and input. In the context where the operation consisted of services provided by a public organization, user satisfaction should also be factored into the equation, resulting in the following.

E= O-I/S
E= Efficiency
O= Output
I= Input
S= Satisfaction

RESULTS AND DISCUSSION

The study on the use of commercial software to increase operational effectiveness of The Office of General Education and Innovative Electronic Learning, Suan Sunandha Rajabhat University was divided into 2 parts, where Part 1 collects documents for creating a procedure of installation of the software, and Part 2 evaluate the performance of the software. The results were as follows.

5.1 Collection of Documents for Modernizing the Teaching Materials

The author aimed to modernize the organization of the courses and improve the effectiveness of the computer system.

5.1.1 In the phase of designing and preparing the procedure of installation of the software, the author had collected software-related data, and created a dataset for brainstorming about the software's implementation plan. The process was discussed with those who would operate the software in 2 occasions, and an implementation plan was finalized.

5.1.1.1 The program was implemented after brainstorming with members of staff of The Office of General Education and Innovative Electronic Learning

5.1.1.2 Collection of Information regarding the computer and the users of The Office of General Education and Innovative Electronic Learning

5.2 Evaluation of the Service

Satisfaction in the performance of the software installed for The Office of General Education and Innovative Electronic Learning and the analysis of the data were presented in tabular format, divided into 2 parts, as follows.

Part 1 Analysis of the demographic of the responders

Part 2 Analysis of the responders' opinions on the performance of the software

5.3 Data Analysis Results

Part 1 Results from the analysis of the demographic of the responders

Responders were categorized according to their roles and affiliated departments.

Table 5.3.1 Percentages of different demographics of the responders

Item	Category	Number of people	Percentage
1. Sex			
	male	13	46.4
	female	15	53.6
2. Age			
	20-30 years old	10	33.3
	31-50 years old	18	36
3. Education level			
	Bachelor's degree	22	78.6
	Master's degree	6	92.8

Different demographics of the responders are shown in Table 5.3.1. Categorizing according to sex, of the 28 responders, 13 (46 per cent) were male and 15 (54 per cent) were female; according to age, 10 (33 per cent) were between 20-30 years of age, and 13 (36 per cent) were between 31-50 years of age; according to education level, 22 (79 per cent) held bachelor's degrees, and 6 (21 per cent) held master's degrees.

Part 2 Analysis of the responders' opinion on the performance of the software

An analysis of the responders' opinions on the performance of the software is shown in Table 5.3.2.

Table 5.3.2 Evaluation scores

Item	Score						
	5	4	3	2	1	Mean	Percentage
1. performance of the software	27	1	0	0		4.96	99.2
2. Modernness of the software and degree of convenience it provided	28	0	0	0		5.00	100
3. Degree of convenience the service provided	26	2	0	0		4.93	98.6
4. benefits of the overall service and degree to which the users' needs are fulfilled	27	1	0	0		4.96	99.2

Shown in Table 5.3.2, the average score on the performance of the software was 4.96 (99.2 per cent). Modernness of the software and degree of convenience it provided had an average score of 5.00 (100 per cent). Degree of convenience the service provided had an average score of 4.93 (98.6 per cent). Lastly, benefits of the overall service and degree to which the users' needs are fulfilled had an average score of 4.96 (99.2 per cent).

CONCLUSION AND RECOMMENDATIONS

This study was divided into 2 parts, namely, creation of teaching materials for The Office of General Education and Innovative Electronic Learning's general education courses, which were to be delivered via online streaming, and the survey the opinions on the performance of the streaming platform. The results could be concluded as follows.

1. For creating teaching materials for streaming, The Office of General Education and Innovative Electronic Learning designed a data system for its general education courses, collecting class schedules in an easy-to-use database. Tools for creating new teaching materials were constantly being monitored and updated. Manuals for using the tools were also available, so users could use the tools correctly and effectively, and could import relevant information and use them for announcements for the students.

2. In the study of user opinions on the use of teaching materials for the general education courses in the streaming format, it was found that the information provided were useful for the users, were correct, complete, and reliable. It was also found that the system was easy-to-use.

Nevertheless, in future studies, the author aims to further develop the online learning system for the general education courses, adding more details, improving the ease-of-use, and making the software more accessible for every type of users. The weaknesses of the data system could be addressed in future studies.

ACKNOWLEDGEMENTS

I would like to thank Suan Sunandha Rajabhat University for the opportunity to participate and present this study in an international conference at the Republic of Finland.

This study on techniques for using commercial software to increase operational effectiveness of The Office of General Education and Innovative Electronic Learning, Suan Sunandha Rajabhat University would not have been completed without the help from Assist. Prof. Nutthapat Kaewrattanapat, whose advice and support throughout the duration of the study are greatly appreciated.

I would also like to thank my colleagues in The Office of General Education and Innovative Electronic Learning, Suan Sunandha Rajabhat University, who have always been ready to cooperate and provide suggestions on matters related to this study.

REFFERENCES

Ketkeo, T. (2016: Abstract). Development of Customized Accounting Software Packages. Graduate College, Rajamangala University of Technology Rattanakosin.

Prommoon, P. (2012 : Abstract). Development of Quality Control Data Management Program. Srinakharinwirot University.

Aphiwatpisan, N. (2017: Abstract). Components of the Factors Affecting in the Selection Decision Making of Accounting Software Package of Accounting Managers of the Stock Exchange in Thailand. Silpakorn University.

Sornsiriwong, P. (2014). Application Program Development for Evaluation of Teachers' Professional Experience Training: A Case Study of Faculty of Education, Silpakorn University.

Anusornthrangkun N. (2012: Abstract) Factors affecting learning about computer basics to create design work of learners with different learning backgrounds.