

CHAPTER VI

SYSTEM EVALUATION

6.0 INTRODUCTION

In chapter five, the analysis and design of case management system for Al-Tayba court (CMSAC) were provided to explain the functional and non-functional requirements in order to improve the traditional implementations of the court environments. This chapter will discuss the system evaluation of the proposed system.

6.1 SYSTEM EVALUATION

There are two important factors need to be measured to evaluate the technology systems acceptance; (1) system usefulness and (2) system ease of use. The proposed system evaluated through collecting quantitative data using questionnaire from real employees in Al-Tayba court in order to measure the users' acceptance of the proposed system. The questionnaire that used to evaluate the proposed system adopted from Lewis (1995) study of title "IBM Computer Usability Satisfaction Questionnaires: Psychometric Evaluation and Instruction for Use". The data were collected from 43 users from various viewpoints; lawyers, judges, and court staff.

The researcher reviewed many related works that deal with technology system evaluations. Most of researches used the questionnaire as efficient data collection tool

to evaluate the users acceptance of technology systems through two main factors; (1) usefulness of the system, and (2) system ease of use (Lewis, 1995).

According to Righetti et al. (2004), the questionnaire based likert scales answers are effective method to collect and analyze the users' opinions about descriptive components and features such as technological systems. On the other hand, Righetti et al. (2004) mentioned that the quantitative data collecting approach reflects the real situation of the current working environments and the expected situation of the working environment based on new solutions. Thus, this research adopts the questionnaire of Lewis (1995) study in order to ensure two main issues which are:

1. To evaluate the usefulness of the proposed system for the lawyers, staff, and judges of Al-Tayba court environment. The usefulness factor reflects the benefits that can be gained from the proposed system according to real users.
2. To evaluate the proposed system ease of use for the lawyers, staff, and judges of Al-Tayba court environment. The ease of use reflects the reliability of the proposed system implementations.

Both of usefulness and ease of use factors determine the users' motivation level to adopt the proposed system as new solution in their working environment. However, the systems may fails due to low levels of users' motivations.

6.2 QUESTIONNAIRE DEVELOPMENT

The researcher adopts Lewis (1995) evaluation questionnaire based on the following justifications:

- 1- After reviewing many related works to analyze the most suitable approach to evaluate the computerized systems, it was clear that this questionnaire is the most used method for the purpose of systems evaluation.
- 2- This questionnaire has the most important factors to evaluate the proposed system. The acceptance factors considered as the most important issue to measure the technology solutions.

Based on the above mentioned points, Lewis (1995) questionnaire could be suitable to evaluate the proposed system of this research. Table 31 presents the main parts of the questionnaire.

Table 31: Questionnaire Scaled Parts

Study Factor	Item Number	Items Total
Usefulness	3, 4, 5, 6, 8, 9, 11, 12, 14 and 18.	10
Ease of use	1, 2, 7, 10, 13, 15, 16, and 17	8
General Satisfaction	19	1
Total	19	

6.3.1 Data Collection

The data were collected using questionnaire from 43 employees of Al-Tybah court environment; lawyers, staff and judges. The researcher distributed 50 copy of the questionnaire but the number of valid collected responses was 43 copies. Therefore, the valid collected responses represent 86% of the total collected responses. Table 32 shows the valid collected responses based on employees types.

Table 32: Summary of Questionnaire Responses

Employee Type	Number of responses	% of responses total
Judges	3	7%
Court staff	17	39.5%
Lawyers	23	53.5%
Total	43	100%

The researcher ensures the reliability of collected data through many procedures which are as the following:

1. Uploading and implement the proposed system using online host (www.altayebahcourt.com).
2. Allowing the employees to use the system and understand the systematically features of the proposed system.
3. Distribution of the questionnaire using Docs. Google tool in order to save the users time and efforts of questionnaire answering.
4. The electronic file of responses extracted and transferred to SPSS format to ensure the analysis accuracy.
5. SPSS version 20.0 used to analyze the collected data due to SPSS efficiency in analyze the quantitative data.
6. The reliability of the questionnaire analyzed to confirm the answers reliability.
7. The descriptive analysis (frequencies and means) calculated to analyze the users' opinions of the proposed system usefulness and ease of use.

6.3 DATA ANALYSIS

Statistical Package for the Social Sciences (SPSS) was employed to analyze the questionnaire reliability, frequencies, and means.

6.3.1 Reliability Analysis

The reliability defined as the responses consistency. In the other words, the respondents should provide real answers to support the success of the analysis.

According to Santos (1999), the questionnaire reliability can be measured using

cronbach alpha test. The value of the acceptable coefficient alpha could be more than (0.7). Table 33 shows the reliability analysis of the questionnaire. The coefficient alpha is (0.77) which considered as acceptable value. Thus, the questionnaire responses are reliable.

Table 33: Reliability Analysis

Cronbach Alpha	Number of Respondents	Number of Items
0.774	43	19

6.3.2 Descriptive Analysis Discussion

The questionnaire designed based on 7 likert scale; 1 for Strongly Disagree (SD), 2 for Disagree (D), 3 for Somewhat Disagree (WD), 4 for Neither disagree or Agree (N), 5 for Somewhat Agree (WA), 6 for Agree (A), and 7 for Strongly Agree (SA). The questionnaire consists of 19 items which focus on two main factors, system usefulness and system ease of use. According to item 19 in the questionnaire, the respondents are agreeing that in general the system satisfy their needs based in their daily working activities. Table 34 shows the frequencies and means of the items responses.

Table 34: Descriptive Analysis

Item No.	Item	SD	D	WD	N	WA	A	SA	Mean
1	Overall, I am satisfied with how easy it is to use this system	0	1	0	1	12	23	5	5.63
2	It was simple to use this system.	0	0	2	2	11	20	8	5.7
3	I could effectively complete the tasks using this system.	0	1	1	6	9	17	9	5.65
4	I was able to complete the tasks quickly using this system.	0	1	1	5	10	19	7	5.53

Table 34: Descriptive Analysis (continued)

Item No.	Item	SD	D	WD	N	WA	A	SA	Mean
5	I was able to efficiently complete the tasks using this system	0	0	1	4	11	20	7	5.65
6	I felt comfortable using this system.	0	0	3	3	9	19	9	5.65
7	It was easy to learn to use this system.	0	1	2	3	7	23	7	5.63
8	I believe I could become productive quickly using this system.	0	1	1	4	10	20	7	5.58
9	Whenever I made a mistake using the system, I could recover easily and quickly.	0	0	4	7	12	15	5	5.23
10	The information (on-screen messages) provided with this system was clear.	0	0	3	6	10	16	8	5.47
11	The system gives error messages that clearly tell me how to fix problems.	0	0	0	8	10	16	9	5.6
12	It was easy to find the information I needed.	0	0	2	12	10	13	6	5.21
13	The information provided for the system was easy to understand.	0	0	1	11	9	17	5	5.33
14	The information was effective in helping me complete the tasks and scenarios.	0	0	2	7	10	19	5	5.42
15	The organization of information on the system screens was clear.	0	0	3	4	12	19	5	5.44
16	The interface of this system was pleasant.	0	1	1	7	6	20	8	5.56
17	I liked using the interface of this system.	0	0	1	5	6	19	12	5.84
18	This system has all the functions and capabilities I expect it to have.	0	2	2	4	6	21	8	5.53
19	Overall, I am satisfied with this system.	0	0	0	1	7	18	17	6.19

1. Usefulness: the responses means are agreeing with the items number 3, 4, 5, 6, 8, 11, and 18. On the other hand, the responses tend somewhat agree with items 9, 12, and 14. Therefore, the proposed system is useful for the real implementations of the employees of Al-Tayba court working environment.
2. Ease of Use: the responses means are agreeing with the items number 1, 2, 7, 16, and 17. On the other hand, the responses tend to somewhat agree with items 10, 13, and 15. Therefore, the proposed system is easy to use by the employees of Al-Tayba court.

According to overall means of the questionnaire items, the proposed system acceptance is valid. Thus, the proposed system could be success to handle the working activities of the employees efficiently. And the user accepts the proposed system as new solution to avoid the challenges of the current system.

6.4 CHAPTER SUMMARY

The proposed system developed using ICT services and infrastructures. Thus, the researcher evaluates the acceptance of the new system through collect quantitative data from real employees in Al-Tayba court. The results show that the proposed system is useful for the working activities of Al-Tayba court and the employees mentioned that the system functions are clear and easy to use.