

A Study on Personnel Officers' Satisfaction of E-Learning in Taiwan Public Colleges and Universities

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Abstract : *In accordance with exploring the influential factors on satisfaction of E-Learning, some scholars were emphasized the course design, and some were focused on the system design. However, generally speaking, the influential factors on satisfaction of E-Learning can be divided into these 3 categories as follows: system design, course design and use function. At the same time, there're researchers who have verified the positive influence of E-Learning satisfaction on work performance. Based on the results of abovementioned researches, this study is attempted to analyze the satisfaction level of E-Learning for personnel officers in public colleges and universities according to these 3 aspects: function, content and effectiveness, and expect to provide as the empirical reference to promote E-Learning for public servant.*

Keywords : E-Learning, Satisfaction, Personnel Officers

1. Research Origin

Since the emergence of Internet in 1990s, many countries have promoted to build information infrastructure and make use of its applications. With using information technology to support the teaching activities which can increase the diversification of personal choices; as a result, people can obtain knowledge anytime and anywhere, in the meantime, it can also improve the teaching effectiveness as well (N.S. Chen, J.T. Yang, 2009). Thus, E-Learning has become the fastest learning method in the busy life for modern people.

In accordance with exploring the influential factors on satisfaction of E-Learning, some scholars were emphasized the course design (L.E. Wei, 2009), and some were focused on the system design (M.S. Su, 2011). However, generally speaking, the influential factors on satisfaction of E-Learning can be divided into these 3 categories as follows: system design, course design and use function (Y.Y. Chen, 2008; Y.T. Cheng, 2009). At the same time, there're researchers who have verified the positive influence of E-Learning satisfaction on work performance (K.L. Yu, 2011). Based on the results of abovementioned researches, this study is attempted to analyze the satisfaction level of E-Learning for personnel officers in public colleges and universities according to these 3 aspects: function, content and effectiveness, and expect to provide as the empirical reference to promote E-Learning for public servant.

2. Research Purpose

2.1. To explore the satisfaction of E-Learning platform for personnel officers in public colleges and universities.

2.2. To compare the difference in satisfaction of E-Learning platform between male and female personnel officers in public colleges and universities.

2.3. To compare the difference in satisfaction of E-Learning platform between different age groups of personnel officers in public colleges and universities.

3. Research Design

3.1. Research Object

By considering the relatively completed network equipment and framework, this study is mainly adopted the personnel officers in public colleges and universities as the research population. Therefore, this study is aimed at about 390 personnel officers in 45 public colleges and universities in Taiwan region, and used the randomly sampling method to issue 200 copies of questionnaire, and 141 copies returned. After eliminating 4 incomplete and invalid copies, the number of valid questionnaire was 137 with a total Valid Return Rate of 68.5%, the detail is as shown in Table 1.

3.2. Research Tools

The scale used in this study is based on the literature review and the questionnaire is designed in accordance with these 3 aspects: “Functions”, “Contents” and “Effectiveness” to measure the satisfaction level for personnel officers in public colleges and universities. At the same time, this research asked scholars and experts for reviewing and approving the questionnaire to establish the expert validity. In terms of the questionnaire for using in the formal survey, there are 5 questions about “Function”, and 4 questions each for “Content” and “Effectiveness”, totaled 13 questions. Besides, selections of sex, ages (five groups: Above Age 51, Age 41~50, Age 31~40, Age 21~30, Under Age 20), and computer literacy (five groups: excellent, good, fair, poor and bad) are considered as the basic information in order to understand attributes for the sampling personnel officers.

3.3. Data Collection and Management

In April – May 2012, the questionnaire was sent by mail, and the deadline of return was set in the early June. After returning and screening, mean and standard deviation (SD) were applied to analyze the concentration and distribution of satisfaction for the sampling personnel. Next, the Independent-Sample t-Test was adopted to test the difference in satisfaction between male and female sampling personnel. In the meantime, One-way ANOVA was used to test the difference in satisfaction among the sampling personnel in different age groups.

4. Research Results

4.1. Basic Information Analysis

In this study, 137 valid copies of questionnaire were returned. More than half of the subjects in this study had general computer literacy; relevant personal information was statistically tabulated in Table 1.

Table 1 Basic Information of Sampling Officers

	Male		Female		Total	
	N	%	N	%	N	%
Computer Literacy						
Excellent	9	6.6%	6	4.3%	15	10.9%
Good	13	9.5%	33	24.1%	46	33.6%
Fair	17	12.4%	59	43.1%	76	55.5%
Total	39	28.5%	98	71.5%	137	100%

4.2.E-Learning Satisfaction of Personnel Officers in Public Colleges and Universities

The sampling personnel have higher level of E-Learning satisfaction. As a result, it revealed that they have higher level of satisfaction with using and operating E-Learning platform for their work and obtaining professional knowledge. However, they have the lowest level of satisfaction for “E-Learning platform system is very durable” and “E-Learning platform’s contents are not boring”, the means are 2.88 and 2.75 respectively, and their opinions are seemed to be consistent (SD=.86, SD=.67, SD=.43). It is worth noticing that the mean of “The use of E-Learning platform makes

easy and convenient learning” up to 3.96 (SD =.74), which has almost reached the high-level satisfaction of 4.0. It showed an effective achievement of establishing the E-Learning platform in Taiwan, as indicated in Table 2.

Table 2 E-Learning Satisfaction of Male and Female Sampling Personnel Officers

Questions	Male		Female		t	Total	
	M	SD	M	SD		M	SD
Functions	3.	.5	3.	.3	-.	3.	.42
1.E-Learning platform is very easy to operate and use	43	6	45	5	209	45	.70
2.E-Learning platform’s functions are very ideal	67	5	83	7	977	78	.69
3.E-Learning platform system is very durable	3.	.9	3.	.5	-.	3.	.86
4.E-Learning platform layout has comfortable visual effect	59	1	63	9	272	62	.62
5.E-Learning platform can be easily linked to other network resources	2.	.9	2.	.8	-.	2.	.64
	85	0	89	4	254	88	
Contents	3.	.7	3.	.5	.9	3.	.43
6.E-Learning platform’s contents are worth learning	67	7	54	5	26	58	.71
7.E-Learning platform’s contents are not boring	3.	.8	3.	.5	.1	3.	.67
8.E-Learning platform’s teaching methods are very flexible	38	1	37	6	21	37	.70
9.E-Learning platform makes me to be interested in	3.	.5	3.	.3	.5	3.	.75
	38	6	32	6	71	34	
Effectiveness	3.	.8	3.	.6	.1	3.	.48
10.The use of E-Learning platform makes easy and convenient learning	85	4	82	6	98	82	.74
11.The use of E-Learning platform develops my professional knowledge	2.	.6	2.	.6	.4	2.	.76
12.The use of E-Learning platform is helpful to my work	79	1	73	9	71	75	.78
13.The use of E-Learning platform results in better learning effectiveness	3.	.9	3.	.6	.5	3.	.83
	44	1	39	0	04	40	
	46	4	38	6	88	40	
	3.	.5	3.	.4	1.0	3.	
	69	6	59	5	34	62	
	4.	.9	3.	.6	.7	3.	
	05	7	93	3	30	96	
	3.	.8	3.	.7	-.	3.	
	79	9	80	1	007	80	
	3.	.8	3.	.7	.8	3.	
	79	9	66	4	80	70	
	3.	1.	3.	.7	.7	3.	
	13	0	00	6	19	04	

4.3.E-Learning Satisfaction Comparison between Male and Female Personnel Officers

As for the E-Learning satisfaction for the sampling personnel of different sexes, males have a higher level of satisfaction with “E-Learning platform’s contents are worth learning”, “The use of E-Learning platform makes easy and convenient learning”, “The use of E-Learning platform develops my professional knowledge”, and “The use of E-Learning platform is helpful to my work”, and the means are 3.85, 4.05, 3.79 and 3.79 in the order; in addition, the pinions of these sampling personnel tend to be fairly concentrated (SDs are .84,.97,.89 and .89, respectively). Therefore, it showed that males have a higher level of satisfaction for the E-Learning platform with considering the platform contents are worth learning, the convenience of learning, the professional knowledge obtained from work and it is helpful to their work. Females, however, have a higher level of satisfaction with “E-Learning platform is very easy to operate and use”, “E-Learning platform’s contents are worth learning” and “The use of E-Learning platform makes easy and convenient learning”, and the means are 3.83, 3.82 and 3.93; moreover, the pinions of these sampling personnel tend to be fairly concentrated (SDs are .57, .66 and .63, respectively), which revealed females have a higher level of satisfaction for the E-Learning platform with considering the use and operation of such platform, the platform contents are worth learning and the convenience of learning. By comparing sampling male and female, they have the lowest level of satisfaction for “E-Learning platform system is very durable” and “E-Learning platform’s contents are not boring”, the means are 2.85 and 2.79 respectively for males, and 2.89 and 2.73 for females, which all lower than the mean 3.0, and their opinions are fairly consistent (male: SD=.90, SD=.61; female: SD=.84, SD=.69). It revealed that both males and females thought about the failure in E-Learning platform, and the platform contents might be a bit dull

and boring. Integrally speaking, the difference between sampling males and females has not yet reached the significance level; therefore, there is no significant difference in satisfaction, as shown in Table 2.

4.4. E-Learning Satisfaction Comparison between Personnel Officers with Different Ages

By comparing the sampling personnel of different age groups, no matter the group of above age 51, the groups of age 41-50 and 31-40, and the group of under age 30 all revealed the highest satisfaction level of “The use of E-Learning platform makes easy and convenient learning” for each age group (means: 3.97-4.08); as a result, it showed that no matter users at different ages who can use the digital platform to learn conveniently. Next, by comparing the E-Learning platform satisfaction for sampling personnel of different ages, the means of these 2 questions: “E-Learning platform system is easy to get failure in operation” and “E-Learning platform’s contents are not boring” are lower than 3.0 for all age groups; among which, the groups of above age 51 and under age 30 have the minimum mean $M=2.69$ and consistent opinion ($SD=.71$ and $SD=.75$) for the lowest satisfaction level of “E-Learning platform’s contents are boring”, which showed different age groups’ dissatisfaction for the system failure and boring content. Overall speaking, however, the satisfaction of E-Learning platform has not yet reached a significant level for all age groups, and without any significant difference; therefore, this research will not conduct the post-comparison, please refer to Table 3.

Table 3 E-Learning Satisfaction for Sampling Personnel Officers of Different Ages

Questions	Age above 51		Age 41-50		Age 31-40		Age under 30		F
	M	SD	M	SD	M	SD	M	SD	
Functions	3.48	.50	3.45	.44	3.45	.32	3.32	.33	.44
1.E-Learning platform is very easy to operate and use	3.72	.84	3.83	.70	3.84	.57	3.54	.66	.74
2.E-Learning platform’s functions are very ideal	3.59	.73	3.67	.76	3.56	.50	3.62	.76	.19
3.E-Learning platform system is very durable	2.90	1.04	2.83	.81	2.97	.86	2.85	.68	.20
4.E-Learning platform layout has comfortable visual effect	3.72	.70	3.59	.66	3.50	.50	3.38	.50	1.11
5.E-Learning platform can be easily linked to other network resources	3.48	.78	3.35	.67	3.38	.49	3.23	.43	.52
Contents	3.34	.47	3.37	.43	3.31	.39	3.26	.41	.31
6.E-Learning platform’s contents are worth learning	3.79	.81	3.84	.76	3.72	.52	4.08	.64	.80
7.E-Learning platform’s contents are not boring	2.69	.71	2.73	.70	2.88	.55	2.69	.75	.49
8.E-Learning platform’s teaching methods are very flexible	3.45	.73	3.48	.73	3.38	.55	3.00	.70	1.74
9.E-Learning platform makes me to be interested in	3.45	.87	3.46	.77	3.28	.63	3.31	.63	.50
Effectiveness	3.69	.46	3.57	.52	3.65	.44	3.67	.46	.49
10.The use of E-Learning platform makes easy and convenient learning	4.03	.77	3.90	.83	3.97	.59	4.08	.49	.32
11.The use of E-Learning platform develops my professional	3.86	.78	3.75	.86	3.81	.59	3.85	.68	.18

knowledge									
12.The use of E-Learning platform is helpful to my work	3.69	.80	3.67	.82	3.75	.67	3.77	.92	.11
13.The use of E-Learning platform results in better learning effectiveness	3.17	1.10	2.97	.82	3.06	.66	3.00	.57	.41

5. Conclusions and Suggestions

5.1. Research Conclusions

According to results, some conclusions of the present study could be made as follows :

First, according to the research results, it could be inferred that more than half of the personnel officers in public colleges and universities only possessed common level of computer literacy and should be improved in the future.

Second, based on functions of such learning platform, those subjects of different genders and age groups had low satisfaction with “Whether the learning platform system is easy to have a failure”; the mean score of satisfaction was the lowest, below 3.0, as compared with other items of functions. It showed that the learning system had some problems of malfunction from time to time, which might be caused by failure or congestion of network. However, there was no significant difference of satisfaction with function in use among those subjects.

Third, as regards the construction of the content of learning platform, those learners of different genders and age groups had low mean score of satisfaction (below 3.0) with “Whether its contents will be boring nor not.” This might be because the construction of the content had been unchanged and the content was really dull. However, the satisfaction with the construction of the content among those subjects did not reach significance level.

Fourth, as for the learning effects, both male and female subjects of different age groups were satisfied with “The use of E-Learning platform makes easy and convenient learning”, especially the male learners’ mean score of satisfaction got to 4.05. On the other hand, people under age 30 had higher satisfaction with “The use of E-Learning platform makes easy and convenient learning”, and both mean scores were more than 4.0 that were higher than those of other age groups. It indicated that the younger the learners were, the more desire they would have for learning. However, there’s no significant difference of satisfaction with the content of E-Learning platform among those learners.

5.2. Research Suggestions

5.2.1. Improving Computer Literacy for Personnel Officers in Public Colleges and Universities

According to more than half of personnel officers in public colleges and universities who thought to have common level of computer literacy, thus it should organize and hold the computer literacy training, especially the computer software development. People will be easily fall behind others if he or she didn’t learn new computer software from time to time, especially for people with older ages. Many computer training courses and programs will improve his or her computer literacy and get him or her to be familiar to operate and use computer.

5.2.2. System Maintenance Personnel Should be Careful of the Regular Operation of the E-Learning Platform Functions

It may frequently have a great amount of users to enter the system at a time, which will result in the insufficient bandwidth or a crash; therefore, cause a failure or malfunction for the system. System maintenance personnel should be always careful of the normal operation of the system, or give a warning in advance. On the other hand, users should be careful of whether the PC equipment meets the system requirement or not, as well as careful of updating (or upgrading) the support software.

5.2.3. Improving the Diversification of E-Learning Contents

The contents of E-Learning platform will be designed according to the popularization without significant change, and may not be satisfied with individual need. Therefore, after long-term using, users may feel boring for the contents; for this reason, the learning contents can be designed toward the gamized, dynamic, interactive and plentiful teaching methods, which will make users to feel interesting and attraction than boring.

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