

Research Article

A Study of the Counseling Service System Satisfaction for Teacher-Counselor in Tainan Elementary School

Hsiu-Hao Liu*

The Ph.D. Program in Business and Operations Management, College of Management, Chang Jung Christian University,
No. 1, Changda Rd., Gueiren District, Tainan City 711301, Taiwan

ARTICLE INFO*Article History*

Received 30 October 2020
Accepted 20 July 2021

Keywords

Perceived usefulness
perceived ease of use
counseling service system
teacher-counselor

ABSTRACT

As the most important case management system in the school counseling work, the counseling service system must meet the needs and expectations of the school teacher-counselors (the main users). This investigation used the questionnaire survey method aimed at teacher-counselors in elementary schools in Tainan City to understand the degree of teacher-counselors' satisfaction when they used the counseling service system. The results mainly found that counselor-teachers were most satisfied with "The items provided by the system website are completed and various." followed by "The items provided by the system website are necessary items meeting the needs for counseling work." while the least satisfactory item was "Using the system website helps me communicate and interact with others in counseling work." In the five satisfaction dimensions of the system, the perceived ease of use and the usage attitude were found to be effective in explaining the system usage intention. Some practical implications of this research as well as topics worthy of further research were discussed at the conclusion of the research.

© 2021 The Author. Published by Atlantis Press International B.V.

This is an open access article distributed under the CC BY-NC 4.0 license (<http://creativecommons.org/licenses/by-nc/4.0/>).

1. INTRODUCTION

The counseling service system is the most important tool for case management in counseling work in the junior high and elementary schools in Tainan City. The purpose of the system design is to assist school teacher-counselors to care for students and track their psychological development, and hope that students will have good adaptive growth. The school teacher-counselors are the main users of the system. In addition to daily counseling affairs, the school teacher-counselors also use the system to record the background information, counseling records, referrals and other operations of the case. In actual use, the school teacher-counselors find that they have encountered difficulties and doubts in the operation of the system, filling in items, and review procedures, and even ethical concerns about the leakage of personal data, which may endanger the relevant rights and protection of the case, and therefore also affect the system usage intention of the school teacher-counselors.

2. BACKGROUND

The Technology Acceptance Model (TAM) was a model developed by Davis [1] and others based on the Theory of Rational Action (TRA) to explore the relationship between cognition, emotion, and technology use behavior. Many follow-up researches on new information technology have applied TAM as a research framework. TAM has undergone many empirical studies and summarized through much literature, verifying that perceptual ease of

use and perceptual usefulness will affect attitudes, and perceptual usefulness and attitudes will affect the intention of use [2,3]. And there was a study showing that good system quality will promote the use of website [4]. Another study showed that the system response time is an important factor that affects users' beliefs about the website [5].

This study is to explore the reasons why the school teacher-counselors accept or reject this system. It is based on the TAM [1] and refers to related research [6], used the five dimensions, these are System Quality (SQ), System Response Time (SRT), Perceived Usefulness (PU), Perceived Ease of Use (PEOU) and Usage Attitudes (UA), as the main factors to explore the System Usage Intention (SUI) of the school teacher-counselors.

3. RESEARCH DESIGN

3.1. Conceptual Model

Based on the related theories, we propose a hypothetical conceptual model, illustrated in Figure 1.

The model has the following hypotheses:

Hypothesis 1. Different demographic characteristics will have an impact on system satisfaction.

Hypothesis 2. Different demographic characteristics will have an impact on SUI.

Hypothesis 3. System satisfaction will have a significant impact on SUI.

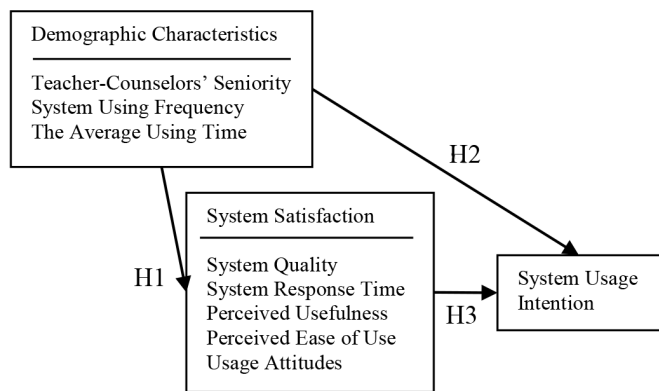


Figure 1 | Conceptual model.

3.2. Participant

The main objects of this research were the full-time teacher-counselors of Tainan Elementary Schools who were in service in the academic year 2020/2021, with a total of 88 teachers. Finally, 20 teachers volunteered to participate in the questionnaire survey and submitted responses.

3.3. Data Collection Instrument

This research was based on the self-compiled “Questionnaire on the Status of Professional Counselors in Tainan Elementary Schools Using the Counseling Service System” to conduct a survey, including demographic characteristics (four questions), system satisfaction (18 questions) and system usage Intention (two questions) consists of three parts, which are in the form of a Likert four-point scale. The higher the score, the higher the degree of satisfaction or system usage intention.

The reliability of the questionnaire has a very good internal consistency reliability ($\alpha = 0.92$). In terms of validity, seven senior experts and scholars in the relevant fields, including information, counseling and education, and with seniority between 6 and 20 years are invited to conduct the survey. The content is fully discussed, which brings the narrative of the questionnaire closer to the subject of the survey. According to the above, the research tools used in the research should have content validity.

4. RESULTS

4.1. System Satisfaction Score

The results of the elementary school teacher-counselors satisfaction items were as follows: “The items provided by the system website are completed and various.” ($M = 2.90$), was the highest of all items. “The items provided by the system website are necessary items meeting the needs for counseling work.” ($M = 2.75$) was secondly. The least satisfactory item was “Using the system website helps me communicate and interact with others in counseling work” ($M = 1.85$). The second lowest was “I think the system helps me in the word processing of counseling work is more efficient and convenient” ($M = 1.90$).

From the perspective of the five dimensions, except for the system quality, the other dimensions had the lowest scores, but none of the dimensions had the highest scores. Observing the average score of the dimension again, it could be found that the school teacher-counselors were somewhat dissatisfied with the degree of satisfaction with the system (Table 1).

4.2. System Usage Intention Score

In terms of the performance of the school teacher-counselors in elementary schools, from the highest, lowest and average scores, it could be found that school teacher-counselors have a little low system usage intention (Table 1).

4.3. Demographic Characteristics and System Satisfaction

After performing a one-way ANOVA, it was found that the system satisfaction, system quality, system response time, perceived usefulness, perceived ease of use and usage attitudes of the school teacher-counselors.

There was no difference due to seniority, usage frequency, and average use time (Table 2).

4.4. Demographic Characteristics and System Usage Intention

One-way ANOVA found that the system usage intention of the elementary school teacher-counselors did not depend on seniority ($F = 1.48, p > 0.05$), usage frequency ($F = 2.48, p > 0.05$) and average use time ($F = 0.00, p > 0.05$).

4.5. System Satisfaction and System Usage Intention

System satisfaction and SUI were related to the Pearson product difference. It is found that there was a high positive correlation between the two ($r = 0.89, p < 0.01$), and four of the five dimensions were significantly correlated ($r = 0.71-0.87, p < 0.01$). Only the system reaction time and the willingness to use the system were not significantly correlated ($r = 0.33, p > 0.05$). It shows that in the usage intention of the school teacher-counselors to use the system, compared with other dimensions, the system response time was not the main consideration (Table 1).

Carried out multiple regression analysis based on the five dimensions of system satisfaction and SUI and use stepwise regression as the method of regression model to screen predictive variables. It was found that the two dimensions of perceived usefulness and usage attitude in the degree of system satisfaction could effectively explain the SUI (multiple $R^2 = 0.84$, adjusted $r^2 = 0.82, p < 0.01$). It showed that there may be key factors in the system usage intention of the school teacher-counselors in the two dimensions (Table 3).

Table 1 | Descriptive statistics and correlations between the variables of the study

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. SQ	15.65	1.79	–	–	–	–	–	–
2. SRT	4.55	1.43	0.55*	–	–	–	–	–
3. PU	4.30	1.42	0.61**	0.43	–	–	–	–
4. PEOU	8.20	2.48	0.52*	0.38	0.89**	–	–	–
5. UA	8.60	2.42	0.66**	0.20	0.76**	0.81**	–	–
6. SUI	4.15	1.50	0.71**	0.33	0.87**	0.83**	0.85**	–

* $p < 0.05$, ** $p < 0.01$.**Table 2** | Summary table of one-way ANOVA (system satisfaction dimensions)

Dimensions	Seniority (<i>F</i> -value)	Usage frequency (<i>F</i> -value)	Average use time (<i>F</i> -value)
SQ	0.61	2.85	0.50
SRT	1.13	1.22	0.02
PU	1.61	1.89	0.04
PEOU	2.03	2.16	0.42
UA	0.59	1.51	0.02

Table 3 | Summary table of multiple regression analysis coefficient

Selected forecast var. and order	Multiple R^2	Δ Multiple R^2	ΔF -value
PU	0.76	0.76	56.37**
UA	0.84	0.08	8.74**

** $p < 0.01$. See Ref. [7].

From the above results, we can know that through one-way ANOVA, we found that different demographic characteristics have not to impact on system satisfaction either usage intention (SUI). Therefore, hypotheses 1 and 2 did not hold.

And through multiple regression analysis, we found that SUI with the system could be effectively explained by perceived usefulness (PU) and usage attitude (UA) in the satisfaction of the system. Therefore, hypothesis 3 was partially substantiated.

5. CONCLUSION

Based on the above results, it could be found that different seniority, usage frequency, average use time, the elementary school teacher-counselors were no significant differences in the degree of system satisfaction. Similarly, elementary school teacher-counselors with different background variables were no significant difference with the degree of system usage intention (the score tends to be low). In terms of this result, it could be seen that the current counseling service system was not trusted by the elementary school teacher-counselors, and it cannot help the school teacher-counselors to improve their work efficiency or improve the time-consuming trouble of paper processing. It was difficult to obtain the expected benefits in practice.

The main factors influencing the SUI were related to the two dimensions of PEOU and usage attitudes. Compared with the previous

research, the usage attitude has been mentioned all the time. Research conducted in the past also confirms that there was a positive correlation between the usage attitude and the usage intention [8,9]. It showed that the usage attitude dimension requires high attention.

From the items of the two dimensions, it could be found that there may be difficulties in learning to operate the counseling service system, and the security of the system could not be trusted by the school teacher-counselors. Since school counseling work has a fairly strict principle of confidentiality, the use of any information is regulated by law. From this result, it could be found that the school teacher-counselors have great concerns about data preservation or management of information security.

In the future, this study will continue to extend the scope of research to practitioners in different backgrounds, such as junior and senior high school teacher-counselors, and counseling psychologists, etc., to verify the results of this research. In addition, according to the literature, if artificial intelligence with a good human interface can be introduced into the information system to improve the perceived usefulness and PEOU [10]. This may help improve the users' satisfaction with the counseling service system.

We will propose improvements to the system maintenance organization based on the results of this research.

CONFLICTS OF INTEREST

The author declares no conflicts of interest.

REFERENCES

- [1] F.D. Davis, Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quart.* 13 (1989), 319–340.
- [2] F.D. Davis, R.P. Bagozzi, P.R. Warshaw, User acceptance of computer technology: a comparison of two theoretical models, *Manage. Sci.* 35 (1989), 982–1003.
- [3] E. Karahanna, D.W. Straub, The psychological origins of perceived usefulness and ease-of-use, *Inform. Manage.* 35 (1999), 237–250.
- [4] T. Ahn, S. Ryn, T. Han, The impact of web quality and playfulness on user acceptance of online retailing, *Inform. Manage.* 44 (2007), 263–275.
- [5] J.C.C. Lin, H. Lu, Towards an understanding of the behavioural intention to use a web site, *Int. J. Inform. Manage.* 20 (2000), 197–208.

- [6] L.G. Wallace, S.D. Sheetz, The adoption of software measures: a technology acceptance model (TAM) perspective, *Inform. Manage.* 51 (2014), 249–259.
- [7] K. Petchko, *How to Write About Economics and Public Policy*, Academic Press, USA, 2018.
- [8] N. Wilson, The impact of perceived usefulness and perceived ease-of-use toward repurchase intention in the Indonesian E-commerce industry, *J. Manajemen Indonesia* 19 (2019), 241–249.
- [9] N.A. Juarez Collazo, X. Wu, J. Elen, G. Clarebout, Tool use in computer-based learning environments: adopting and extending the technology acceptance model, *ISRN Edu.* 2014 (2014), 736931.
- [10] K. Sumi, Affective human computer interaction, *J. Robot. Netw. Artif. Life* 3 (2016), 74–78.

AUTHOR INTRODUCTION

Mr. Hsiu-Hao Liu



He received his Master's degree from the Department of Psychology, National Chung Cheng University, Taiwan in 2015. He is currently a Doctoral course student in Chang Jung Christian University, Taiwan. His research interests include the application of information technology to education and counseling.