Role of technical proficiency towards satisfaction: Study on government servant in Malaysia

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Abstract. The successfulness of e-government initiatives relies on their users’ satisfaction. This paper tested the role of technical proficiency influencing user’s satisfaction to use e-government. Survey data was collected from e-government users in Malaysia. The hypothesized model was then tested using statistical package for social science (SPSS). The results show that technical proficiency has positive relationship with users’ satisfaction.

1 Introduction
Technical proficiency is still new in information system studies. Previous studies on technical proficiency only focused on non-information system field such as movement science [1], music education [2]. According to Weigel & Hazen [3] The Information System (IS) Success model implies that IS users possess baseline technical abilities; an assumption that, if not met, may adversely affect the constructs and relationships proposed by the model. We propose that the level of users' technical proficiency should be accounted for when considering deployment of information systems. However, considering the extant literature, it is unclear precisely what constitutes technical proficiency in today's business environment. Using a Delphi method approach, we develop the technical proficiency construct to uncover what competencies indicate technically proficiency, what business needs such proficiencies address, and how technical proficiency can be assessed. We uncover 16 qualities of technical proficiency, 14 common technology business needs, and 13 methods to assess proficiency. This research lays the groundwork for future research regarding IS Success and technical proficiency. Practitioners can use these findings to help better prepare their workforce for IS deployment. This study will be the first attempt to empirically assess the relationship between technical proficiency and satisfaction in information system usage.

2 Literature Review

2.1 Technical Proficiency
According to Bulger, Mayer, & Metzger [4] proficiency in digital literacy refers to the ability to read and write using online sources, and includes the ability to select sources relevant to the task, synthesize information into a coherent message, and communicate the message with an audience. Apart from technical proficiency, we believe that the concept of digital fluency [5] is similar.
2.2 Satisfaction
Current study utilized Chiu, Chao, Kao, Pu, & Huang’s, [6] definition of satisfaction which is refers to the level of user satisfaction with the results of their use experience. User satisfaction can also be understood as a situation whereby the users can feel the difference between the actual and expected benefits. Previous studies have shown that satisfaction is an important indicator of information system success. Users will continue to use any particular technology if they found the technology is useful, beneficial and satisfy them.

2.3 Hypothesis development
Since technical proficiency has not been discussed extensively in the literature, we are relying to the almost similar concept namely digital fluency. According to Wang, Myers, & Sundaram [7] digital fluency is the ability to reformulate knowledge and produce information to express oneself creatively and appropriately in a digital environment. Accordingly, we are going to test the following hypothesis:

H1: Technical proficiency is positively associated with satisfaction

![Figure 1. Conceptual framework](image)

3 Methodology
This study uses a causal effect approach from the methodological point of view. This study is a quantitative study using the ex-post facto method. Researchers chose a positivist approach based on past studies that study the acceptance of information technology using the same approach.

4 Data analysis
Data analysis was carried out using SPSS 20. Before testing the hypothesis, data must be firstly screened for any potential causes of distortion such as non-linearity, non-normality and common method bias. Those potential causes can be eliminated through rigorous methodological procedure as well as can be remedied by mean of statistical approach. In order to perform a descriptive analysis for demographic variable, we are using a simple form of statistical calculation such as mean, standard deviation, frequency and percentage wherever possible.

4.1 Demographics
Based on the analysis, 79.2 % are Malays, 201.1% are Chinese and .7% is Indians. Most of them are female (78.6%) and male (21.4%). Majority of the respondent are using e-filing (47.7 %) and followed by e-service 21% while e-sila, e-labor, e-perolehan, e-syariah, and project monitoring system accounted for 11%, 10.7%, 7.9%, 1.5% and .2% respectively.
4.2 Hypothesis testing

In order to test the hypothesis, multiple linear regression is carried out. The relationship between technological proficiency and satisfaction was found significant at $\beta .28$ ($p = 0.05$). Technological proficiency is capable to explain only 0.08% of variance.

| Variable  | Standardized Coefficients | t    | Sig  |
|-----------|---------------------------|------|------|
| TECH      | .279                      | 6.756| .000 |

5 Discussion

Findings based on the analysis shown that there is a significant and positive relationship between technical proficiency and satisfaction. Although there were no empirical evidence that proves the relationship between technical proficiency and satisfaction, we believe that there will be a nomological association between both variable. This finding would help both government and the policy maker in order to come up with a systematic solution on how to increase satisfaction level among e-government users and finally to foster up the e-government usage. This study also shed light on how technological proficiency can plays a significant role in explaining why users get satisfied when using any particular technology. Users who have a very good command in technology usually will tend to more satisfy with the technology. They will experienced such a beautiful moment when using that particular technology because there will be always an element of playfulness among expert users.

6 Conclusion

Technical proficiency is indeed an important variable in technology adoption studies. This finding can be beneficial to both practical and theoretical paradigm. As for practical, the government should consider the element of technical proficiency among users. There should be more training the actual usage of any particular technology. Thus, it will make sure that all users get firstly familiarize with the technology. There are several limitations of this study. The first is that this study was conducted using cross-sectional data collection method which is less capability on explaining the phenomena in the long term. Another limitation is regarding the type of e-government under study was not specific. Different type of e-
government will divulge different experience among users. This model only uses one independent variable to test the relationship and thus produced very low variance explained. Accordingly, future studies should also explore any other potential variables that can be included in the research model.

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