An Empirical Study on the Relationship between Identity-Checking Steps and Perceived Trustworthiness in Online Banking System Use

A Thesis

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By

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ABSTRACT

Online banking systems have become more common and widely used in daily life, bringing huge changes in modern banking transaction activities and giving us a greater opportunity to access the banking system anytime and anywhere. At the same time, however, one of the key challenges that still remain is to fully resolve the security concerns associated with the online banking system.

Many clients feel that online banking is not secure enough, and to increase its security levels, many banks simply add more identity-checking steps or put on more security measures to some extent to give users the impression of a secure online banking system.

However, this is easier to be said than done, because we believe that more identity-checking steps could compromise the usability of the online banking system, which is an inevitable feature in design of usable and useful online banking systems. Banks can simply enhance their security level with more sophisticated technologies, but this does not seem to guarantee the online banking system is in line with its key usability concern. Therefore, the research question raised in this thesis is to establish the relationships between usability, security and trustworthiness in the online banking system.

To demonstrate these relationships, three experiments were carried out using the simulation of an online banking logon procedure to provide a similar online banking experience. Post questionnaires were used to measure the three concepts, i.e.

usability, security and trustworthiness. The resulting analyses revealed that simply adding more identity-checking steps in the online banking system did not improve the customers' perceived security and trustworthiness, nor the biometric security technique (i.e., fingerprints) did enhance the subjective ratings on the perceived security and trustworthiness. This showed that the systems designer needs to be aware that the customer's perception of the online banking system is not the same as that conceived from a technical standpoint.

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STATEMENT OF ACADEMIC INTEGRITY

I declare that this research study is entirely my own work and that it has not been copied from the work of other people. If the work and ideas of others have been used in this study, they have been properly cited in the text.

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