Association for Information Systems
AIS Electronic Library (AISeL)

SIGHCI 2011 Proceedings

Special Interest Group on Human-Computer Interaction

2011

Application Discoverability and User Satisfaction in Mobile Application Stores: An Environmental Psychology Perspective

Jaeki Song
Texas Tech University, jaeki.song@ttu.edu

Junghwan Kim
Texas Tech University, jung.kim@ttu.edu

Donald Jones
Texas Tech University, donald.jones@ttu.edu

Jeff Baker
American University of Sharjah, jbaker@aus.edu

Follow this and additional works at: http://aisel.aisnet.org/sighci2011

Application Discoverability and User Satisfaction in Mobile Application Stores: An Environmental Psychology Perspective

Jaeki Song
Texas Tech University
jaeki.song@ttu.edu

Junghwan Kim
Texas Tech University
jung.kim@ttu.edu

Donald, R. Jones
Texas Tech University
donald.jones@ttu.edu

Jeff Baker
American University of Sharjah
jbaker@aus.edu

ABSTRACT

As people adopt mobile applications (mobile apps) for hand-held devices, mobile application stores are becoming more widely used in everyday life. In order to appeal to consumers, application stores must provide a large quantity of applications. However, with so many applications to sort through, finding the right ones to download can be a painstaking task for consumers. Application stores must therefore find a way to achieve the seemingly conflicting goals of providing a large quantity of various types of applications and making the specific applications that consumers desire easy to discover. To address this challenge, this study investigates the effects of application quantity and application discoverability on application store users' satisfaction.

Drawing on an environmental psychology perspective as a theoretical base, we explain that user satisfaction is influenced by both perceived quantity of applications and application discoverability. Essentially, we argue that satisfaction can be increased when application stores are able to enhance application discoverability while simultaneously increasing the quantity of applications. On a more detailed level, we explain that the perceived quantity of applications is composed of two distinct elements: quantity-sufficiency of applications and quantity-overload of applications. In explaining these relationships, we also propose three facilitating aspects of app stores that improve application discoverability: multi-channel engagement, application store coherence, and user-generated reviews. We argue that these facilitating aspects support users' efforts to find the applications they desire in the mobile application store.

A study of 278 U.S. and Korean college students was conducted to test our research model. We used a survey methodology and PLS-based data analysis, finding support for our model. Our study has several key findings. First, the two elements of perceived quantity of applications independently influence application discoverability.

Quantity-sufficiency has a positive and significant impact on application discoverability, whereas quantity-overload has negative and significant impact on application discoverability. Second, our findings show that application store coherence and user-generated reviews are important facilitating factors that help users to easily find the applications they are seeking.

This study has implications for both theory and practice. From a theoretical point of view, we provide an explanation for the relationship between application quantity and application discoverability, an explanation that also reveals how quantity and discoverability influence user satisfaction. Additionally, this study extends prior research streams regarding information seeking and information overload, integrating those perspectives with the context of mobile computing environments.

From a practical point of view, this study explains that balancing or co-increasing application discoverability and application quantity plays a critical role in enhancing user satisfaction in mobile application stores. Furthermore, we highlight how the discoverability facilitators of the application store (such as user recommendation systems, the different channels through which applications can be accessed, and the user interface that provides logical navigation through the application store) promote users' satisfaction with the application store. A final practical implication of our study is that we suggest that companies and users can adopt cloud computing at their firm by incorporating the application store metaphor as a way of finding the applications they need.

KEYWORDS

Mobile application store, environmental psychology, application discoverability, discoverability facilitators, application quantity