Mobile Application Diffusion and Success: An Interpretative Approach to Influential Factors

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ABSTRACT

The rapid evolution of mobile computing technology has been attributed to the increasing capitalizing by companies on this innovative business medium. The result of conformity between technology advancement and market demand increment for mobility has led to the development of different categories of mobile businesses in recent years. This research reviews the previous related literature to the subject and by deploying meta-synthesis as a systematic quantitative method; a generic model covering important factors contributing to mobile application diffusion is presented. The proposed comprehensive model consists of users’ specifications, technical aspects and contextual factors in the first level. This article also represents the logical relationship expected to be valid between these factors as conceptual framework, which could be investigated in future studies. The proposed influencing factors as a generic model can help developers and mobile business analysts to have a comprehensive understanding about the contexts may influence their mobile application success or failure.

KEYWORDS

Environment, Mobile Application, Organizational Factors, Technical Aspects, Users’ Specification

INTRODUCTION

Mobile computing is a reality in our lives; we use mobile devices to receive and answer our e-mails, locate a place, order food, and ‘like’ the status of our friends. Moreover, there is a global trend towards increasing the number of users connected to the network via mobile devices. This trend produces demand for information systems and mobile applications. Sales are increasing because of the diversity of features and capabilities offered by such devices (Barroca Filho et al., 2015).

Mobile businesses are evolving and attractive business opportunities, which have been enabled by mobile computing technology enhancement. Based on market acceptance and the importance of mobility for users, this emerging market is growing quickly. It is obvious that the phenomenal growth of these devices to access services has captured the attention of businesses to develop high value added mobile applications to respond quickly to such an increasing demand (Poushter, 2016). Thus, driven by the mobile computing scenario that is changing the way society accesses information, there is a growing demand for mobile applications (Barroca Filho et al., 2015).

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A mobile application is a software application that runs on a smartphone or other portable devices. Mobile applications provide value to users by enabling them to use the internet services that were previously only available on desktop or notebook computers, but also by offering functionalities that are specific to mobile devices including GPS navigation, location-based services, and QR-code scan product searches (Song et al., 2014).

Although the market and technology are growing quickly in the field of mobile business, failures can be seen all around. It is important to know which important factors play an essential role regarding the success of mobile applications. In this way, active companies in mobile business can strategically allocate their limited resources in the most important factors and make appropriate strategies to improve the content and quality of their mobile services (Shieh et al., 2014). A great deal of research has been made to understand the factors that determine mobile app acceptance by users and their significance. However, most of the previous research in this area has focused on the general factors related to the adoption of mobile services (Shieh et al., 2014). The goal of the mentioned studies was mainly to extract factors that could determine user acceptance toward a specific application. Some of them have been implemented in a specific society and some others are concentrated on special applications such as mobile banking. In the present research, we attempt to design a generic model that comprehensively demonstrates important factors that could contribute toward mobile application diffusion and success. The novelty of mobile application development (started from 2009) as well as the necessity for basic knowledge in this field may help us to define research aims to present the factors that should be considered when designing and introducing a mobile app to the market.

**RESEARCH METHOD**

This study investigates the most recent studies about mobile application acceptance. We refer to related literature on software businesses as well as e-commerce success to complete our model. Of course, the experience and expectations of users are important; however, this is not enough to have an extensive understanding about mobile application success. Meta-synthesis is perhaps the most well-developed methodology for synthesizing qualitative studies. This research method is used to produce interpretive translations, ground narratives, or theories by integrating and comparing the findings or metaphors of different qualitative studies (Beck, 2002; Sandelowski et al., 1997). Meta-synthesis is “research of research” that incorporates analysis of the theory, methods, and findings of existing qualitative research studies, and synthesizes these insights to provide new understandings of the phenomenon (Siau & Long, 2005). In this study, we extract the most important and influencing factors contributing towards mobile application success and diffusion from previous related research about mobile commerce successes and user acceptance of mobile applications. Meta-synthesis is deployed to compare, interpret, translate, and synthesize different concepts or influencing factors provided by others, and generates an interpretive synthesis of the findings. Therefore, meta-synthesis is considered as an appropriate method to achieve a comprehensive synthesis of factors based on 117 primary previous studies. This study adapts Noblit and Hare’s (1988) seven-step approach, which encompasses the following phases:

1. **Getting Started and Identifying the Research Question:** The important question is: what are the most important factors that play a role in mobile application diffusion? We aim to discover the logical expected relationship between these factors;
2. **Identifying and Gathering the Literature Relevant to the Research Question:** In the second step, similar studies are found and considered as a base for investigating the main factors in mobile app diffusion. For this purpose, we systematically search through the related databases (Emerald, Elsevier, Google Scholars and Research Gate) to identify current literature related to
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