

## Chapter 6

# Mobile Application Stickiness: Why Do Mobile Applications Get Deleted So Quickly?

**Christopher P. Furner**  
*East Carolina University, USA*

**Pradeep Racherla**  
*Woxan School of Business, India*

**Jeffrey Babb**  
*West Texas A&M University, USA*

**Robert Zinko**  
*University of Newcastle, Australia*

### ABSTRACT

*While mobile application use has grown substantially in the past 10 years, research suggests that the majority of mobile applications are abandoned and often deleted shortly after being downloaded. This study seeks to explore the cognitive processes behind the decision to keep applications, while seeking to identify app characteristics, usage characteristics as well as consumer characteristics which influence mobile application stickiness. Finally, this study maps the decision processes involved in application use continuation.*

### 1. INTRODUCTION

As early as 2008, it was predicted that by 2014, mobile devices would overtake computers for online activity (Bosomworth, 2015). This projection was too conservative. Between the years of 2006 and 2013, mobile traffic was growing at an annual rate of 146% (Naboulsi et al., 2016). By 2013, approximately 2/3<sup>rd</sup> of the traffic was via mobile devices (Wise et al., 2013b).

App usage can be attributed to be one of the main causes of this growth, and the ability for these apps to make extensive use of a variety of mobile device capabilities, accounting for more than 52% of digital traffic (comScore Report, 2014). Between 2011 and 2014, over five billion smartphones and

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millions of applications have been purchased (Moreno-Munoz et al., 2016). Consequently, marketers now believe that apps (and mobile experiences in general) are an integral part of their marketing and consumer engagement strategies, as well as key drivers of revenue (Schadler and McCarthy, 2013).

There have been consistent calls in the literature for a better understanding of mobile engagement (e.g., Kim et al., 2013), yet academic research has only now begun to address this issue with exploration into areas such as reputation (e.g., Zheng and Jin, 2016) and usage frequency (e.g., Liu et al., 2017). One of the main issues of concern to marketers is app consumer retention and stickiness (Zott et al., 2000, Furner et al., 2016). It is commonly accepted in the literature that stickiness leads to long-term loyalty, positive word-of-mouth, and greater revenues (Reichheld and Scheffer, 2000; Srinivasan et al., 2002). However, in the mobile world, data shows that building a relationship with consumers is hard, retention is a challenge, and the time available to achieve both is minuscule. Indeed, by July 2014, there were 1.3 million Android apps and 1.2 million Apple apps available for download. The average smartphone has about 40 apps on it, but only about 16 of those are used on a regular basis (Urban & Sultan, 2015). On the whole, user retention and stickiness is considered one of the most desirable, albeit the most challenging, tasks to achieve in the market (Furner et al., 2014a).

It is worth considering how the very nature of mobile platforms and apps fits existing models and understanding of stickiness. Consumers can engage with mobiles at any moment and in any context. Furthermore, most apps work in conjunction with “always connected” data access and information gathered from the mobile sensors to create a pervasive and ubiquitous usage experience that is driven by the consumers’ location, context, and discretion. Apps must occupy a niche, offer novelty, or fit a common need in a manner that becomes synonymous with that function. In this study, we adopt the generally accepted view that stickiness and website loyalty are similar constructs, however it is worth noting that some prior studies (e.g. Oliver, 1999) have considered website stickiness to be a sub-dimension of loyalty. Hence, we draw insights from the literature on loyalty, e-loyalty and stickiness in order to explore mobile application stickiness.

### **1.1. Purpose of the Study**

The objective of this study is to give an overview of the latest emerging topics that demand research attention, and provide a framework, based on interactivity and mobile stickiness, to guide the investigation of these topics. To this end, we use elements of interactivity and telepresence theories (Rafaeli, 1988, Steuer, 1992) to organize the research issues surrounding consumers’ adoption, use and stickiness to mobile apps. We accomplish the objectives in three steps: 1) Based on both primary and secondary data, we map the key elements of the consumer decision process with respect to mobile app usage, 2) we identify key factors which affect consumers’ initial and long-term stickiness to mobile apps and resultant outcomes for consumers and marketers, and 3) we identify key research issues and areas of critical inquiry in this emerging area of interest based on an extensive review of mobile commerce and e-commerce literature.

This study is organized as follows: First, we explore the differences between the mobile environment and the desktop environment (apps vs. desktop websites), and how they matter in terms of understanding consumer behavior. We then frame our study with an introduction to the theory base. Subsequently, we present a process framework that captures the key facets of consumer behavior with respect to mobile app download/purchase and usage. We then survey inter-disciplinary literature with the goal of illuminating key research themes.

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