

# Chapter 74

## Mobile Device Selection in Higher Education: iPhone vs. iPod Touch

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### ABSTRACT

*Mobile devices are rapidly becoming the most common interface for accessing network resources (Hall 2008). By 2015 the average 18-year old will spend the majority of their computing time on mobile devices (Basso 2009). These trends directly affect institutions of higher learning. Many universities are offering learning initiatives and m-services designed to distribute content and services to mobile devices. In this chapter, we report findings from an exploratory, longitudinal study at Abilene Christian University, where incoming freshmen received their choice of an Apple iPhone or iPod touch. Our findings indicate that users' device selections were affected by their perceptions of the costs of the devices, the devices' relative characteristics, and the social influence of parents. We also found that users' attitude, satisfaction, and confidence about their device selection varied across devices, with iPhone users having more favorable perceptions. The chapter concludes with recommendations for mobile learning initiatives and directions for future research.*

### INTRODUCTION

Higher education institutions have long been interested in tools and behaviors that promote positive learning outcomes for students. Increasingly, educational technology initiatives are employing mobile devices as platforms for content delivery and collaboration. Universities must choose between

dedicated devices and programs (e.g., clickers or Blackboard course management software) and more open platforms, such as mobile phones, that may offer a broader range of uses. While dedicated devices afford increased control and simplicity for universities, these devices have limited utility outside of the learning environment. Open platforms that leverage existing devices (e.g., mobile phones), however, allow learners to use a common device for academic and social purposes, at the

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risk of limited control and increased complexity for the university. In response to these choices, several universities are providing mobile devices to incoming students along with a comprehensive suite of mobile services (m-services) built for that device (Argetsinger 2004).

This chapter reports exploratory findings from surveys of new student users at Abilene Christian University (ACU), a private university in the southwestern United States. ACU offered incoming freshmen a choice of either a free iPod touch or an iPhone (calling plan not included) in conjunction with a suite of custom-built m-services for mobile learning, collaboration, and communications. This chapter examines: a) what factors influenced students to choose the iPhone or iPod touch and b) what consequences this choice had on various student outcomes.

## **BACKGROUND**

With over three-billion mobile phones in use, mobile devices are quickly becoming the most common interface for accessing network resources (Hall 2008). This trend is especially evident in higher education. According to a recent survey of university leaders, over 80% of respondents anticipate an “increase” or “great increase” in demand for mobile communication services over the next three years. The same study found that 65% of respondents agreed that handheld, web-enabled devices would be an essential tool in higher education within three years (Pirani and Sheehan 2009).

As mobile devices become more affordable and ubiquitous, they are increasingly attractive as learning tools because they combine portability with multiple functions that can be used inside and outside of the classroom. In higher education, these functions focus on communication media (e.g., phone, email, chat, audio/video content, web browsing, etc.) that enable behaviors that serve academic, social, or entertainment purposes. Of

course, not all of these functions are expected to have an equal or necessarily positive impact on student outcomes. Therefore, educators need to carefully choose mobile devices that are well-designed to accomplish desired outcomes.

Additionally, educators need to consider possible interventions that might influence users towards preferred devices (Venkatesh and Bala 2008). In considering possible interventions, educators should evaluate possible pre- and post-implementation interventions (Cooper and Zmud 1990). Pre-implementation interventions are those that precede the system roll-out, such as those that promote specific devices to incoming students and subsidize device or contract costs. Post-implementation interventions are designed to promote effective use. Possible post-implementation interventions include ongoing training, consistent use of eLearning best-practices across the curriculum, and on-going development of m-services that meet the needs of learners.

In the remainder of the background section, we introduce the conceptual model that guides our exploration of the mobile learning initiative at Abilene Christian University. First, we introduce key factors that we expect to influence the users’ choice between the iPhone and iPod touch. Then, we consider the potential impact of this choice on student outcomes. See the model depicted in Figure 1.

## **Factors that Influence User Adoption Decisions**

Prior research indicates that users’ perceptions of a technology affect their adoption decisions. One stream of this research is the Technology Acceptance Model (TAM) (Davis, Bagozzi and Warshaw 1989). TAM argues that users’ intent to use a technology is influenced by their perceptions of its usefulness and ease-of-use, among other factors (Venkatesh, Morris, Davis and Davis 2003). Perceived usefulness is a user’s belief in the ability of the device to make common tasks

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