

# Chapter 26

## Framework to Enhance the Mobile User Experience of Goal Orientated Interactions

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### ABSTRACT

*Practitioners and interaction designers cannot design, much less control, the Mobile User Experience. They can, however, design for an enhanced Mobile User Experience. This chapter aims to advance the understanding of Mobile User Experience in goal-orientated interactions by identifying the components that would inform the interaction. These identified components are underpinned by Mobile User Experience factors and the impact they will have on the interaction. Together these components and Mobile User Experience factors contribute towards the initial development of a theoretical understanding that, through a subsequent guided exploration, led to the development of a coherent framework that would enable the appropriate development of services and technology for the enhancement of the Mobile User Experience in goal orientated interactions.*

### INTRODUCTION

User experience (UX) is an acknowledged factor in the successful uptake and use of technology (Dix, 2010; McCarthy & Wright, 2004; Pine & Gilmore, 1998). Although user experience research informs practice on, not only functional, but also hedonistic needs (Roto, 2006), limited empirical research is available to reflect upon (Hassenzahl & Tractinsky, 2006). This is even more evident when considering the Mobile User Experience.

This chapter aims to advance the understanding of the Mobile User Experience in goal orientated interactions by identifying the components that would inform the interaction. These identified components are underpinned by Mobile User Experience factors and the impact they will have on the interaction.

Together these components and Mobile User Experience factors contribute towards the initial development of a theoretical understanding that, through a subsequent guided exploration, led to

the development of a coherent framework that would enable the appropriate development of services and technology for the enhancement of the Mobile User Experience in these interactions. The developed framework is titled the *Framework to enhance the Mobile User Experience of Goal Orientated Interactions*.

This framework was developed through two iterations of Design Science Research (Herrington, 2012; Hevner & Chatterjee, 2010). The first iteration provided a *Framework for Enhancing the Mobile User Experience in an Mlearning interaction* (Botha, 2012) and the second a *Framework for Mobile User Experience for Voice Services* (Botha, Calteaux, Herselman, Grover, & Barnard, 2012). The framework presented in this chapter is thus the resulting generalization of these two iterations. The specific domain implications are not further articulated in this chapter but would form part of the adaptation of the framework for a specific domain.

The vast scope of such an endeavour represents a challenging research task and as such a more specific research interest is declared. The extensive and complex phenomenon of Mobile User Experience will be limited to goal-orientated interaction as framed by Hassenzahl (2005). Referring to the end-user mode of interaction with mobile technology, he distinguishes between goal mode and action mode. Goal mode is characterized by the user wanting to achieve a goal as opposed to action mode, where the user is focused on entertainment. Entertainment activities would include interactions such as browsing or gaming. The interactions that were considered in this chapter are then limited to goal-orientated interactions (Hassenzahl, 2005; Oinas-Kukkonen, 1999; 2000; Oinas-Kukkonen & Kurkela, 2003).

In the following sections the Methodology is briefly outlined and then followed by the Literature review which grounds the deliberations in the literature. The *Framework to Enhance the Mobile User Experience of Goal Orientated Interactions*

is then presented with specific observations related to the two development iterations. Further research opportunities are outlined and the delimitations of the study articulated.

## **METHODOLOGY**

Design science research was applied to develop the framework as this methodology allows for the creation of artefacts for a practical purpose. March and Smith (1995) differentiate among four different types of artefacts: concepts, models, methods and instantiations. Two important characteristics of design science artefacts are their relevance and novelty (Geerts, 2011). Firstly, an artefact must solve an important problem: i.e. it must be relevant. Secondly, to differentiate design science research from routine design, Hevner et al. (2004) suggest that design science research should address either an unsolved problem in a unique and innovative way or a solved problem in a more effective or efficient way.

Design science research contribution requires the following processes: 1) Preliminary study/analysis of practical problems and needs, 2) development of solutions/prototype phase, 3) evaluation and testing and 4) assessment or reflection (March & Storey, 2008; Reeves, 2006; Wang & Wang, 2010).

Hevner et al. (2004) were amongst the first authors to provide an Information Systems (IS) framework to show where design science research fits. This framework was later improved by Pirenen (2009) as well as Wang and Wang (2010). Both the work of Hevner et al. (2004) and Pirenen (2009) stressed the relevance and rigor of design science research in IS. The IS design research framework suggested in Hevner, March, Park, and Ram (2004) incorporate the rigor and relevance as three integral research cycles: relevance, rigor and design. The adaptation of the IS design research framework for this chapter is presented in Figure 1.

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