Chapter 27
Using Cognitive Psychology to Understand Anticipated User Experience in Computing Products

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ABSTRACT

User Experience assessment is an evaluation of user's experience with the product, system or service during 'use' (i.e., actual interaction experience) as well as 'anticipated or before use' (i.e., pre-interaction experience).Whereas many user experience researchers may be conversant with explaining a person's experience during use of a product, system or service, they find it difficult to explain experience before a product or service is used (Anticipated Use), which in this chapter is referred to as Anticipated User Experience (AUX). This chapter applies the theory of cognitive psychology and its principles to best explain how Anticipated User Experience occurs and how this experience can be achieved. This chapter goes a long way in informing user experience researchers and practitioners on the relevance of attaining AUX in a computing product and how it can be achieved.

INTRODUCTION

User experience is the delight and fulfilment a user gets before, amid and after utilizing an item or service. User Experience has been under broad review throughout the most recent decade, producing various User Experience models and assessment techniques. However, the greater part of these models do not show how the delight and fulfilment a user gets before utilising the product can be achieved. In this paper, it is referred to as ''Anticipated User Experience'' (AUX). Understanding Anticipated User Experience (AUX) till now is a challenge to many user experience designers. The greater part of existing user experience theories and models concentrate on comprehending and accomplishing user experience

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during and after product use. Yet, AUX is an extremely important aspect in any product or service if the acceptance of that particular product or service is to be guaranteed. AUX in simple terms is an anticipated, pictured or imagined pleasure and satisfaction the user feels about the product even before it's made available to the user. AUX plays a great role in product acceptance. There is need to understand UAX and how it can achieved in computing products. One of the theories that can help user experience researchers and practitioners better understand AUX and how it can be achieved in computing products is the Cognitive Psychology theory.

This Chapter

This chapter attempts to use Cognitive Psychology theory and its principles to better understand AUX and how it can be achieved in mobile computing products. This chapter goes a long way in informing designers of computing products on the relevance of attaining AUX in a computing product and how it can be achieved

BACKGROUND

According to Pakanen (2015), the foundations of user experience research is rooted on usability. As defined by ISO 9241-11 (1998), usability is the extent to which a product [a portal] can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. According to the revised definition of usability in ISO FDIS 9241-210, it is the extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. Designing for effectiveness and efficiency in computing products has rather been successful. However designing for satisfaction has somewhat been under looked. However, the swift of ideology from compulsory work-oriented use of a computer (effectiveness and efficiency) to leisure and personal use (satisfaction) has led to an interest in expanding usability research to focus on User Experience (Pakanen, 2015). During the past 20 years, designing for user experience has been admired (Arhippainen, 2003, 2009). According to Kaikkonen (2009), research in the 1990's was focusing on user interface and interaction, and usability was synonymous with this. In recent years, User Experience has been recognized as an important and determinant factor in design, development and evaluation of human-computer interfaces and man-machine interfaces (Adikari et al., 2010). The raise of the term '*user experience'* came up during mobile devices and services error. It showed that the ease of use, efficiency and effectiveness are not adequate to warranty user satisfaction, in addition to cognitive aspects; wider perspective to humans was needed (Kaikkonen, 2009). Everything has influence on user experience including those that the designer and developer cannot influence, like user past experiences, environmental factors, and many others. Consequently, the increasing use of the term shows the need for a wider approach to the user than 'usability' can offer (Kaikkonen, 2009). Product development in user experience is no longer only about applying features and testing their usability, but it is about designing products that are enjoyable and support essential social, cultural and economic needs and values of the user (Väänänen et al., 2009). A part from optimizing human performance like usability does, user experience aims further at optimizing user satisfaction with achieving both pragmatic and hedonic (pleasurable) goals (Bevan, 2010). According to Arhippainen (2003, 2009) user experience initially was included in usability issues, but afterwards, it has been understood that even a product with