Design, Learning, Empathy & Intuition

An experience-centered research and design approach for digital, mobile, museum learning application design

Chloe Walker
Faculty of Design, Architecture & Building
UTS, Sydney, Australia
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CERTIFICATE OF AUTHORSHIP/ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Acknowledgements

Table of Contents

Table of Figures

Abstract

This thesis aims to develop an experience-centered research and design approach for designing digital, mobile applications that facilitate personally, emotionally significant and transformational learning experiences for people in museums. A set of three design proposals result from this research. This approach aims to contribute the following new knowledge: a process for experience-centered design and research *for* design; and new knowledge encased within the digital, mobile, museum learning application designs, resulting from this research.

This experience-centered research and design process proposes a **philosophical focus**; a set of **contextual considerations**; and a set of **methods** for researching and designing for individualised, free choice, museum learning experiences, facilitated by digital, mobile technology.

Philosophical Focus

Philosophically, an individualised, free-choice, museum learning experience could likely comprise of *an aesthetic experience*—because someone would encounter and respond to an artwork, an object, or a space and/or *a flow* experience if they are given a challenge that they can accomplish and enjoy. I propose that an individualised museum experience can become more personally emotionally significant if it comprises these two types of experience.

Dewey's *Pragmatism* proposes that "an experience" is different to the continuum of "experience" because it is defined with a beginning and an end. Dewey saw *"an aesthetic experience"* as being different to "an experience" because it possesses some sense of individualised 'quality' (an emotion) that defines it. It is therefore more likely to be the type of experience we have with art or design as opposed to science or mathematics. Also *"an aesthetic experience"* is conceived as a series of experiences that are tied together based on a thread of experience: emotional, spatiotemporal, compositional or sensual.

Similarly Csikszentmihalyi's concept of *Flow* speaks to the 'quality' of an experience, but defines it more specifically as an 'optimal', enjoyable experience. *Flow* also speaks to an individual's sense of awareness within an experience, wherein a person is so immersed that they are no longer aware of themselves being present in the here and now.

In addition to offering a perspective on experience, *Flow Theory* and *Pragmatic Aesthetics* also offer their own perspectives on learning. A *flow* experience occurs as the result of skills being met by challenges, skills improving and new attainable challenges being presented. *An aesthetic experience* defines one experience as independent from another and gives it meaning through it's autonomy. Meaning is then given depth when an experience is incorporated with other experiences.

Contextual Factors

Meaning and the potential for learning are defined by the context in which the experience takes place. This research also looks at the impact 'context' can have upon the attainment of these experiences and how they effect someone's ability to learn.

In order to understand the impacts of context upon learning potentials, I have used Falk's *Contextual Model of Learning* to understand the museum specific learning context. It proposes that three contexts—the *Personal* context, the *Physical* context, and the *Socio-cultural* context—predefined someone's ability to learn. Factors such as: an individuals prior knowledge and interests; whether they are able to share; or whether they can orient themselves, can define this.

Research and Design Methods

Once the contextual factors have been considered, a designer can focus, more specifically, on designing to support the qualities of *an aesthetics experience* or a *flow experience*. This experience-centered research and design approach encourages a designer to support these levels of experience by designing *for* and *with* unique individuals.

By considering someone's *personal context*, (their personal interests, knowledge, perspectives, skills, and concerns); their *physical context*, (objects, spaces and orientation); and their *socio-cultural context* (cultural factors, potential mediation for learning, and their abilities to communicate with others) a designer will consider the "whole person".

I hypothesise that by designing a mobile, learning application with empathy for "the whole person", it is more likely that *an aesthetic experience* or a *flow experience* could occur, because it is more likely that a person will feel comfortable, familiar and emotionally tied to the application. To help myself within this process (and other designers in the future) I've developed a model for designing to support optimal experience, aesthetic experience and learning. It considers all of these aspects, not to reduce them to absolutes, but to make them accessible to a designer as a tool within the design process.

The opportunity within this research is to develop an experience-centered research and design approach for designers to use when designing digital, mobile museum learning applications focused on facilitating, optimal, emotionally rich, aesthetic, personally and contextually meaningful museum learning experiences; and to show this process within the design outcomes. This focus is under catered for and under researched and is the gap in current research that I will be filling.