

Design, Learning, Empathy & Intuition

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


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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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Table of Contents

- Table of Figures.....7
- Abstract10
- Section 1: Introduction & Context11**
 - 1.1 Objectives & Hypothesis.....12
 - 1.2 Process, methods, tools and scope for this research and design.....14
 - 1.3 Limitations of research and design15
 - 1.4 Theoretical influences on the research and design process16
 - 1.5 Philosophical approach to experience-centered research and design18
 - 1.6 Flow Theory: “an optimal experience”20
 - 1.7 Pragmatic Aesthetics: ‘an aesthetic experience’24
 - 1.8 The contextual model of learning.....28
 - 1.9 The context.....32
 - 1.10 The object, the space and others.....33
- Section 2: The process.....35**
 - 2.1 Engagement39
 - 2.1.1 Recruitment40
 - 2.1.2 The Insights Kits40
 - 2.1.3 The Kick-off41
 - 2.1.4 Immersion.....42
 - 2.1.5 Reflection.....48
 - 2.2 Ideation dialogues.....49
 - 2.2.1 The Ideation process.....51
 - 2.2.2 Ideation with Sarah.....52
 - 2.2.3 Ideation with Lexi.....54
 - 2.2.4 Ideation with Alice.....56
 - 2.2.5 Immersion and validation58
 - 2.2.5.1 Sarah’s ideas.....58
 - 2.2.5.2 Lexi’s ideas59
 - 2.2.5.3 Alice’s ideas.....59
 - 2.2.6 Reflection on the Ideation Phase.....60
 - 2.3 Conceptualisation61
 - 2.3.1 Conceptual Design Process.....62

2.3.1.1	"Infinity of Creativity" concept for Sarah	64
2.3.1.2	"Cultural Pulse" concept for Lexi.....	70
2.3.1.3	"Remember me" for Alice.....	76
2.3.2	Reflection on the Conceptual process.....	82
2.4	Visualisation	83
2.4.1	Visual Design Process.....	85
2.4.1.1	"Cultural Pulse" Visualisation for Lexi.....	86
2.4.1.2	"Infinite Creativity" Visualisation for Sarah	88
2.4.1.3	"Threads" Visualisation for Alice.....	90
2.4.2	Reflection on the visual design	92
2.5	Animation	93
2.5.1	Animation Process.....	94
2.5.1.1	Animation for Lexi.....	94
2.5.1.2	Animation for Sarah.....	95
2.5.1.3	Animation for Alice.....	95
2.5.2	Final Review/reflection	96
Section 3: The Model/Framework.....		97
3.1	Creating the model.....	98
3.1.1	Evaluating the designs.....	99
3.2	The personal context.....	100
3.3	The socio-cultural context	102
3.4	The spatio-temporal context	103
3.5	Reflection on the designs.....	106
3.5.1	Personal Context.....	107
3.5.2	Socio-cultural Context.....	110
The spatio-temporal Context	111	
3.6	Reflections on the findings.....	112
Section 4: Discussions, conclusion and future directions.....		115
4.1	Contributions to knowledge.....	116
4.2	Thesis Summary.....	117
4.3	Reflection on Empathy.....	118
4.4	Reflections on the process.....	120
4.5	Future Research	123
References.....		125
Appendix A: Literature Review.....		130

1 The type of research.....	131
2 Understanding emotionally significant museum learning experiences.....	132
2.1 The phenomenon of experience.....	133
2.2 Understanding the Emotional Thread.....	136
2.2.1 Identifying Emotions.....	138
2.3 Free-choice learning.....	140
2.4 The museum audience.....	141
2.5 Experience and technology.....	142
2.6 Blend of the real and the virtual.....	143
Appendix B: Design.....	145
1 Reflective visual thinking.....	145
2 Contextual investigation.....	167
3 Design of the insights kits.....	169
4 Design Influences.....	174
4.1 Horizon (1999).....	174
4.2 Design influences.....	178
4.3 Emotionally reactive media.....	181
Appendix C: Documentation for research.....	187
Transcripts of Interviews with Lexi.....	188
Transcripts of interviews with Alice.....	196

Table of Figures

Figure 1: Flow channel, Chloe Walker 2011 from Csikszentmihalyi 1990	21
Figure 2: Chloe Walker 2011 from Yerkes Dodson , 1908	21
Figure 3: Flow Chloe Walker 2011 from Csikszentmihalyi 1990, Yerkes Dodson 1908, Van Gorp 2006	22
Figure 4: "an aesthetic experience"Chloe Walker 2011	26
Figure 5: Diagram of Contextual Model of Learning, (Falk & Dierking, 2002, p. 37)	28
Figure 6: the contexts of learning and an aesthetic experience, Chloe Walker 2011	31
Figure 7: Conceptual Sketches, Chloe Walker 2011	66
Figure 8: Conceptual Sketches, Chloe Walker 2011	67
Figure 9: Conceptual Sketches, Chloe Walker 2011	68
Figure 10: Conceptual Sketches, Chloe Walker 2011	69
Figure 11: Conceptual Sketches, Chloe Walker 2011	72
Figure 12: Conceptual Sketches, Chloe Walker 2011	73
Figure 13: Conceptual Sketches, Chloe Walker 2011	74
Figure 14: Conceptual Sketches, Chloe Walker 2011	75
Figure 15: Conceptual Sketches, Chloe Walker 2011	78
Figure 16: Conceptual Sketches, Chloe Walker 2011	79
Figure 17: Conceptual Sketches, Chloe Walker 2011	80
Figure 18: Conceptual Sketches, Chloe Walker 2011	81
Figure 19: Visual design screens, Chloe Walker 2011	87
Figure 20: Visual design screens, Chloe Walker 2011	89
Figure 21: Visual design screens, Chloe Walker 2011	91
Figure 22: The table of consideration for a holistic, museum learning experience, Chloe Walker 2011	103
Figure 23: Potential flow of experience with the applications, Chloe Walker 2011	105
Figure 24. Emotional Meta-experience, Chloe Walker 2011 from James Russell, 2003	133
Figure 25. model of emotion, Chloe Walker 2011 from Norman, Ortony and Revelle 2004	134
Figure 26. Goals for experience-centered design, Chloe Walker 2011 from Hassenzahl, 2010	135
Figure 27. Emotion & Cognition, Chloe Walker 2011	136
Figure 28. Core Effect, Picard 2003	137

Figure 29. Emotion Circumplex, Chloe Walker 2011 from Plutchik 2001	138
Figure 30. map of connections in the field of study, Chloe Walker 2011	145
Figure 31 & 32. Flow Theory & Narrative Structure Maps, Chloe Walker, 2007-2010	146
Figure 33: Mapping Process Chloe Walker 2011	147
Figure 34: Mapping Process Chloe Walker 2011	148
Figure 35: Mapping Process Chloe Walker 2011	149
Figure 36: Mapping Process Chloe Walker 2011	150
Figure 37: Mapping Process Chloe Walker 2011	151
Figure 38: Mapping Process Chloe Walker 2011	152
Figure 39: Mapping Process Chloe Walker 2011	153
Figure 40: Mapping Process Chloe Walker 2011	154
Figure 41: Mapping Process Chloe Walker 2011	155
Figure 42: Mapping Process Chloe Walker 2011	156
Figure 43: Mapping Process Chloe Walker 2011	157
Figure 44: Mapping Process Chloe Walker 2011	158
Figure 45: Mapping Process Chloe Walker 2011	159
Figure 46: Mapping Process Chloe Walker 2011	160
Figure 47: Mapping Process Chloe Walker 2011	161
Figure 48: Mapping Process Chloe Walker 2011	162
Figure 49: Mapping Process Chloe Walker 2011	163
Figure 50: Mapping Process Chloe Walker 2011	164
Figure 51: Mapping Process Chloe Walker 2011	165
Figure 52: Mapping Process Chloe Walker 2011	166
Figure 53 & 54 Insights Kit, Chloe Walker 2011	169

Figure 55 & 56 Insights Kit, Chloe Walker 2011	170
Figure 57 & 58 Insights Kit, Chloe Walker 2011	170
Figure 59 & 60 Insights Kit, Chloe Walker 2011	171
Figure 61 & 62 Insights Kit, Chloe Walker 2011	171
Figure 63 & 64 Insights Kit, Chloe Walker 2011	172
Figure 65 & 66 Insights Kit, Chloe Walker 2011	172
Figure 67 & 68 Insights Kit Chloe Walker 2011	173
Figure. 69 Chloe Walker 1999, Horizon, Interactive Installation	174
Fig. 70, 71, 72 Chloe Walker 1999, Horizon: Personal space—Anger/red/fire/car Journey, Interactive Installation	175
Figure . 73, 74 75, 76 Chloe Walker 1999, Horizon: Public Space, Interactive Installation	176
Figure 77. Chloe Walker 1999, Horizon, Narrative structure, Interactive Installation	176
Figure: 78, 79 Chloe Walker 1999, Horizon: Yellow (Happiness) & Blue (Sadness) interface and video, Interactive Installation	177
Figure 80, Blossom, Jayne Wallace, 2008	178
Figure 81. WeARMoMA, Interactive Installation Misc. Artists, 2010	179
Figure 82. American Natural History Museum app, 2010	179
Figure 83. Philly History, Philadelphia Museum, 2010	180
Figure 84. Urban Augmented Reality, Netherlands Architectural Institute, 2010,	181
figure 85. Bio-Mapping, Christian Nold 2006	181
Figure 86. Key Table, Bill Gaver 2003	182
Figure 87. ScreamBody, Kelly Dobson 1998-2004	184
Figure 88 : Waterworth Waterworth and Riva 2004, Exploratorium, Interactive Installation	184
Figure 89. Train, Brenda Braithwaite 2008	185

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.