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Retail Visual Assistant Digital Artefact

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Knott, N., : Retail Visual Assistant Digital Artefact, Technological University Dublin, Dissertation. Master of Arts (MA) in Creative Digital Media, Technological University Dublin, 2013.

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Retail Visual Assistant
Digital Artefact

By
Neville Knott

Submitted in partial fulfilment of the requirements
for the degree of Master of Arts in Creative Digital Media DT539-2A

School of Media, College of Applied Arts and Tourism
Dublin Institute of Technology, 2013

Declaration

I hereby certify that the material submitted in this support document towards the award of Master of Arts in Creative Digital Media has not been submitted for any academic assessment other than partial fulfilment of the aforementioned award.

Signature of Candidate:

Date:

Executive Summary

Window display, store layout and visual merchandising are defined as the ability to attract and sell to the consumer silently. One of the biggest challenges facing small retail businesses in towns and villages around the globe is how to compete against large multinationals in the visual layout and presentation of their merchandise and shops. One of the key advantages that large retail units have over small ones is professionally merchandised stock incorporated into a strategic spatial layout. The cost of employing a full- or part-time design expert within the field of visual merchandising is not viable for smaller shops, resulting in the sales assistants, section managers or store owners attempting to design the window displays, interior layouts and visual-merchandising strategies to increase sales. The lack of knowledge and professionalism results in the merchandise being visually cluttered and ultimately devalued.

The purpose of this project is to build a new interactive digital iBook using Apple's iBooks Author software in order to educate the user in window display, store design and visual merchandising. The new format offered by this software allows the defined subject to be communicated by means of a download through the iTunes store and iBooks, in a new and exciting way.

Worldwide, it will allow users to learn how to design a window display and retail layout, and implement a visual-merchandising strategy in a simple, interactive and well-illustrated process.

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Chapter 1

Introduction

1.1 Introduction

The opening chapter considers the aims and objectives of this project. The aims will state the platform genre that will be utilized for the delivery of the artefact and attempt to establish some focused ground rules in order to meet the demands of the user prior to the initial phase of design. The objectives will set out to ascertain the logistics and prerequisites of the opening research and user-test requirements, which endeavour to collate appropriate and trustworthy information, in order to achieve coherency and relevancy throughout the entire design process.

The Scope and Spec section of the project will briefly outline some of the key features of the artefact, beneficial to the reader, while clarifying precisely how the building of the artefact will be accomplished through the effective manner of utilizing existing and available software. The concluding element to the chapter will review the technology required to successfully complete the task ahead and achieve the desired objectives.

1.2 Aims and Objectives

The aims of this project are:

- to create a new interactive digital iBook for use on the Apple iPad that will educate the user in window display, store layout and visual merchandising;
- to deliver the interactive iBook, with a focus on clarity, necessary to communicate the required knowledge in a straightforward manner;
- to identify the user requirements for window display, store layout and visual merchandising for an interactive digital book; and

- to assess factors affecting users in the design of window display, store layout and visual merchandising.

The objectives of this project are:

- to establish requirements and gather data necessary for building a digital artefact for the purpose of educating the user in window display, store layout and visual merchandising in a retail environment;
- to undertake background research and testing using retailers, students and industry experts to show what problems the interactive digital book needs to solve and how it will achieve this over existing applications;
- to show how the data gathering was conducted and what findings were produced;
- to show how the data was analysed and how it affected the development of the digital artefact;
- to define the target-user groups through personas and scenarios;
- to describe the functionality of the interactive digital book and the constraints it has to work under;
- to show the motivation behind the visual design and the effects that user testing has on it;
- to design new three-dimensional content using Google SketchUp Pro to illustrate plans and layouts;
- to design new motion-graphics content using Keynote to illustrate the processes and outcomes;
- to show the motivation behind the navigation design and the effects that user testing has on it;
- to show how the strategy was implemented in building the interactive digital book; and
- to show how the interactive digital book was tested and how it met the requirements identified.

1.3 Rationale/Business Opportunities

This project uses the combined expertise of a lecturer in store design and visual merchandising with twenty-five years of expertise in the field and a visual merchandising manager from Marks & Spencer and Dunnes Stores in Ireland.

The two key markets for this iBook are small to medium-sized retailers and visual-merchandising students. The interactive digital iBook utilizes the combined knowledge and training abilities of its authors in order to communicate the knowledge necessary to educate the owners, managers and sales staff of retail outlets worldwide. In a clear and simple way, the iBook will instruct users on how best to effectively design the spatial layout and implement the visual-merchandising and display requirements of a small store environment. The book may also be available for procurement by students in the areas of visual merchandising, retail store design, marketing and business studies as a supporting educational device. The iBook will employ animation, videos and high-resolution images to convey the principles of visual merchandising, display and store layout in a clear and logical manner. The completed digital artefact can be used globally, creating a new interactive experience that educates the user in a new and exciting way.

1.4 Scope and Spec

The interactive iBook will offer textual content in each chapter, containing interactive illustrations with automatic recomposition when viewed in either the landscape or portrait position. While in the portrait position, the emphasis is on text, with illustrations appearing smaller and adjacent to it. In the landscape position, the emphasis is on the illustrations, with text appearing smaller underneath or above them. Each page contains tap, swipe or pinch actions, creating a new learning experience.

The following HTML modules appear as objects alongside the text, with web-based, dynamically updated data keeping examples current:

- Embedded Keynote presentations, allowing readers to browse content with custom animations inside the textbooks, including intuitive controls for slide navigation and optional self-playing presentations.
- Interactive images that expand using call-outs and pan-and-zoom features.
- Interactive galleries that allow users to swipe through an entire collection of interactive photos and captions with a finger. They can navigate the gallery using photo thumbnails or step through images one at a time.
- Three-dimensional (3D) images that allow users to manipulate them using zoom, rotational, horizontal or vertical gestures.

The format of the project is iBook based, using the new Apple iBooks Author software. The format used may be adaptable for further use as an app or website, however, the research conducted and the user testing undertaken will only apply to the chosen format.

This project does **not** aim:

- to design content for a website format;
- to design an Android or iPhone app;
- to design an interactive DVD;
- to educate the user on how to become a designer;
- to educate the user on retail interior design;
- to educate the user in graphic-design layouts;
- to cover all merchandise types; or
- to cover all spatial environments.

1.5 Deliverables

1. To design an iBook that offers the user clear content categories in a non-confusing manner.
2. To educate the user in retail layout and visual merchandising using content and illustrations from top experts in the field.
3. To embed Keynote presentations that allow users to browse content with custom animations inside the textbooks. This includes intuitive controls for slide navigation and optional self-playing presentations.
4. To embed interactive images that expand using call-outs and pan-and-zoom features.
5. To embed interactive galleries that allow users to swipe through an entire collection of interactive photos and captions with a finger. They can navigate the gallery using photo thumbnails or step through images one at a time.
6. To design, draw and render three-dimensional (3D) images that allow the user to manipulate them using zoom, rotational, horizontal or vertical gestures.

1.6 Technical Requirements

The technical requirements for producing the interactive digital iBook are:

- MacBook Pro 15-inch:
 - Processor: 2.53 GHz Intel Core 2 Duo
 - Memory: 8 GB 1067 MHz DDR3
 - Graphics Card: NVIDIA GeForce 9400M 256 MB
 - Software: Mac OS X Lion 10.7.2 (11C74)
- iBooks Author software (version 1.0.1 168)
- Google SketchUp Pro software (version 8.0.11751)
- V-Ray for SketchUp rendering software

- Apple iWork Keynote software
- Apple iWork Pages software
- iPhoto '11 software (version 9.2.1 628)
- Adobe Illustrator CS5 software
- Adobe Photoshop
- Adobe Premiere
- Prezi software
- ScreenFlow software

1.7 Platform

The digital artefact was designed for use on the Apple iBook platform. The selection of this platform was made following research undertaken by International Data Group (IDG), the world's largest technology media company, with access to 35 million businesses worldwide [Appendix 1]. Its research showed that 60% of professionals in Europe now use an iPad at work. The *iPad for Business Survey* (IDG, 2012) showed that 'IT and business professionals certainly use their iPads at home. But unlike most consumers, they also use their devices in a similarly intensive way at work. In a further, decisive, break with consumer usage patterns, IT and business professionals use their devices on the road far more frequently than anywhere else.'

In a survey by Tech.pinions, 'The iPad is Hot in Small Business' (Bajarin, 2011), it states that 85% of small business owners surveyed in the United States are either using an iPad in some way or plan to purchase and use one within the next year. As the United States is part of the target market for sales of this iBook, it supports the platform choice.

1.8 Conclusion

In conclusion to the opening phase of this document, aims and objectives have been outlined in consideration of the best source of digital platform required for the artefact, while meeting the necessary end-user stipulations through a coherent and concise agenda. The logic behind the creation of the artefact has been examined, while the development of a series of parameters, including design deliverables and software requirements, has been addressed.

Chapter 2

Research and Requirement Gathering

2.1 Introduction

This chapter will show how an effective research model has been developed to attain varied yet compatible material for examination and establish key advantages and disadvantages of existing information. Data gathering through carefully targeted user groups, including members of the retail trade and third-level degree students, will provide realistic, concrete and considered user feedback during the initial and closing stages of the development of this product. Through the use of a strategic user questionnaire, the gathering of factual information pertinent to the overall success of this venture will prove a crucial research component while effectively navigating the artefact's eventual design direction. A provision for user personas with typical or realistic scenarios will broaden the scope for the design and ensure that the development of the research components remain steadfast and focused to the original aims and objectives.

2.2 Background Research

2.2.1 Web Content

Initial research into visual-merchandising training websites, books and other relevant materials revealed a wide variety of websites and text-based sources that offer visual-merchandising services or virtual-reality tools. One such website, www.visualretailing.com, provides clients with a series of interactive digital programs that enable retailers to build shop furniture, arrange a store layout similar to their own environment, and implement the latest fashion buys into a three-dimensional (3D) model. However, the application demands training in the

use of the software initially, and requires the user to build shop fittings and spaces to create a virtual store similar to their own store.

While most of these programs may be interactive, the building, populating and report-production abilities of the packages are subject to use within an office environment upon a PC or laptop platform, and not on the shop floor. The tools do not teach retailers the basic art of visual merchandising or store-layout design, but rather complete a generic look that can be utilized in the client's store, but need regular updating in order to maximize their potential to the user.

Further online searches revealed a diverse range of dedicated visual-merchandising, display and marketing companies, for example, www.millingtonassociates.com, www.faithbartrugdesign.com and <http://visualmerchandise.net>. While all of these companies offer retail clients bespoke visual-merchandising services, they do not teach retailers how to enhance the look of their stores or develop an appropriate product-handling skill-set for sales staff and management alike.

Additional cyber-searches provided random YouTube videos, uploaded by some well-known fashion retail outlets, such as Benetton. However, these videos are strictly commercially driven showcases for new-season lines and looks, but do not encourage visual-merchandising techniques or training. Alternative video sources included amateur freelance visual-merchandising coaches, who have provided guidance in the form of a video tutorial. Although clear in their objectives, these short pieces have been recorded with inadequate lighting and sound, and are predominantly fashion-led tutorials aimed at high-street boutique stores.

2.2.2 DVDs

Two of the most common associations with the use of a DVD in today's market seem to be that of price and the product's shelf life. The exorbitant retail price for such DVDs has largely become a disincentive within a business environment, especially during an era when most retailers are trying to reduce their overheads. Research included two such DVDs, *Visual Merchandising* (D.E. Visuals, 2012) and *Contemporary Visual Merchandising and Environmental Design* (Diamond, 2011). Both products' prices ranged from about EUR 100 to EUR 150 per DVD. The customer would generally purchase all DVD packs within the range, five in total, from one of the leading distributors. It should also be noted that e-commerce is quickly moving towards the extensive use of a tablet form within the workplace and learning spaces, such that the DVD format is clearly becoming something of an antiquated source of learning. If we consider the use of the DVD as a learning product within a retail environment, the viewer is generally subject to inspecting the material in isolation via a PC or DVD player, and, more often than not, away from the all-important sales floor.

2.2.3 Hardback Books

Although considered the best form of research in order to collate the appropriate material prior to embarking upon the production of any type of training manual, research into existing hardback books included such books as *Silent Selling: Best Practices and Effective Strategies in Visual Merchandising* (Bell, 2012) and *Store Design and Visual Merchandising: Creating Store Space That Encourages Buying* (Ebster and Garaus, 2011). Both were predominately text-based books with stylized examples, which quickly go out of fashion, especially with earlier purchased editions. Typically inclined towards the UK or US market, most of the books contain wide and varied content that has been produced with the large retailer in mind. The overall approach is academic, and clearly represents the

visual-merchandising, display and store-layout ethos of high-street department and chain stores alike: a high quantity of text with some photographic examples, usually printed in black and white and with very little colour utilized throughout. There is also a continued use of marketing jargon and mundane monochromatic illustrations that, in most cases, do not address the basic merchandising issues found within the wider global market of small to medium-sized retail outlets.

2.2.4 E-books

Leading e-books including *The Handy Visual Assistant* (Wade, 2011) and *Store Design: A Complete Guide to Designing Successful Retail Stores* (Green, 2011) are simply printed titles uploaded for use with a Kindle or iPad. The images remain static, and the content is very heavily text orientated. Each of the books reviewed is excessively detailed, with an emphasis on training individuals who are interested in pursuing a career in visual merchandising and display, and not for day-to-day use within an established small to medium-sized retail firm.

2.3 Target-User Groups

Following the background research, lecturers in visual-merchandising, display and store design from the Department of Design in the Dublin Institute of Technology took part in a group discussion. This group consisted of Ireland's leading experts in the fields of educational training and practice. The conclusions reached at the meeting identified two specific target-user groups:

- Retail owners or employees, male and female over twenty years of age who undertake the visual changes in their individual retail environments on a weekly basis.
- Lecturing staff and students of visual-merchandising and display courses who need a structured visual training system.

2.4 Establishing Requirements

Two user groups that reflected the target-user profiles were identified and contacted to facilitate the research questionnaire.

2.4.1 Retail Users' Data Gathering

Retailers in the town of Boyle, Co. Roscommon, were identified as reflecting the target-user group profile of retailers who would employ the use of the proposed digital artefact within their stores. Six retailers were selected to reflect a cross-section of store layouts and merchandise.

The retailers who completed the questionnaire were:

- Magee's (ladies' fashions and accessories)
- Boles of Boyle (department store)
- Daly's (off-licence)
- Marian's (ladies' fashions, accessories, children's wear and bridal shop)
- Taylor's (carpets, curtains and hardware)
- Brogan's (pharmacy)

2.4.2 Lecturing Staff and Student Users' Data Gathering

Lecturers and students from the Department of Design in the Dublin Institute of Technology were also interviewed in an attempt to establish requirements for teaching first- and second-year students the fundamentals of display, visual merchandising and store layout.

The lecturing staff and students who completed the questionnaire were:

- Male lecturer (visual merchandising and retail design)
- Female lecturer (window display and visual merchandising)
- Male student, first year (window display and visual merchandising)
- Female student, first year (window display and visual merchandising)

- Female student, second year (window display and visual merchandising)

2.4.3 Retailer Questionnaire

The questionnaire was designed using a series of thirty-three questions to ascertain the following:

- What importance within the target-user group is placed on store layout, window display and visual merchandising?
- How the potential user would rate their own abilities and existing efforts within the areas of visual merchandising, display and store layout.
- What areas they would like to improve upon.
- The availability and usefulness of an interactive digital book on an iPad, used as a training device to improve store layout, window display and visual merchandising [Appendix 2].

The thirty-three questions were grouped into five main sections, as follows, to enable strong analysis and user-led conclusions:

1. The importance of window display within the target-user group.
2. The importance of store layout within the target-user group.
3. The importance of visual merchandising within the target-user group.
4. The analysis of existing designs and personal abilities.
5. The iPad platform and primary content.

The questionnaire was undertaken by retail staff, lecturers and students, identified as the target-user group. The meetings were conducted in retail units or a design studio. The questions were read aloud, and answers recorded by the interviewers. At the end of the defined questions, general comments were also recorded [Appendix 3].

2.5 Questionnaire Results

The importance of window display within the target-user group.

Some 100% considered window displays very important for the promotion of key merchandise or specific offers.

The benefits include attracting passing shoppers into the shops, selling items directly and indirectly from the displays, promoting specific products, indicating price and defining brand identity.

The importance of store layout within the target-user group.

Some 90% believed that store layout was very important in the promotion of key merchandise or specific offers.

The importance of store layout was described as helping the customer to navigate the shop, defining departments, generating impulse buys and reinventing the overall look of the interior, keeping customers interested.

The importance of visual merchandising within the target-user group.

Some 90% considered visual merchandising very important in the promotion of key merchandise or specific offers.

The importance of this was described as beneficial to achieving high-yield sales, visually impressing customers, creating a brand identity, attracting new, younger customers, and enhancing the look of the products, ultimately making them look and feel more expensive.

2.6 Analysis of Existing Retail Designs

When rating their abilities between one and ten (one being the lowest and ten being the highest):

Designing a promotional window display:

6 Retailers – 4 rated (7/8) and 2 rated (3/4)

4 Students – 4 rated (5/6)

Designing a store layout:

6 Retailers – 5 rated (6/7) and 1 rated (2)

4 Students – 2 rated (1/2) and 2 rated (3/4)

Visually merchandise stock:

6 Retailers – 4 rated (7) and 2 rated (5)

4 Students – 3 rated (2/3) and 1 rated (5)

Increase your knowledge of window display:

6 Retailers – 4 rated (10) and 2 rated (7/8)

4 Students – 4 rated (10)

Increase your knowledge of store layout:

6 Retailers – 3 rated (10) and 3 rated (7/8)

4 Students – 4 rated (10)

Increase your knowledge of visual merchandising:

6 Retailers – 3 rated (10) and 3 rated (7)

4 Students – 4 rated (10)

How have you increased your knowledge of the following?

6 Retailers – 2 (read books) – 0 (e-books) – 5 (Internet searches) – 4 (training courses)

4 Students – 4 (read books) – 0 (e-books) – 4 (Internet searches) – 4 (training courses)

2.7 iPad Platform and Primary Content

Four out of six retailers had access to an iPad. The remaining two stated that they would invest in a unit for the sole purpose of using an interactive digital iBook. All students and staff had access to an iPad. All retailers, lecturers and students said that they would use an interactive iBook on an iPad as a training device. Analysis of completed questionnaires demonstrated that a visual format was the preferred form of delivery for the topic. Recorded feedback revealed that animated presentations and three-dimensional visuals would be hugely important and very helpful in learning and emulating designs, while textual explanations should be kept concise and to a minimum. The suggested primary content was regarded as correct, and should be included in the interactive iBook. The general feedback emphasized the need for a very simple navigation system with sequential and logical content.

2.8 Questionnaire Conclusions

The conclusions reached from the questionnaires showed a strong need for an interactive digital iBook when training the defined user groups in window display, store layout and visual merchandising. The results and analysis clearly inform and direct the development of content, navigation and user experience. They reinforce the need to simplify the learning environment, with a firm emphasis on animation and three-dimensional graphics, with minimum textual content. The high rate of ownership and availability of iPads within a small rural Irish town, as well as among the lecturers and students, proves that the platform is viable as an appropriate training device. The retailers selected to undertake the questionnaire subsequently agreed to cooperate in further or continuous user testing throughout the development and realization stages of this project.

The industry experts in the Department of Design in the Dublin Institute of

Technology were shown the results of the retailers' questionnaires. They backed up the results with identical personal experiences in teaching and working with retailers over a fifteen-year period. The experts concluded that both retailers and students would benefit from an interactive learning environment based on an iBook. The importance of a 'visual step-by-step guide on how to achieve window displays, visual merchandising and store layout' was seen as key to the successful understanding of visual-merchandising and display techniques. Easy navigation and a visual simplicity were critical in providing good usability. Animated visuals and three-dimensional plans with concise textual explanations were seen as key elements in the learning process. Students from the first and second years of the degree course in visual merchandising were also identified as a second area for user testing.

The completion of this process identified the target-user profiles and formed clear characters on which to develop personas and scenarios.

2.9 User Profiles

2.9.1 Persona 1

Darren is a thirty-two-year-old menswear department manager in a small department store situated on the main street of Carrick-on-Shannon, Co. Leitrim. He is married to Amy, who for the past twelve years has worked as a part-time sales assistant in the ladies' department of the same business. The family-owned department store has been at the centre of town life for over eighty years, with an excellent reputation for selling quality merchandise.

On his way to work each day, Darren drives past the new retail park, built five years ago. He watches as the anchor low-cost chain store constantly changes its window designs and in-store layouts every two weeks. He is aware that loyal customers of his store are now shopping in the new chain store.

Darren is extremely concerned that the downturn in his trading figures over the past two years is directly linked to the outdated look and presentation of merchandise throughout his store.

As part of cost-cutting measures introduced by the company two years ago, Amy had her days reduced from five to three. Darren is now worried that one of the three staff members working under him will be made redundant if sales do not increase. He feels responsible, as his lack of ability to attract customers and present merchandise in a professional way is the core of the problem.

At lunchtime Darren enjoys reading books and newspapers on his iPad, which he got as a birthday present from his family. He has become familiar with iTunes and iBooks, where he constantly downloads content.

He has often looked for books relating to store design and visual merchandising on Amazon and iBooks, but finds the few on offer irrelevant and confusing.

2.9.2 Scenario 1

Darren has been told by his employers that a major promotion will take place in the department store to boost sales, starting in two weeks. The promotion will be advertised in two regional newspapers, announcing new brands of merchandise, aimed at attracting both the existing customer and a younger age group.

The launch of these new brands will involve moving fixtures and fittings in each department, as well as promotional tables and displays.

Darren goes to his office and does an Internet search on his iPad for information on basic department layouts. The first number of sites that he visits are companies offering design advice for \$1,000, based in the United States. The rest are selling expensive software to help design layouts, planograms or sales analyses.

Darren goes to Amazon and does a search for store layouts and basic visual merchandising. Three books appear: *The Handy Visual Assistant* by Louis Wade, *Store Design and Visual Merchandising: Creating Store Space That Encourages Buying* by Claus Ebster and Marion Garaus, and *Store Design: A Complete Guide to Designing Successful Retail Stores* by William Green. He buys and downloads all three books.

Darren, helped by his team, tries to follow the information given in the e-books to reposition fixtures, but finds that too many confusing examples are given and the diagrams are very basic. Having abandoned the layout, Darren and his team concentrate on the visual-merchandising and promotional areas. As the photos and illustrations are two-dimensional and involve layering and stacking, they find it impossible to follow and return to their usual way of presenting their merchandise.

2.9.3 Persona 2

Kerry, forty-five, has been a lecturer in visual merchandising in a Dublin-based degree programme for the past four years. With over twenty-five years' experience within the trade, Kerry has worked in department stores and small retail outlets, while in more recent years, she has facilitated training courses within the fields of styling and display to small and medium-sized retailers the length and breadth of the country. In between running a home and raising their three children, Kerry and her husband, John, have also found time to complete a postgraduate MA programme in computing and learning. To help further promote her business in visual merchandising, Kerry has set up a website to offer potential clients a chance to see exactly what services she has on offer.

In more recent times, visitors to Kerry's website have begun to leave comments and questions regarding the availability of additional online tuition or specialized training packs that she may be willing to recommend. With an increase in her lecturing hours and more and more clients requesting basic training or on-site

advice within their stores, Kerry needs to find a way to cope with the demand for her services.

Like most of her colleagues and students, Kerry relies heavily on her iPad to help keep up to date with the latest visual-merchandising and styling techniques. She finds that the iPad offers a great source of online material for class notes, presentations, or just simply to download relevant books for her ongoing research. As with many lecturers within her field, Kerry regularly refers to a few well-known published hard copies of key visual-merchandising and display textbooks, all of which are too bulky to carry around, while the various merchandising techniques examined within are heavily reliant on text-based descriptions and two-dimensional diagrams.

2.9.4 Scenario 2

Kerry has been asked by the head of the school to develop a new part-time visual-merchandising course, to be delivered to a group of marketing and retail-manager students. The course will focus heavily on the use of IT within a commercial environment. Many of the potential applicants regularly use iPads to retain retail figures or access bulletin newsletters or business emails.

The new course will require a large amount of practice within a store environment, with a focus on maximizing sales through the correct use of sales-floor space and an emphasis on competing within a larger marketplace. Kerry begins by coordinating material from books and retail periodicals, with a view to producing a Keynote presentation. Within a short while, she soon realizes that the presentation will not be very practical, as students will not be able to access the presentation each time that they wish to put the new knowledge into practice.

Kerry considers creating hard copies of the finished presentation. Unfortunately, there may be resistance from the students to carry around additional paperwork on the shop floor, and this would also conflict with the prerequisite of the course as

an IT-supported learning programme.

As a large portion of the students use iPads on a daily basis, Kerry considers downloading a visual-merchandising and store-planning app. The app presents itself as a useful tool that highlights regular tips to experienced merchandisers and store designers, however, it does not concentrate on the fundamentals of visual merchandising, display and store layout.

2.10 Conclusion

This section examined how the group conducted its background research. It demonstrated how essential data gathered from a user-designated questionnaire, regular feedback from industry experts and existing published material was used. Once obtained, this information was critically analysed for user needs and possible content inclusion. This will form the core content structure to be designed in the next chapter.

Chapter 3

Design

3.1 Introduction

Analysis of existing related content and data gathered from target-user groups will substantiate and influence the initial design concept and contents structure for this digital iBook. A comprehensive breakdown of each of the chapters, sub-chapters and asset requirements, achieved by means of a contents map with further consideration for the visual design, title and physical orientation of the book, will be discussed in greater detail throughout this chapter.

3.2 Contents Structure

The contents structure for the iBook was informed by researching existing textbook and e-book structures, combined with the curriculum used to educate design students in the defined areas. An overview of the structure was shown to the target users and industry experts for analysis and resolution. The first iteration included three main chapters: ‘Introduction to Store-Layout Principles’, ‘Introduction to Visual Merchandising’ and ‘Inserting Graphic Focal Points’. Each chapter has between four and seven active text links, with drop-down submenus containing sequential chapter links. Feedback from both the target users and industry experts identified a need for ‘Window Display’ as a separate chapter, and a lesser need for the chapter ‘Inserting Graphic Focal Points’. This was subsumed into the visual-merchandising chapter. The second iteration provided the basis for the contents map [Appendix 4].

3.3 Contents Map

The contents map was produced, showing the main chapter and sub-chapter menus. The map identifies where the image galleries, keynote animations, Google SketchUp three-dimensional visuals and text are embedded in the iBook. The map took into consideration the changing formats of landscape and portrait modes. Utilizing the contents map, a series of lists was produced for the various assets required. The contents list categorized the relevance and order of topics covered in each chapter, and an agreed production schedule for the team was produced [Appendix 5].

3.4 Visual Design Concept

The visual design concept for the interactive iBook is a clean, contemporary look based on a white background with black text headings and dark-grey text blocks. Large images placed as horizontal banners on top of chapter and section pages create visual impact and content awareness. A graphic logo using three circles grading upward in opacity of the relevant topic colour offers a visual marker by adding curves to an otherwise linear structure. The concept is designed to convey an uncluttered and visually clean approach, assisting the user with navigating and content absorption [Appendix 6].

3.5 Colours

Three accent colours were selected from the 2013 Crown Colour Trends palette as the defining colours for each of the three chapters. Each accent colour is subtly used in animation backgrounds and rendered visuals. The graphic logo consists of three circles shaded in one of the accent colours. Positioned over the headings at the top of each chapter, the logo acts as a subliminal anchor for the user and a

reminder as to which chapter they are currently exploring. Muted Yellow (RGB 206, 210, 99) defined the window-display chapter, Muted Blue (RGB 165, 206, 203) defined the store-design chapter, and Muted Pink (RGB 205, 177, 182) defined the visual-merchandising chapter. The restrained use of colour in each chapter offers a sense of consistency throughout the artefact. It reinforces the visual clarity and overall simplicity of the design scheme [Appendix 7].

3.6 The iBook Name

The name chosen for the iBook is ‘Retail Visual Assistant’. This choice combines the three main areas under one title, while allowing potential users to locate the artefact easily in the iBooks section of iTunes. It also considers the inherent user a member of the retail trade, whether they are a manager or a sales assistant, and understands that they are not necessarily an expert in the fields of visual merchandising and display, but are indeed passionate about the look of their store.

3.7 Layout

The iBook has two page layouts, portrait and landscape, depending on the user’s chosen iPad orientation. The portrait orientation allows the user to read and scroll through the textual assets in one long continuous reading block. The landscape orientation favours the two-dimensional animations, three-dimensional models and high-resolution image galleries.

3.8 Portrait Orientation

The table of contents is positioned left of centre, with a banner containing graphics and text headings. The chapter and section pages position all two-

dimensional animations, three-dimensional models and image galleries on the left side of the page automatically. The header text and graphic circles define each chapter and section in conjunction with a black line above, using a stroke-weight value of four points. The layout on portrait orientation emphasizes the textual assets in a continuous, uncluttered vertical block.

3.9 Landscape Orientation

The table of contents is positioned as a continuous series of thumbnail images along the bottom of the page under a full-size screen image. The chapter pages use a full-size screen image with a white opaque rectangle positioned over the image on the lower right side. Dark-grey text is confined within each block.

The section pages have three main layouts. The image-gallery layout has a large banner image dropping down 31mm from the top of the page. A flat white strip under the banner image contains the graphic logo, title text and text block, aligned to the left of the page. A smaller rectangular image is positioned to the bottom right, with a scrolling image gallery.

The two-dimensional animation pages use two thumbnail images of the animations positioned side by side, 31mm down the page. Two rows of text are placed under title headings above the thumbnails.

The three-dimensional model pages and interactive image pages use 80% of the full screen, with one title text block.

A careful balance between image and text has been adhered to throughout the artefact. Positive and negative space has been individually considered on each page, allowing the user a decongested space that is visually uncluttered in its approach to handling functions.

3.10 Conclusion

Establishing the primary visual design concept has been made feasible through regular group design discussions while adhering to defined user requirements and the maintenance of ongoing analysis of existing visual-merchandising training products. Essential data gathered during the research phase of the project has continued to perform a central role, ensuring that the design concept and contents structure are developed with a considered balance of both text and animations, culminating in a clean, visually exciting product that addresses key display and merchandising techniques in a simple and logical manner.

Chapter 4

Development

4.1 Introduction

This chapter will examine, in depth, the design development stage of the process, including initial prototype creation and target-user feedback. This includes a further examination of the methodology deployed during the asset acquisition and creation, including software preferences and requirements for the process, accompanied by the eventual evolution of the contents map into a navigation sequence for the iBook.

4.2 Prototype and Technologies Used to Develop the Artefact

A low-fidelity prototype was designed, firstly with the use of hand sketches [Appendix 8], and subsequently in Adobe Photoshop and Apple's iBooks Author software [Appendix 9], showing the basic layout of the menu, chapters, sub-chapters and sections. A generic layout was designed to show the positioning of the two-dimensional animations and text blocks. The design was shown to a number of target users and altered to produce a second iteration with a refined end result. The second iteration simplified the overall look with larger images and smaller two-dimensional embedded widgets [Appendix 10]. The horizontal aspect of each page was emphasized using cropped images, text blocks and graphics. The two-dimensional animations were scaled down and stacked vertically to link to subject matter. Subliminal directions were incorporated into the design, linking more complex elements into invisible groups with intuitive interactions.

4.3 Design Development

4.3.1 Assets

The assets required to construct the digital artefact were categorized as:

- Textual assets compiled using Apple iWork Pages software, for use in the main chapter and sub-chapter content pages.
- Two-dimensional animation assets constructed using a combination of Adobe Illustrator, SketchUp and Keynote software.
- Three-dimensional assets constructed using Google SketchUp Pro and V-Ray for SketchUp software.
- Image assets compiled using downloads from Shutterstock and archive images.
- Video constructed using Prezi software.

4.3.2 Visual Design of Text

The font Futura Medium, in black, was selected for the main chapter and sub-chapter headings, producing a clear, contemporary statement at the top of each main section. Helvetica Light, in dark grey, was selected as the font for all support text throughout the chapters, sections and animations. This produced a clean, well-spaced text that is easy to read on a back-lit iPad screen [Appendix 11].

4.3.3 Visual Design of Two-Dimensional Animations

The two-dimensional animations use a series of layers to create the graphic illustrations. The background layer uses a graded white-to-light-grey colour to create subtle depth and dimension. The second layer contains the Window Display, Store Layout and Visual Merchandising backgrounds, built using a one-point stroke line. This layer contains the prescribed artefact colours used for shading, highlights and adding shadows. The top layer uses white as the

merchandise colour, with a five-point drop-shadow and reflection effect to add extra depth. Helvetica Light is used as the typeface, positioned with the reflective effect set to 'on' under each of the illustrations [Appendix 12].

4.3.4 Visual Design of Three-Dimensional Models

The three-dimensional animations were modelled using the prescribed generic colours. The backgrounds, graphics, props and decorative elements use shaded derivatives of these colour tones. All merchandise is silhouetted against the shaded colours using white. The interactive model is placed on a white background for visual clarity and ease of use. A title block is aligned to the top left of the page, with a text block aligned to the bottom left of the page [Appendix 13].

4.3.5 Overall Navigation Scheme

The navigation scheme is based on one overall structure, with two individual substructures for use in landscape- or portrait-orientation mode.

The overall structure employs a drop-down menu bar, accessible throughout the book in both orientation modes.

The drop-down menu contains the following:

- Library button, allowing the user to exit to their iBooks library.
- Contents button, allowing the user to return to the contents menu.
- My Notes button, allowing the user to add highlights and notes throughout the book.
- Search button, allowing the user to search the document using a word or a page number.
- Bookmark button, allowing the user to add bookmarks.

4.3.6 Contents-Menu Navigation

In landscape orientation, the contents page acts as a home page, showing the five main chapter headings: Welcome, Window Display, Store Layout, Visual Merchandising and Credits. The contents page appears as a menu within a white box on the far right of the screen [Appendix 14]. A touch gesture expands the window to the first page of the chapter. On the portrait contents page, a continuous row of thumbnail images of each chapter and section runs along the bottom of the page with highlighted page numbers. This allows the user to quickly scroll through each chapter and section page. Touching any thumbnail window expands it to show the full-size window. Navigation from page to page is achieved using a simple sweep gesture horizontally on the screen, with a single finger.

4.3.7 Section Navigation

In Portrait orientation the chapters and sections are defined by line breaks, text headings and the graphic logo. A vertical touch gesture with a delayed movement informs the user of the next chapter or section. Small image windows containing embedded widgets of animations, three-dimensional models and image galleries are positioned in a vertical row to the left of the text blocks. A touch gesture expands the small image and allows the user to interact with the individual widgets.

In Landscape orientation the chapter breaks are defined by a large horizontal gesture with a delayed movement. Embedded widgets of animations, three-dimensional models and image galleries appear as visual images. A touch gesture expands the image and allows the user to interact with the individual widgets.

[Appendix 15].

4.3.8 Animated Tutorials Navigation

The tutorial animation window expands to show a large circular command button, instructing the user to touch it. Once touched, the specified short animated sequence begins to play. On completion of each animated sequence, the existing circular command button disappears, and the user is prompted by a new circular command button. When the entire animated tutorial is completed, the user is advised to 'Try this' in their own store. When this message appears on the screen, this is the end of the tutorial. An exit 'X' is positioned on the top left-hand corner of the animation screen, allowing the user to exit at any stage of the tutorial. By clicking the exit 'X', the user is returned to the original portrait page, where the chosen animation was initiated.

4.3.9 Three-Dimensional Model Navigation

The three-dimensional model window expands out to show an interactive model. The user moves the model 360 degrees, in any direction, by holding their finger on the screen and moving it in the desired direction. An exit 'X' is positioned on the top left-hand corner, allowing the user to exit at any stage of using the interactive model. Upon clicking the exit 'X', the user is returned to the portrait page where the chosen three-dimensional model was selected.

4.3.10 Image-Gallery Navigation

The image-gallery window expands out to show a single image. The user moves through the gallery using a horizontal finger gesture to view all images. An exit 'X' is positioned on the top left-hand corner, allowing the user to exit the image gallery. Upon clicking the exit 'X', the user is returned to the portrait page where they initiated the gallery sequence.

4.4 Implementation Strategy

The implementation strategy focused on identifying and using the team members' individual areas of expertise to achieve the overall objectives.

Both team members had over twenty years of expertise in the retail design industry, so joint research was conducted, analysing the content and structures of existing websites, e-books, books and educational training courses. Using both team members' research and interviews with industry experts, an extensive questionnaire was produced. Interviews were conducted in the town of Boyle, Co. Roscommon, as one member of the team had a family retail business there, which facilitated access to a large section of the retail community. The interview conclusions produced a 'scope and spec' document that outlined clear deliverables.

Using one team member's expertise in project management, a detailed contents-structure map was produced, detailing the required assets.

The animation assets were produced by both team members using their expertise in Adobe Illustrator, Google SketchUp Pro and Apple iWork Keynote. The three-dimensional views needed for window backgrounds, store layouts and merchandise tables were first drawn in SketchUp Pro to produce a three-dimensional drawing. This was exported as a .PNG file and imported into Illustrator. The drawings were then broken up into components, and individual elements were exported into Keynote. A prototype animation asset was produced by the team and user-tested for usability and content. Agreement on the final iteration of the asset [Appendix 16] allowed both team members to work individually using the same methodologies to produce the thirty-six required animations.

Using both team members' years of experience modelling three-dimensional

images in Autodesk AutoCAD, Google SketchUp Pro software was selected as the most suitable for producing the required three-dimensional assets. A prototype was drawn using three-dimensional line weights, applied materials, shading and style type. The correct plane of view was selected, and the drawing exported as a .DAO file. User testing by team members refined the look and usability of the asset before the final iteration was produced.

The expertise of one team member in rendering three-dimensional assets using the plug-in program V-Ray for SketchUp allowed high-resolution images to be produced in the same style as the animations [Appendix 17] and three-dimensional models.

High-resolution images were acquired by purchasing a monthly subscription to the Shutterstock website. This permitted the download of thirty licensed images per day for a month. Downloaded images were filed and saved into separate folders, suitable for specific chapters and sections.

Using Apple's iBooks Author software to compile all the assets, both team members produced a prototype chapter using different styles and layouts. This produced defined text-block areas with clear word-count guides. Text was written for each chapter and section by the team member who had the most specific knowledge of the design area.

The final iteration, containing all assets, was compiled by one team member for continuity of style and layout.

At all stages of the process, both team members exported copies of the iBook to two separate iPads, where they were previewed for personal testing and evaluation.

4.5 **Conclusion**

Prior to the testing and evaluation stage of the iBook, the process of design development for the product has been addressed within this chapter. Consideration for the type of software procured for the creation of the animated assets has been assessed, and the implementation strategy employed to engage the individual talents of the team members has also been identified.

Chapter 5

Testing and Evaluation

5.1 Introduction

This final chapter will outline the process of evaluation of the formal user-testing results and subsequent user feedback. It will attempt to identify the iBook's initial design flaws and any program errors, in addition to a conclusive analysis of the final user-test results, before examining critical design alterations prior to the final sign-off and submission of the digital artefact.

5.2 Testing and Evaluation Strategies

5.2.1 Evaluation of the iBook

Testing and evaluation of the iBook was undertaken to highlight flaws with content and usability. Four key testing groups were identified to comprehensively look at how the iBook performed using different user groups. The four different types of testing, as follows, took place over a three-week period:

1. Testing by both team members on two iPads, to identify as many navigation and content errors as possible.
2. Testing by four retailers in the town of Boyle, Co. Roscommon, to identify navigation, design and content errors.
3. Testing by three staff members of the BA in visual merchandising in the Dublin Institute of Technology, to identify navigation, design and content errors.
4. Testing by twenty students in the first year of the BA in visual merchandising in the Dublin Institute of Technology, to identify navigation, design and content errors, and educational relevance.

Profile of Users Testing the iBook

Team Users

- User 1. Forty-five-year-old male cross-discipline lecturer in design.
- User 2. Forty-year-old male business owner and lecturer in design.

Retail Users

- User 3. Sixty-year-old female owner of a small ladies' fashion shop.
- User 4. Twenty-nine-year-old female sales assistant of a large pharmacy.
- User 5. Forty-three-year-old male owner of a department store.
- User 6. Fifty-year-old female owner of a large ladies' fashion shop.

Student Users

- User 7. Twenty-one-year-old BA student of visual merchandising in DIT.
- User 8. Thirty-year-old BA student of visual merchandising in DIT.

Expert Users

- User 9. Forty-eight-year-old female visual-merchandising consultant and lecturer.
- User 10. Forty-five-year-old male display and store-design expert.
- User 11. Fifty-year-old female lecturer in computer science.

Student Group

- Users 12-36. Twenty- to twenty-eight-year-old male and female students studying visual merchandising and store design.

5.2.2 Team Testing

Both team members downloaded a copy of the iBook onto two iPads. Each page was examined for textual errors and visual discrepancies. All assets were examined for operational functionality, smoothness and consistency. Each page was systematically examined in both the portrait and landscape orientations. Errors were identified and noted for amendment and alteration.

5.2.3 Formal Testing by Retailers

A form with a list of six tasks was constructed to expose as many problems as possible in formal usability tests [Appendix 18].

Four retailers and two students were selected to complete defined tasks by navigating the iBook's content structure, finding the relevant sections, reading the textual content, watching the animated tutorials and realizing the learning outcomes on site with merchandise. Problems with the navigational architecture, content and aesthetic design were identified from notes taken while observing the tests.

5.2.4 Lecturer and Student Testing

Three staff members and fifteen students from the BA in visual merchandising were given a full demonstration in a lecture room in the Dublin Institute of Technology Mountjoy Square. The demonstration consisted of an iPad linked to an overhead projector screen, with seating and tables. A presentation covering the main chapters was made, showing the animations, text tips, three-dimensional models and image galleries. Following the presentation, two iPads containing the interactive iBook were passed around to allow all members of the staff and student group time to examine the artefact. The reaction of each group member to the navigation, content and overall experience of using the artefact was observed and documented. A prepared survey sheet was handed out at the end to record critical feedback on the relevance, content, navigation and design [Appendix 19].

5.2.5 Set-up of Formal Retailer Testing

The following testing set-up was applied in the town of Boyle, Co. Roscommon:

- A retail space with merchandise.
- A retail owner, manager or sales representative with an iPad.
- A demo version of the store-design and visual-merchandising iBook.

- A list of six tasks in composing window display, store design and visual merchandising.
- Formal notes with task headings and comment boxes.

5.2.6 Testing

The users were asked to read the six tasks and carry them out individually using the shop fittings and merchandise in their own retail environments. The users' interactions with the iBook and how they carried out the tasks were analyzed and formally recorded in prepared notes. On completion of each task, the users were asked to comment on their experience and the outcome of the task. They were also asked to comment on how the navigation, design, assets and content could be improved [Appendix 20].

5.2.7 Data Gathered During Testing

The following data relates to the time that the users took to find the required content in the iBook, and not the time taken to achieve the window display, store layout and visual merchandising.

Task 1 – Create a floor grouping

Performance: 6 out of 6 completed the task; average time: 10 seconds

Navigation: Contents > Chapter (Window Display) > Section (Creating a Single Floor Display) > Text Tips > Animation

Accuracy: 83%

Emotional response: Users felt interested and excited (very useful)

Task 2 – Create an in-store focal point

Performance: 6 out of 6 completed the task; average time: 9 seconds

Navigation: Contents > Chapter (Store Layout) > Section (Navigation Principles)

> Text Tips > Animation

Accuracy: 100%

Emotional response: All users felt confident and excited (very useful)

Task 3 – Add a small graphic to your window display

Performance: 3 out of 6 completed the task; average time: 95 seconds

Navigation: Contents > Chapter (Window Display) > Section (Inserting Window Graphics) > Repeated Process Twice

Accuracy: 50%

Emotional response: 3 users felt interested (very useful); 3 users felt confused (stupid)

Task 4 – Visually merchandise a wall fixture

Performance: 5 out of 6 completed the task; average time: 25 seconds

Navigation: Contents > Chapter (Visual Merchandising) > Section (Visually Merchandise a Wall Fixture) > Animation

Accuracy: 83%

Emotional response: 5 users felt interested (very useful); 1 user felt confused

Task 5 – Colour-coordinate merchandise on a table fixture

Performance: 6 out of 6 completed the task; average time: 14 seconds

Navigation: Contents > Chapter (Visual Merchandising) > Section (Colour-Coordinate Merchandise on a Table Fixture) > Animation

Accuracy: 100%

Emotional response: Users felt interested (very helpful)

5.3 Problems Identified During Testing

The on-screen button to progress the animated tutorials was noted by three users as being too small.

The text on the animated tutorials was identified by four users as appearing and dissolving too quickly.

No text headings on all animations and three-dimensional models in portrait orientation.

Enlargement of all headings in landscape orientation.

No introduction on how to use the iBook.

More three-dimensional models requested.

One missing animation.

Overlapping of text on content pages in landscape orientation.

5.4 Evaluation Using iOS Human Interface Guidelines

The Retail Visual Assistant (iBook) was evaluated using Apple's iOS guidelines, with the following criteria being successfully met:

- A strong focus on the primary task of educating the user in retail design.
- Evaluation of content that users really need within the overall structure.
- A logical path for users to follow.
- Making the usage easy and obvious.
- User-centric terminology.
- Minimizing the effort required for user input.
- Creating an appropriate brand using colours and images in a refined, unobtrusive way.

- Enticing and informing the user with a well-written description.
- Conveyance of the information in a condensed, headline style.
- Recommended usage for standard user-interface elements.
- Physicality and realism within a book format.
- Orientation changes.
- Maintaining focus on the primary content in all orientations.
- Launching the iBook regardless of the orientation.
- Avoidance of gratuitous changes in layout.
- Target buttons that are fingertip size or larger.
- Subtle animation to communicate.
- The use of appropriate gestures.
- Enhancing the interactivity (i.e. don't just add features).
- Conformance with all iBook generic toolbars, navigation and structures.

5.5 Conclusion from Data Gathering in Boyle

Conclusions from user testing and feedback on location in the town of Boyle showed that the retailers found the interactive iBook intuitive to use, with those users already familiar with smartphones and iPads performing faster and with more accuracy than those who were not familiar with the technology. The navigation of the chapters and sections was achieved quickly, with more speed and fluidity of movement shown after a short period of time. The users experimented with the orientation throughout the tasks, deciding which screen position they preferred for each of the stages. This led to accuracy levels averaging at over 80%.

The learning outcomes of undertaking the tasks were described by users as 'very beneficial', 'interesting', 'would benefit sales' and 'easy to use'.

Users interacted easily with the assets, carefully reading the text tips, then activating an animated tutorial, leading to a review of the images in the galleries.

The animated tutorials and three-dimensional models were regarded as innovative and very beneficial in simplifying the learning experience. The overall emotions shown by the retailers and students during testing were ones of excitement and engagement.

5.6 Conclusion from Data Gathered in DIT

The testing by lecturers and students of the BA in visual merchandising in the Dublin Institute of Technology proved very beneficial in highlighting other positive features on the digital artefact. Both staff and students found the navigation of content very simple, as the majority used touch-screen Apple or smartphone technology on a regular basis. This ease of use led to very fast response times in finding textual information, and initiating and exiting the animated tutorials, three-dimensional models and image galleries.

The results of the survey found that:

100% of staff and students agreed that the interactive iBook was a simple way to learn the fundamentals of window display, store design and visual merchandising.

100% of staff and students disagreed that the navigation of the iBook was difficult.

100% of staff and students disagreed that they would prefer hard-copy books from the library.

90% of staff and students agreed that they gained more knowledge from using the interactive iBook than attending lectures.

100% of staff and students agreed that the textual content was concise and to the point.

70% of staff and students agreed that they had discovered new methods of designing window display, store design and visual merchandising.

100% of staff and students agreed that they would like to see the interactive iBook

used as the basis for studio lectures.

When asked to select the most useful learning elements of the iBook, the following were chosen:

Fifteen out of fifteen rated the three-dimensional models as the most useful.

Twelve out of fifteen rated the animated tutorials as the second most useful.

Fifteen out of fifteen recorded the text and image galleries as support information.

The results showed that everyone taking part in the survey preferred to learn via a visually based interactive iBook rather than books with text and illustrations. International and foreign-national students found it simpler to learn from the animated assets than by reading text. Feedback from both the user testing and surveys emphasized the usefulness of the animated tutorials and the three-dimensional animations. Users noted that the three-dimensional models were particularly innovative and useful in a subject area that is based on a three-dimensional environment [Appendix 21].

5.7 Changes Implemented Following User Testing

The key changes implemented following user testing were:

The construction of a video introduction with audio to explain how the iBook should be used. This was achieved by designing a graphics-based animation using Prezi software and recording it as a movie. A script was written and recorded using a Zoom recording device. This was edited in Avid Pro Tools and ScreenFlow, and saved as an MPEG4 document.

The redesign of one hundred and forty buttons on all animated tutorials with a five-point stroke outline and a background shadow.

The introduction of a two-second time delay on text appearing and dissolving during the animated tutorials.

The addition of text headings (fourteen-point Futura Medium) on all animated tutorials and three-dimensional-model thumbnail windows in portrait orientation.

The change of all asset window headings in landscape orientation to a fifteen-point Helvetica Bold font.

The construction of four new three-dimensional models.

The change of settings from anchored to floating, to embed missing animated assets.

The change in page layout on the chapter introduction pages to alleviate text-overlapping issues.

5.8 Technical Issues Found During Testing

The following technical problems were identified during the testing process:

The disappearance of random Keynote assets in portrait orientation.

The random placing of uploaded assets in portrait orientation.

The overlaying of text on the scroll menu on the contents page in landscape orientation.

The inability to lock page layouts in portrait orientation.

The difficulty in invoking the generic drop-down iBooks menu.

The final iteration was tested by both team members and a number of users who participated in previous user testing. This resulted in a successful outcome to the initial aims and objectives of the project, to create a new interactive digital iBook for use on the Apple iPad that will educate the user in window display, store layout and visual merchandising.

5.9 Conclusion

With the final stages of the design process complete, this chapter has analysed the group's testing and evaluation strategies, used to understand data gathered from the user testing campaign and determine various problems encountered throughout the process. Conclusions have been drawn from the test results while vital alterations and necessary additions to the design of the digital artefact have been successfully implemented.

Chapter 6

Critical Analysis

The process of developing and constructing a new interactive digital iBook using Apple's iBooks Author software in order to educate the user in window display, store design and visual merchandising has been fully achieved. To understand how this was accomplished, each one of the chapters will be analysed, examining the methodologies used, the problems encountered, and the solution undertaken to achieve the final resolution. This analysis will highlight the importance of user-led decisions, underpinning the entire process, from establishing the basic requirements through to the content, navigation and visual design of the iBook.

The decision to undertake a group project with one other team member was singularly the most important and beneficial of the whole endeavour. It allowed two experts in the sector to combine their individual knowledge, training, skills and technical abilities into developing a new learning experience. The most beneficial aspect of working within this group dynamic was the constant questioning, debating and alternative viewpoints that resulted in alternative thinking and considered decision-making. Constant communication and regular, structured meetings meant that both members were fully involved at all times, and contributed equally to realizing the project. The only issue arising from this arrangement was the constant pressure to meet specific project deadlines. The external workloads of both team members caused a number of small delays to the overall schedule. This could have been alleviated from the outset by having a more detailed schedule in place, allowing extra time to resolve technical problems and content refinements.

Using the team's joint experience in teaching and training, clear aims and objectives were set out, with an additional rationale for business opportunities. The production of a 'scope and spec' document helped identify the main software

used to construct all elements of the iBook. The most important part of this process was researching the parameters of the software and how it would suit the specific content. The decision to download copies to both team members' computers and build a four-page booklet containing basic text sections, animations and a three-dimensional model was vital to understanding what the iBooks Author software could achieve, and what type of assets would be best suited to convey the relevant information. This led to a list of deliverables, identifying the type of assets required for the iBook and the technical requirements needed to achieve them.

For the iBook to deliver content in a new and exciting interactive learning environment, it was vital to conduct extensive background research into the chosen subject matter. Both team members independently researched the existing types of web content, DVDs, books and e-books, and formed an agreed outline. The follow-on analysis and debate on what type of content structure the artefact should contain was crucial in forming provisional chapter and section headings. Undertaking the background research proved very useful in highlighting major flaws in existing textual content, content structures, visual illustrations and design aesthetics. This led to a provisional agreement by the team members on a visual design concept and an outlined content structure.

Establishing the user requirements was fundamental in steering the process. This involved an extensive questionnaire for a cross-section of retailers in the town of Boyle, Co. Roscommon, and lecturers and students on the BA Design (Visual Merchandising) course in the Dublin Institute of Technology Mountjoy Square. This was critical in identifying what the users actually wanted, and not what both team members thought that they needed or should have. This was an extremely successful part of the research, due in part to the personal connections of one team member with the retail community in Boyle and the lecturing staff and students on the BA course. This resulted in a more open and honest interaction when filling out the questionnaires, with detailed suggestions on how respondents would like

the artefact to help them improve their retail designs. The only difficulty experienced while undertaking the questionnaire was the constant interruption by other staff members or customers, which led to breaks in concentration. Scheduling the questionnaire outside of working hours or on quiet days could have alleviated this difficulty. The process of analysing the questionnaire results provided clarity on the contents structure and how the content should be delivered. The conclusions from the questionnaires reinforced the problems with existing books and websites, identifying heavily weighted text-based content and poor illustrations as difficult to follow and understand. This reinforced the importance of having a visually led iBook, containing interactive animations, three-dimensional models and image galleries. The development of two personas with two scenarios gave a very real focus on the person for whom the iBook was being designed and in what context they would find themselves using it. The most important outcome of all the questionnaires, data gathering and background research was to keep the digital artefact simple, uncluttered and easy to navigate.

The conclusions from the research and requirement gathering were used to fully inform and direct the design process, starting with the contents structure. A contents map drawn in Adobe Illustrator was vital in producing a visual breakdown of the structure and assets required. This also had the benefit of acting as an outline for the navigational architecture. The individual expertise of both team members in the visual design development produced strong concepts for layouts in both portrait and landscape orientations. It became clear from the outset that implementing the design elements simultaneously in both orientations would be extremely problematic, with text blocks and assets constantly moving to push or cover other key elements. The decision was made to create all the assets first, before inserting and adjusting them in both layout orientations.

The decision to use Apple Keynote, Adobe Illustrator, Google SketchUp Pro and V-Ray software to develop the assets was taken, as both team members had years of expertise using the programs. This resulted in higher performance and

productivity. Specific areas of expertise were defined so that asset construction could be divided evenly. To alleviate different design styles, an agreed example of each asset type was produced. Despite this precaution, inconsistencies became apparent during the construction of the thirty-four animated tutorials. This was resolved by allocating one team member to proofread and correct each asset to a high level of visual consistency. The construction of the three-dimensional models became problematic, as the authoring program imported the SketchUp .DAE file into the iBook on varying axis. The solution was to save the models in six orientations until the correct one was found.

The team undertook the selection and purchase of images for chapter headers and image galleries over a number of days. Agreement on image content, colour and resolution was vital in blending the visual narrative seamlessly throughout the iBook's visual identity. The filing of large numbers of images into categorized content folders aided the selection and insertion process, and demonstrates the constant care and attention to detail that both team members practised throughout the project. The team took the decision to download a number of extra images from web pages, as suitable ones were not available to purchase on Shutterstock. This resulted in images being used with no copyright agreement. This will have to be rectified in the future before publication.

The sequential insertion of all assets and text within the iBooks Author program was undertaken by one team member following an agreement on thumbnail window size, and text and image layout and aesthetics. This resulted in a consistent visual standard throughout the iBook. The insertion of textual content following the prescribed layout proved very problematic in landscape orientation, as the text windows had to be to a defined word count. If the word count was not exact, then the text and assets would be pushed onto the next page, creating a knock-on effect. This required all textual content to be constantly edited to fit the landscape page layout. Once orientated into the portrait position, the limitations of the software become apparent, as large gaps appear between sequential sections of

textual content. Any change to this layout resulted in catastrophic damage to the portrait layout. The only solution was to constantly edit text to fit both orientations.

The insertion of animated tutorials and three-dimensional models encountered a similar difficulty in portrait orientation, placing certain assets in random positions, while not allowing others to be moved vertically. The solution to this problem was to constantly remove and upload the assets to the correct position and preview the finished results on the iPad.

To highlight as many problems as possible, a thorough testing regime was implemented. The team agreed that retailers, industry experts and students would all be tested, allowing strong and detailed evaluations to take place. This proved a very successful strategy, as eight main problems were identified throughout the process. One of the main benefits of testing a wide user base became apparent while undertaking the tests. Individual users often had a problem that turned out to be unique to them, and it did not occur during the testing of other users. If this occurred, both team members evaluated the problem and agreed a decision based on whether the problem lay with the user or the artefact. This methodology identified eight problems within the iBook that needed resolving.

The main visual problem identified was the need for a larger, more noticeable button to progress the animated tutorials. This resulted in the redesign of one hundred and forty buttons and the updating of all animations constructed in Keynote. This could have been alleviated at the design stage with a stronger colour selection. The time delays before text dissolves on the animated tutorials were identified as a problem, and subsequently amended during the updating of the Keynote animations. The simultaneous resolution of two problems helped speed up the reconstruction process. The difficulty that users had in finding animated tutorials and three-dimensional models in both orientations was easily resolved by adding headings above or below each asset window. This was undertaken along with enlarging the typefaces of each heading in landscape view.

The additional user testing on lecturers and students was a very important part of the overall testing process, bringing completely different sets of problems and opinions to the surface. This user group concentrated on navigating around all the content and assets to see how relevant they were for them. Their sequential analysis of chapter content, assets and design provided unexpected group discussions on the benefits of a visually led training device. These included the ease of use by foreign-national students and people with dyslexia. The use of interactive three-dimensional models and animated tutorials were regarded as innovative and easy to use, suggesting that more needed to be added to all chapters. This resulted in the team constructing a series of new assets and inserting them into the relevant sections.

At the beginning of the user tests, participants were given a verbal guide on how to use the iBook easily and to its full potential. Following the presentation to the group, it became clear that a video introduction was needed. The team achieved this by designing and constructing a Prezi animation, recording it in ScreenFlow, and editing it in Adobe Premiere.

The evaluation of user testing by the team was invaluable in directing and improving the final iBook. More importantly, it showed that the digital artefact worked, with all users achieving their required tasks quickly and with little confusion.

The feedback showed the visual design to be simple, colourful, engaging and impactful, with no suggested changes to the layout. It highlighted the ease of use and intuitive navigation among the majority of users, with only a small number of problems and suggested changes to improve the overall experience.

To conclude, the Retail Visual Assistant (iBook) has been designed by following the prescribed processes in a sequential and logical manner. The user has driven the process from beginning to end, with continuous iterations of the design. It has led to a new interactive experience that is needed within the retail and educational

sectors, at both national and international levels, to make the process of learning the fundamentals of retail design simple in a digital context. It creates an artefact with a unique visual image and a strong brand identity that is valid at both academic and industry levels.

The future development strategy will see the artefact published in the iBooks Store and launched nationally through contacts in the media in the first quarter of 2013. Once launched in all English-speaking countries, the text will be translated into French, German and Spanish, followed by Mandarin. The income generated by initial sales will be reinvested into developing the Retail Visual Assistant into an e-book and app that can be used on other platforms.

The BA in Visual Merchandising course in the Dublin Institute of Technology will adopt the iBook as a core learning tool for first- and second-year students, starting in February 2013. Research on learning through a digital artefact will be conducted throughout the semester, culminating in a written academic paper to be presented at the ELIA conference in June 2013.

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Appendices

Appendix 1: International Data Group Report

iPad use at Work

Region	Professionals who use their iPad at work	Device supplied by work
North America	67%	11%
South America	70%	4%
Europe	60%	49%
Asia	70%	83%
Africa	40%	97%
Oceania	33%	97%
Other	37%	87%

Last week I chimed: "Only Windows 8 can save the PC market now". Weak consumer computer sales forebode market shifts ahead, but so do those in the enterprise. An IDG Connect study reveals just how much: IT and business decision makers are augmenting or replacing PCs with iPads at an alarming rate.

"Fully 51 percent of IT and business decision-makers say they *always* use their iPad at work", according to the report -- and, of course, that's the number who actually own the tablet. Sixteen percent have replaced their laptop with an iPad and 54 percent supplement it. Remember, these numbers are for people responsible for corporate computing. As the wind

Most Commented Stories

- [Windows Phone will gain serious market share this year](#)
156 Comments
- [Apple is better off without Steve Jobs](#)
78 Comments
- [Apple's Flashback Trojan tool fixes nothing](#)
62 Comments
- [Samsung Galaxy S III promo dares iPhone users to be different \[video\]](#)
60 Comments
- [The King is dead -- Samsung snatches crown from Nokia and Apple](#)
50 Comments

[E-mail Archiver System](#)

Appendix 2: Example of Blank Questionnaire

Data Gathering - Questionnaire

Name of Business Retail unit	
Nature of merchandise sold	

Windows

Total number of Display Windows			
Cycle of window changes (tick box)	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>	Seasonal <input type="checkbox"/>
Please state the importance of window displays for your company			

Shop fittings and walls

Total number of mid floor merchandising and perimeter wall units			
Cycle of instore changes (tick box)	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>	Seasonal <input type="checkbox"/>
Please state the importance of a good store layout for your business			

General Merchandising

Merchandising standards (tick box)	Poor <input type="checkbox"/>	Average <input type="checkbox"/>	Very Good <input type="checkbox"/>
How important are visual merchandising standards to your business			

Store Layout, Visual Merchandising & Display

Who completes store layout, window display and visual merchandising	
How would you rate your ability to design a promotional window display	On a scale of 1 - 10
How would you rate your ability to change the layout of your shop	On a scale of 1 - 10
How would you rate your ability to visually merchandise your stock	On a scale of 1 - 10

On a scale of 1 to 10, how important is it to you to increase your knowledge of the following:

Window Display Store Layout Visual Merchandising

Have you undertaken to increase your knowledge of store layout, window display and visual merchandising by using any of the following:

Purchase a book on store layout, window display & visual merchandising

Purchase a digital book on store layout, window display & visual merchandising

Internet search for information on store layout, window display & visual merchandising

Undertake a course on store layout, window display and visual merchandising

Do you or your business own or use an iPad

Would you use an iPad as a training tool to help you with store layout, window display and visual merchandising

What would most benefit you having an interactive iBook on store layout, window display and visual merchandising

How would animated presentations of store layout, window display and visual merchandising benefit you

How would interactive 3-Dimensional examples of store layout, window display and visual merchandising benefit you

Would you like to see in-depth or concise written explanations

If you did not have an iPad would you buy one to use an interactive iBook as a training device

On a scale of 1 to 10 how important would the following content be to you:

Introduction to Store layouts

Introduction to Visual Merchandising

Inserting graphic focal points

Basic store layouts using wall units, floor rails, till points and promotional hotspots

Colour blocking merchandise

Co-ordination of merchandise

Inserting graphic focal points

Would some or all of the above be useful as chapters

Signature of retailer who undertook this questionnaire

Position held within the company

Appendix 3: Sample Questionnaire

Store Layout, Visual Merchandising & Display

Who completes store layout, window display and visual merchandising Owner / + day to

How would you rate your ability to design a promotional window display 3
On a scale of 1 - 10

How would you rate your ability to change the layout of your shop 2
On a scale of 1 - 10

How would you rate your ability to visually merchandise your stock 5
On a scale of 1 - 10

On a scale of 1 to 10, how important is it to you to increase your knowledge of the following:

Window Display 10 Store Layout 10 Visual Merchandising 10

Have you undertaken to increase your knowledge of store layout, window display and visual merchandising by using any of the following:

Purchase a book on store layout, window display & visual merchandising NO

Purchase a digital book on store layout, window display & visual merchandising NO

Internet search for information on store layout, window display & visual merchandising yes

Undertake a course on store layout, window display and visual merchandising yes.

Do you or your business own or use an iPad yes.

Would you use an iPad as a training tool to help you with store layout, window display and visual merchandising yes

What would most benefit you having an interactive iBook on store layout, window display and visual merchandising more visual - easy to use / very portable

How would animated presentations of store layout, window display and visual merchandising benefit you Highly important & helpful

How would interactive 3-Dimensional examples of store layout, window display and visual merchandising benefit you Give strong ideas / easy to copy

Data Gathering - Questionnaire

Name of Business Retail unit *Taylor Concept & Centre Centre L711*
Nature of merchandise sold *Concept / Centre*

Windows

Total number of Display Windows *6*

Cycle of window changes (tick box) Weekly Monthly Seasonal

Please state the importance of window displays for your company

*High - attracts the customer inside.
generate sales - direct and indirect selling.
Brandy the shop's*

Shop fittings and walls

Total number of mid floor merchandising and perimeter wall units *100+*

Cycle of instore changes (tick box) Weekly Monthly Seasonal

Please state the importance of a good store layout for your business

*extremely important - attracts customer
to new merchandise - static layout is
bad,*

General Merchandising

Merchandising standards (tick box) Poor Average Very Good

How important are visual merchandising standards to your business

*Business depends on the VM
like more of a mix of products*

Would you like to see in-depth or concise written explanations

more visual *concise /*

If you did not have an iPad would you buy one to use an interactive iBook as a training device

yes change this getting prepared,

On a scale of 1 to 10 how important would the following content be to you:

Introduction to Store layouts

Introduction to Visual Merchandising

Inserting graphic focal points

Basic store layouts using wall units, floor rails, till points and promotional hotspots

Colour blocking merchandise

Co-ordination of merchandise

Inserting graphic focal points

Would some or all of the above be useful as chapters

*comment - everything is geared to fashion
Business - needs to cover Homezone*

Signature of retailer who undertook this questionnaire

Carli Day

Position held within the company

Director.

Appendix 4: Chapter & Asset List

Animation required

Mannequin groupings
Floor groupings
Combining mannequins and merchandise
Inserting graphics
Inserting props
Lighting
Store layout square
Store layout rectangle
Department layout
Graphics principles
Symmetrical balance
Asymmetrical balance
Repeat patterns
Floor units
Table
Display
Colour blocking
Co-Ordination

3D Required

Mannequin groupings
Floor groupings
Combining floor and mannequin groupings
Inserting graphics
Inserting props
Lighting
Symmetrical balance
Asymmetrical balance
Repeat patterns
Floor unit
Table
Display
Colour blocking
Co-Ordination

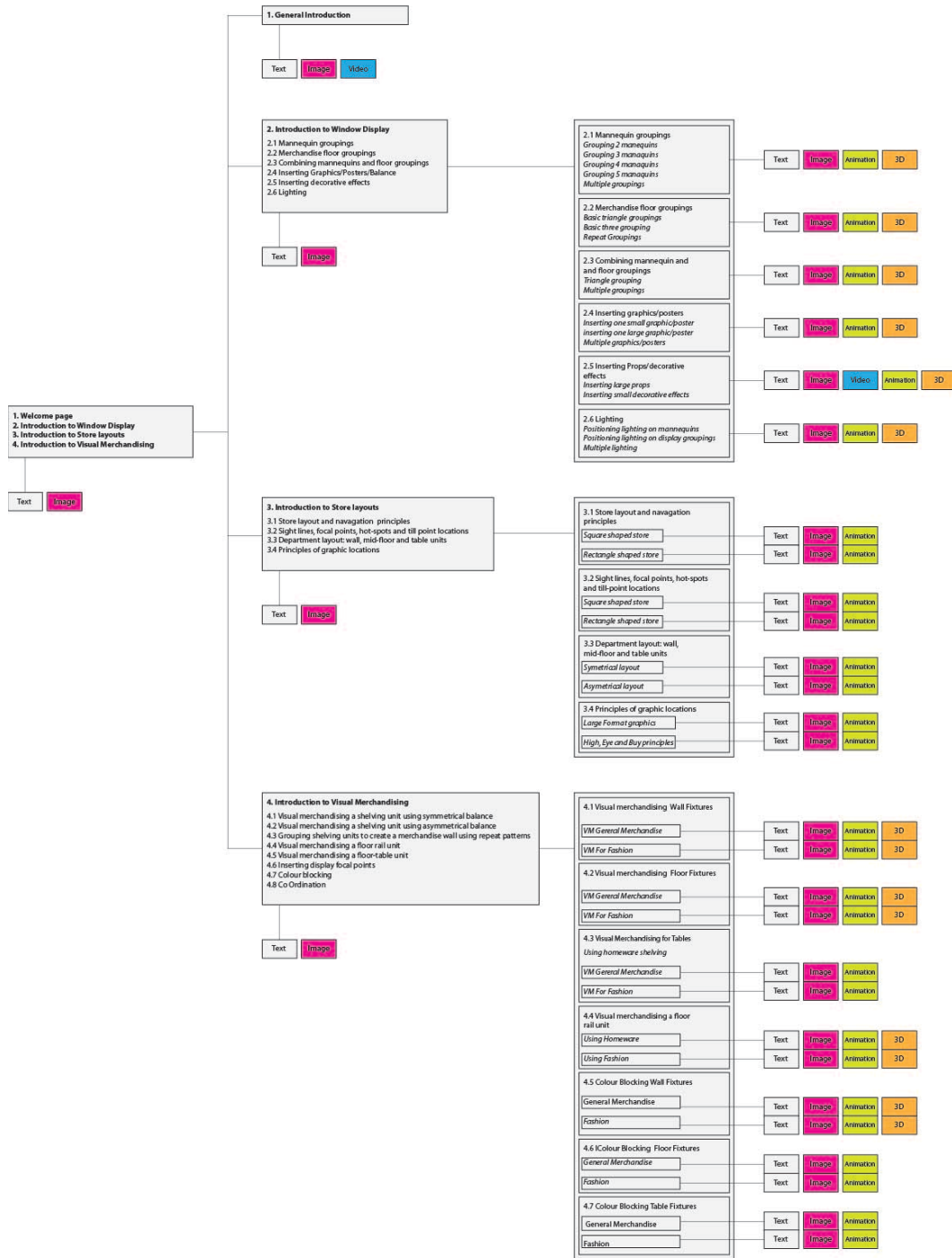
Supporting text required

Mannequin groupings
Merchandising floor groupings
Combining mannequin and floor groupings
Inserting graphics
Inserting props
Lighting
Store layout and navigation
Sightlines, focal points, hotspots and tills
Department layout
Principles of graphic locations
Symmetrical balance
Asymmetrical balance
Repeat patterns
Floor units
Tables
Displays
Colour blocking
Co-Ordination

Images required

Welcome page
Introduction
Introduction to Window display
Introduction to Store layout
Introduction to Visual Merchandising
Mannequin groupings
Floor groupings
Combining mannequins and display
Graphics
Props
Lighting
Square store layout
Rectangle store layout
Department layout
Graphic locations
Visual merchandising shelving symmetrical
Visual merchandising shelving asymmetrical
Repeat patterns
Floor unit
Table
Display
Colour Blocking
Co-Ordination

Appendix 5: Contents Map



Contents Map




Appendix 6: Visual Design Concept

WELCOME

Welcome to your essential Retail Visual Assistant, which has been specifically designed for you.










This book uses the expert knowledge of professionals involved in training many of the Retail designers employed by the top retail stores in Ireland and the United Kingdom.

This book is broken down into three main sections with the colours below letting you know where you are

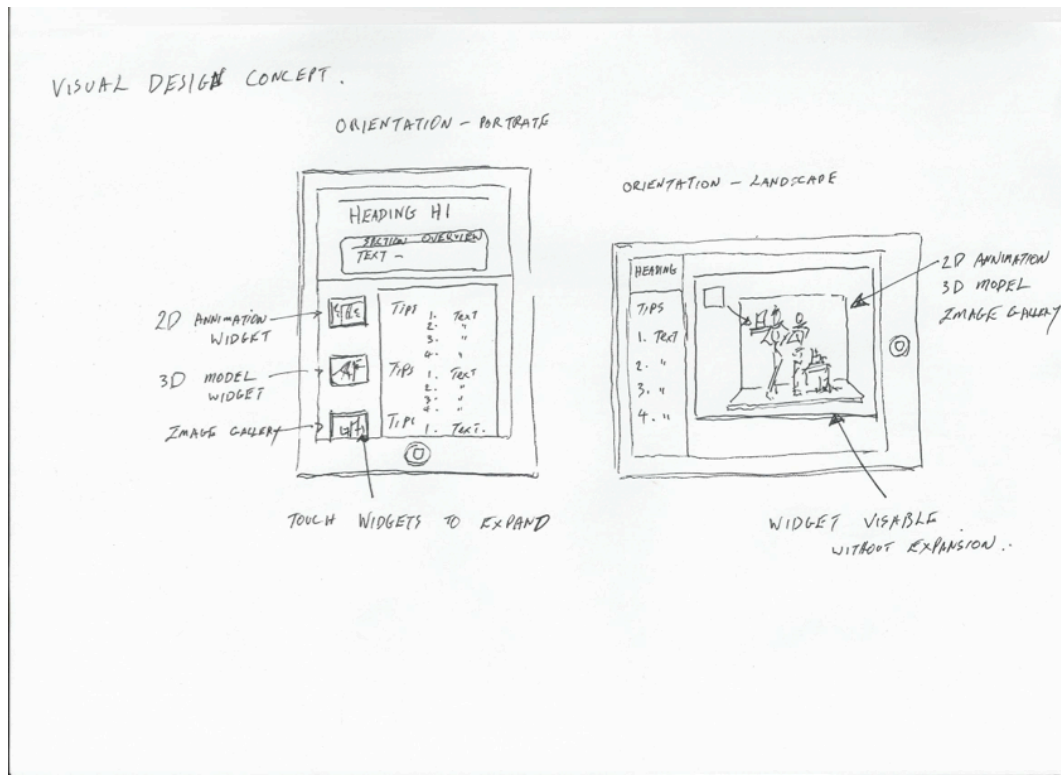
	Window Display
	Store Layout
	Visual Merchandising



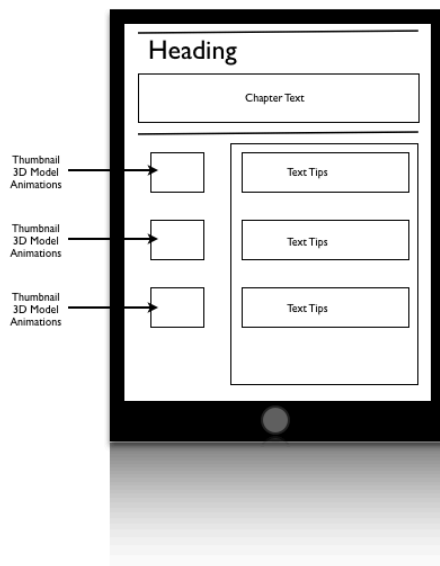
Appendix 7: Colour References

	100%	50%	30%
R= 206 G= 210 B= 99			
R= 158 G= 197 B= 195			
R= 182 G= 157 B= 161			

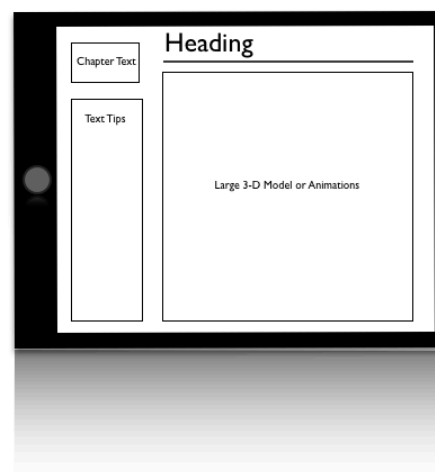
Appendix 8: Concept Layout Sketches



Portrait Orientation



Landscape Orientation



Appendix 9: Prototypes 1

CHAPTER 2

Introduction to window display



Lorem ipsum dolor sit amet, ligula suspendisse nulla pretium, rhoncus tempor placerat fermentum, enim integer ad vestibulum volutpat. Nisl rhoncus turpis est, vel elit, congue wisi enim nunc ultricies sit, magna tincidunt. Maecenas aliquam maecenas ligula nostra, accumsan taciti. Sociis mauris in integer, a dolor netus non dui aliquet, sagittis felis sodales, dolor sociis mauris, vel eu est libero cras. Interdum at. Eget habitasse elementum est, ipsum purus pede porttitor class, ut lorem adipiscing, aliquet sed auctor, imperdiet arcu per diam dapibus libero duis. Enim eros in vel, volutpat nec pellentesque leo, temporibus sceler-



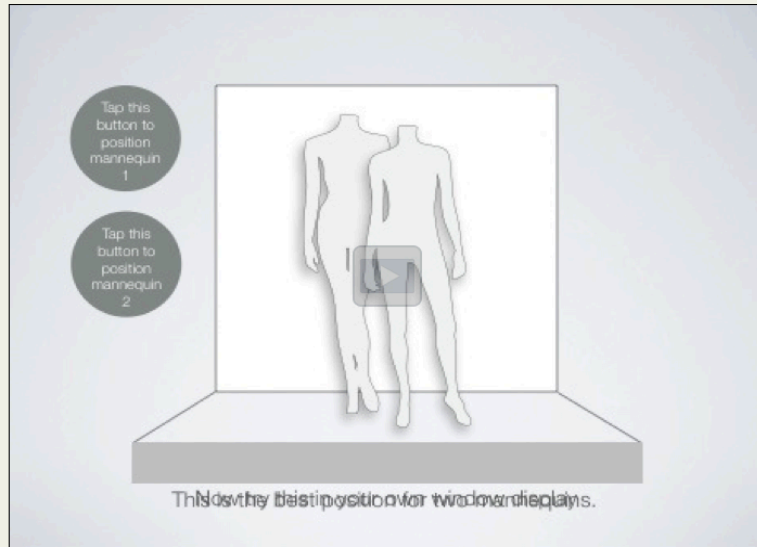
Grouping 2 Mannequins

Top Tips....

Check the stance of each mannequin,

1. Place the mannequin with more movement towards the front.
2. Group in the middle of floor
3. If mannequins are identically, place at the same angle one behind the other.

Lorem Ipsum dolor amet, consectetur



Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do tempor incididunt ut labore et dolore magna aliqua.

Appendix 10: Prototype 2



MANNEQUIN GROUPINGS

All about mannequin groupings

The grouping of mannequins in a display window has always been vital to the visual strategy of a retail brand. The density of the mannequin groupings combined with their visual style conveys the image and price point to the passing customer. New evolving trends in prestige brands worldwide reinforce the importance of larger groupings of mannequins in window displays.

GALLERY 2.1 Window Mannequins



3

Appendix 11: Fonts

VISUAL MERCHANDISING

← Futura Medium 24

The art of Visual Merchandising

← Helvetica Bold 15

Visual Merchandising makes it easier for your customers to locate the desired category and merchandise they require. The correct techniques make it easier for the customer to self select, co-ordination and accessories. It allows the highlighting of specific stock for promotional strategies and is an effective way to increase sales of unsought goods.

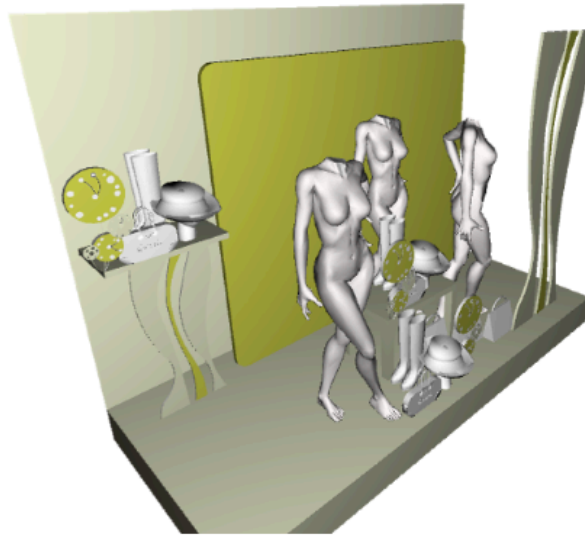
← Helvetica Light 15

Appendix 12: Design for Animated Visual



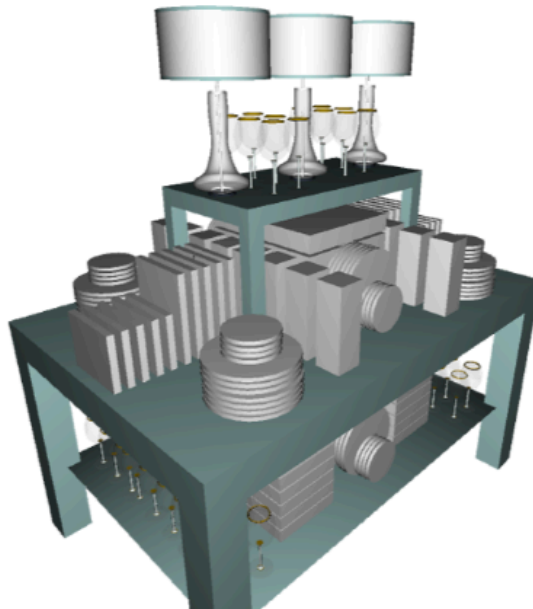
Appendix 13: Design for Three-Dimensional Models

INTERACTIVE 2.3 Lorem ipsum dolor amet, consectetur



Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do tempor incididunt ut labore et dolore magna aliqua.

INTERACTIVE 4.1 3D Model Showing General Merchandised Table and Upper Level Display




Touch the screen to enlarge and rotate this 3D Model

Appendix 14: Portrait Menu Layout

RETAIL VISUAL ASSISTANT

1	Welcome	1	▼
	Introduction	ii	
2	Window Displays	3	▼
3	Store Layout	22	▼
4	Visual Merchandising	31	▼
5	Credits	51	▼


Appendix 15: Example of Landscape Navigation



GS


GALLERY 2.1 Window Mannequins

window has always been
The density of the manne-
l style conveys the image
he evolving trends of pres-
portance of larger manne-




← • • • • • →


4



Grouping Two Mannequins
Touch the image above to
play this animated tutorial



Grouping Three Mannequins
Touch the image above to
play this animated tutorial



Grouping Four Mannequins
Touch the image above to
play this animated tutorial

Grouping Two

- Position both
- Place the ma
- Place manne

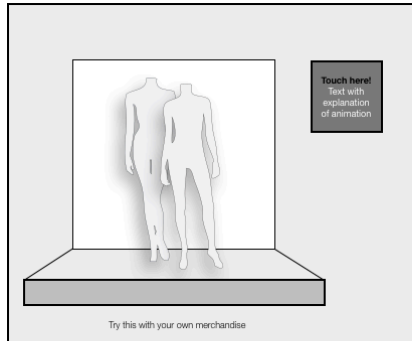
Grouping Three

- Group two id
- Position a thi
- Allow a suffic
- ics or floor-disp

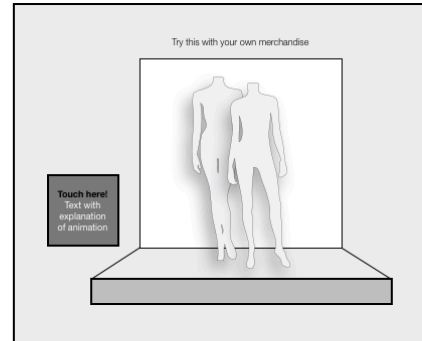
Grouping Four

- Position three
- Position a sir
- dow.
- Ensure that a

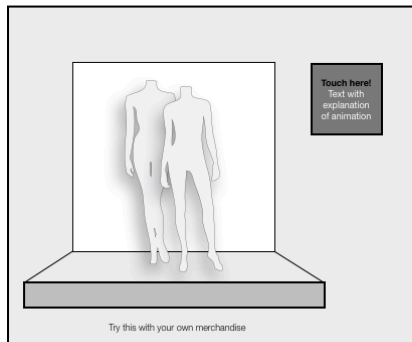
Appendix 16: Animation Iterations



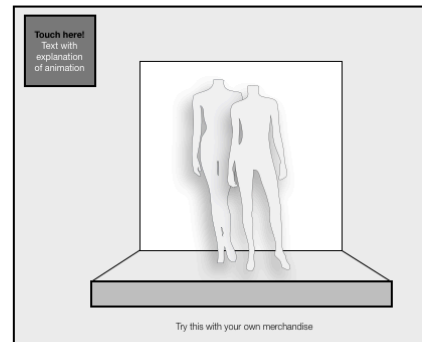
5 - Concept development layout for 2D Animation Asset



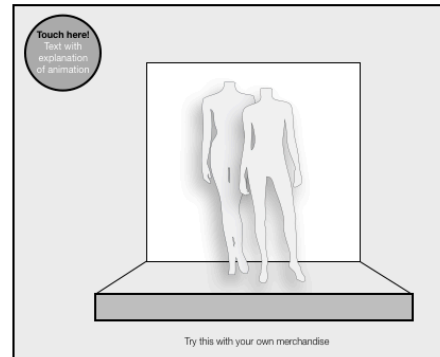
6 - Concept development layout for 2D Animation Asset



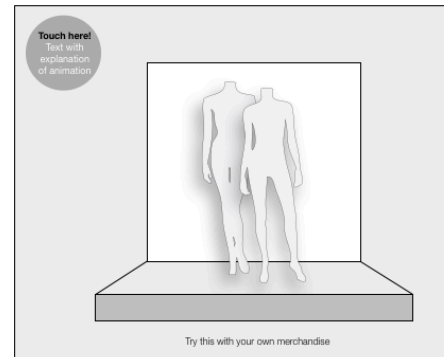
7 - Concept development layout for 2D Animation Asset



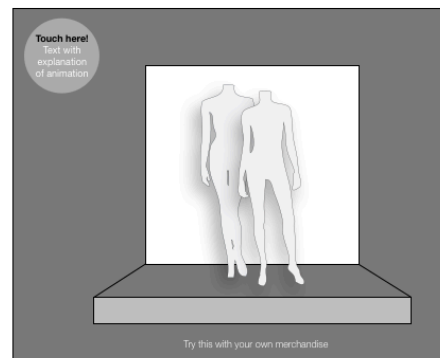
8 - Concept development layout for 2D Animation Asset



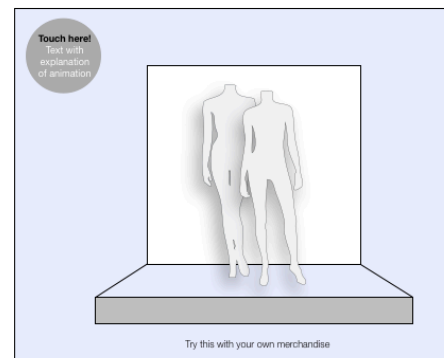
1 - Design resolution layout for 2D Animation Asset



2 - Design resolution layout for 2D Animation Asset

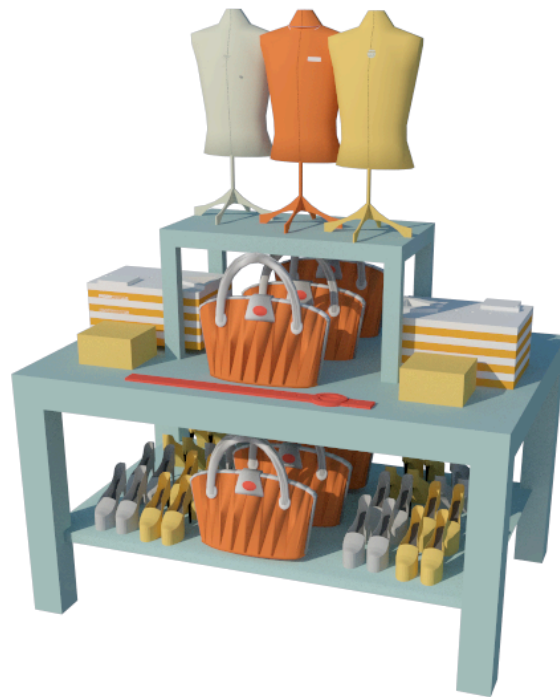


3 - Design resolution layout for 2D Animation Asset



4 - Design resolution layout for 2D Animation Asset

Appendix 17: Rendered V-Ray Visual



Appendix 18: Example of blank User Test

User Testing iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 1 - Position two/three mannequins in your window display

Performance

Navigation of iBook

Interaction with assets

Learning outcomes

Accuracy

Emotional Response

Comment on Experience

Comment on visual appearance

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 2 - Add a small graphic to your window display

Performance

Navigation of iBook
Interaction with assets
Learning outcomes

Accuracy

Emotional Response

Comment on Experience

Comment on visual appearance

User Testing

iBook (Visual Retail Assistant) Date : 20:11:2012

Task 3 - Create a floor grouping

Performance

Navigation of iBook

Interaction with assets

Learning outcomes

Accuracy

Emotional Response

Comment on Experience

Comment on visual appearance

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 4 - Create a secondary walkway

Performance

Navigation of iBook
Interaction with assets
Learning outcomes

Accuracy

Emotional Response

Comment on Experience

Comment on visual appearance

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 5 - Visually merchandise a wall fixture

Performance

Navigation of iBook
Interaction with assets
Learning outcomes

Accuracy

Emotional Response

Comment on Experience

Comment on visual appearance

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 6 - Colour coordinate merchandise on a table fixture

Performance

Navigation of iBook
Interaction with assets
Learning outcomes

Accuracy

Emotional Response

Comment on Experience

Comment on visual appearance

Appendix 19: Example of Blank Survey Form

Interactive Digital iBook Questionnaire

Introduction

This is an anonymous survey which will be conducted by questionnaire. It is for students are in their first year of study in the Dublin Institute of Technology who are studying on the B.A. Visual Merchandising and Display programme. This programme requires a level of awareness of the fundamentals of display to be developed within the first year of study and will lead to careers where confidence in their abilities to use these fundamentals must be displayed. Ethnicity, gender or age will not be a factor in the survey. An interactive digital iBook to teach the fundamentals of window display, store layout and visual merchandising is in the process of being designed, the survey of the prototype will take place during November 2012. The students partaking in trialling the prototype will be asked complete a questionnaire. The students will remain anonymous.

5. *I would prefer hard copy books from the library to learn from.*

Strongly Agree
Agree
Disagree
Strongly Disagree
Don't know

6. *I gained more knowledge from using the interactive iBook than attending lectures.*

Strongly Agree
Agree
Disagree
Strongly Disagree
Don't know

7. *By using the iBook I understood how to assembly a window display in a more structured way.*

Strongly Agree
Agree
Disagree
Strongly Disagree
Don't know

8. *By using the iBook I understood how to layout a store in a more structured way.*

Strongly Agree
Agree
Disagree
Strongly Disagree
Don't know

9. *By using the iBook I understood how to visually merchandise a store in a more structured way*

Strongly Agree
Agree
Disagree
Strongly Disagree
Don't know

10. *The text information was concise and to the point*

Strongly Agree
Agree
Disagree
Strongly Disagree
Don't know

11. *I have discovered new methods of designing window display, store layout and visual merchandising.*

Strongly Agree
Agree
Disagree
Strongly Disagree
Don't know

12. *I would like to see the interactive iBook used as the basis for studio lectures*

Strongly Agree
Agree
Disagree
Strongly Disagree
Don't know

13. *If you had to select the most useful learning element in the interactive iBook what was it?*

Text
Animations
3D Models
Image gallery's

Appendix 20: Sample of Completed Test Form

User Testing iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 1 - Position two/three mannequins in your window display

Performance

Navigation of iBook

- ~~Book~~ Contents - L - / - Sections
Page - Animation - Exit -

Interaction with assets

Excellent instructions -
Glow / steady -
Quick Learning -

Learning outcomes

Did not know without the informant.
Very pleased to learn -
Achieved end result - (very happy)

Accuracy

✓ Good accuracy -
2 mistakes -
Problem with Button - Animation

Emotional Response

Excited by 3D Models -

~~More~~ Much better than paper -

Comment on Experience

Loved the Animated Assets.

Like being told where to put
Mammogram + Mammals.

Loved the Tonga Country.

Comment on visual appearance

Text v good size headings larger

Liked the Book - looks very
sharp and clean

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 2 - Add a graphic to your window display

Performance

Navigation of iBook

Contents - scroll - chapter -
Section - (Amintic Wilson's) - Back
to Contents - Reported 3
Times (Problem) -

Interaction with assets

difficult finding it. (Portrait)
Kept pressing Contact Button
Problem (NO text on Thumbnail in
Portrait) → Fix

Learning outcomes

could not find it.

Accuracy

Poor (heading over model - confusing)
Make section headings Bold Bold

Emotional Response

very excited by 3D Model.
learned a lot from animations

Comment on Experience

Easy to use because has own options
like Biggie Button on animations.

Comment on visual appearance

landscape - renderings not large enough
over animations.

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 3 - Create a single window display grouping

Performance

Navigation of iBook

Contacts - Section - Animation
- Text - Animation

Interaction with assets

Excellent - leaving quickly
Smooth + confident

Learning outcomes

Excellent - small grouping using
own merchandise =
Wanted to add Christmas demo

Accuracy

Very good Accuracy - very
few hesitations -

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 4 - Create a secondary walkway

Performance

Navigation of iBook

Contents - Sections - Text
Animation - Exit ->

Interaction with assets

Very Quick - Has learned a lot
about interaction

Learning outcomes

- strong interaction - achieved the
outcome - Moved 3 stands &
1 Table

Accuracy

100% Animations need feedback (Portrait)

on the term - less is More

Emotional Response

Interested - Wanted to learn more

Comment on Experience

- Would use both orientations -
easy to learn than the more
familiar user - More 3-D's

Comment on visual appearance

legibility - very clear
clear.

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 5 - Visually merchandise a wall fixture

Performance

Navigation of iBook

Book | Contents - chapter - Section -
Annotation - 3471

Interaction with assets

None hesitant.
Text annotations too fast (comment).
Fix

Learning outcomes

Achieved the Outcome easily

Accuracy

90% - Really liked using it

Emotional Response

Excited

Comment on Experience

See Back page.

Comment on visual appearance

See Back page

User Testing

iBook (Visual Retail Assistant) Date : 16:11:2012 / 17:11:2012

Task 6 - Colour coordinate merchandise on a table fixture

Performance

Navigation of iBook

~~for~~ Sections - Contents - Skipton -
Section -

Interaction with assets

Texts, Bills work well - understood.
Very Quick.

Learning outcomes

Excellent interpolation on our stock

Accuracy

80% = Very strong

Emotional Response

still excited - surprised

Comment on Experience

See Back page

Comment on visual appearance

See Back page

Bernie - Perpetua
Patricia -

"The Visual - Moving Animations -
give you a much better understanding."

Colour of prompt - could be stronger

Slow - down - Text on animations

3D Models

~~use~~ Text Telling user to use
ONE FINGER TO MOVE MODEL.

Circular prompts may need Border

Increase font size on small
drop down menu.

Appendix 21: Sample of Completed Survey Form

Creativity Questionnaire

(Please circle only one response for each item).

	Strongly		Strongly Don't
	Disagree	Disagree	Agree Agree Know

1. *I found using the interactive digital iBook a simpler way of learn the fundamentals of window display.*

Strongly Agree
 Agree
Disagree
Strongly Disagree
Don't know

2. *I found using the interactive digital iBook a simpler way of learn the fundamentals of store layout.*

Strongly Agree
 Agree
Disagree
Strongly Disagree
Don't know

3. *I found using the interactive digital iBook a simpler way of learn the fundamentals of visual merchandising.*

Strongly Agree
 Agree
Disagree
Strongly Disagree
Don't know

4. *I found the navigation of the interactive IBook difficult*

Strongly Agree
Agree
 Disagree
Strongly Disagree
Don't know

5. *I would prefer hard copy books form the library to learn from.*

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree
- Don't know

6. *I gained more knowledge from using the interactive iBook than attending lectures.*

- Strongly Agree
- Agree
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7. *By using the iBook I understood how to assembly a window display in a more structured way.*

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- Strongly Disagree
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- Strongly Agree
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- Strongly Disagree
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10. The text information was concise and to the point

- Strongly Agree
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- Disagree
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11. I have discovered new methods of designing window display, store layout and visual merchandising.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree
- Don't know

12. I would like to see the interactive iBook used as the basis for studio lectures

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree
- Don't know

13. If you had to select the most useful learning element in the interactive iBook what was it?

- 1 Text
 - 2 Animations *
 - 3 3D Models *
 - 4 Image gallery's
- > very good.

Any other comments you would like to make regarding the interactive iBook and how it might help support student learning?

its more concise than what you would learn in a lecture, it holds more information & is faster to learn. I have a few learning disabilities so its much easier to take it in with the animations than to concentrate on the lecture for a long time. Also when you miss lectures its convenient. You dont feel like your falling behind with work.

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

Development Log

	Work Undertaken	Author
	Background Research on Topic	N.Knott / T.Leggett
	Research on Technical Requirements	N.Knott
	Background Research on existing DVD's, eBooks, Books and Websites	N.Knott / T.Leggett
	Design of Questionnaire	N.Knott / T.Leggett
	Undertaking Questionnaire Interviews (Boyle)	N.Knott / T.Leggett
	Analysis of Questionnaire Results	N.Knott / T.Leggett
	Development of User Profiles	N.Knott / T.Leggett
	Development of Contents Structure	N.Knott / T.Leggett
	Development of Contents Map	N.Knott / T.Leggett
	Visual Design Concept 1	N.Knott
	Visual Design Concept 2	T.Leggett
	Research on Colour Palettes	N.Knott
	Design of layout	N.Knott / T.Leggett
	Prototype	N.Knott
	Selection, purchase and download of 120 Images from Shutterstock	N.Knott / T.Leggett

	Construction of Assets	Author
	Asset 1 – Keynote (Grouping 2 Mannequins)	Neville Knott
	Asset 2 – Keynote (Grouping 3 Mannequins)	Neville Knott
	Asset 3 – Keynote (Grouping 4 Mannequins)	Neville Knott
	Asset 4 – Keynote (Single floor Display)	Neville Knott
	Asset 5 – Keynote (Multiple Grouping)	Neville Knott
	Asset 6 – Keynote (2 Mannequins with Merchandise)	Neville Knott
	Asset 7 – Keynote (3 Mannequins with Merchandise)	Neville Knott
	Asset 8 – Keynote (Adding Small Graphics)	Neville Knott
	Asset 9 – Keynote (Adding large Graphics)	Neville Knott
	Asset 10 – Keynote (Adding Props)	Neville Knott
	Asset 11 – Keynote (Using General Merchandise)	Neville Knott
	Asset 12 – Keynote (Lighting Window Display)	Neville Knott
	Asset 13 – Keynote (Primary Walkways)	Thomas Leggett
	Asset 14 – Keynote (Sight Lines)	Thomas Leggett
	Asset 15 – Keynote (Hot Spots)	Thomas Leggett
	Asset 16 – Keynote (Graphics Location)	Thomas Leggett
	Asset 17 – Keynote (VM Walls General Merchandise)	Neville Knott
	Asset 18 – Keynote (VM Walls Fashion Merchandise)	Neville Knott
	Asset 19 – Keynote (Focal Points 1)	Neville Knott
	Asset 20 – Keynote (Focal Points 2)	Neville Knott
	Asset 21 – Keynote (VM Rails)	Thomas Leggett
	Asset 22 – Keynote (VM Floor Shelving)	Thomas Leggett
	Asset 23 – Keynote (VM Fashion Table)	
	Asset 24 – Keynote (VM General Merchandise Table)	Neville Knott
	Asset 25 – Keynote (Feature Display GM Table)	Neville Knott
	Asset 26 – Keynote (Feature Display Fashion Table)	Neville Knott
	Asset 27 – Keynote (Colour-Blocking walls GM)	Neville Knott

	Asset 28 – Keynote (Colour-Blocking walls Fashion)	Neville Knott
	Asset 29 – Keynote (Colour-Blocking Floor Rails)	Thomas Leggett
	Asset 30 – Keynote (Colour-Blocking Rail unit)	Thomas Leggett
	Asset 31- Keynote (Colour-Blocking Shelving)	Thomas Leggett
	Asset 32 – Keynote (Colour-Blocking Wall Bar)	Thomas Leggett
	Asset 33 – Keynote (Colour-Blocking Table GM)	Neville Knott
	Asset 34 – Keynote (Colour-Blocking Table Fashion)	Neville Knott
	Asset 35 – SketchUp Model (Mannequin Grouping)	Neville Knott
	Asset 36 – SketchUp Model (Table Grouping)	Neville Knott
	Asset 37 – SketchUp Model (Multiple Grouping)	Neville Knott
	Asset 38 – SketchUp Model (Completed Window Display)	Neville Knott
	Asset 39 – SketchUp Model (Store Layout)	Neville Knott
	Asset 40 – SketchUp Model (VM Table 1)	Neville Knott
	Asset 41 – SketchUp Model (VM Table 2)	Neville Knott
	Asset 42 – Image Gallery (Window Mannequins)	Thomas Leggett
	Asset 43 – Image Gallery (Mannequins/ Groupings)	Thomas Leggett
	Asset 44 – Image Gallery (Window Graphics)	Thomas Leggett
	Asset 45 – Image Gallery (Decorative Effects)	Thomas Leggett
	Asset 46 – Image Gallery (Lighting)	Thomas Leggett
	Asset 47 – Image Gallery (Focal Points)	Thomas Leggett
	Asset 48 – Image Gallery (Instore Graphics)	Thomas Leggett
	Asset 49 – Image Gallery (Visual Merchandising)	Thomas Leggett
	Asset 50 – Image Gallery (Colour Blocking and Coordination)	Thomas Leggett
	Asset 51 – V-Ray Rendered Image (Mannequins and Groupings)	Neville Knott
	Asset 52 – V-Ray Rendered Image (VM Tips 1)	Neville Knott

	Asset 53 – V-Ray Rendered Image (VM Tips 2)	Neville Knott
	Asset 54 – V-Ray Rendered Image (Colour co-ordination GM)	Neville Knott
	Asset 55 – V-Ray Rendered Image (Colour co-ordination Fashion)	Neville Knott

	Written Text Assets	Author
	All Text Content (Chapter 1)	Neville Knott
	All Text Content (Chapter 2)	Thomas Leggett
	All Text Content (Chapter 3)	Neville Knott
	Glossary	Neville Knott
	Layout of Assets in iBook Author	Author
	Layout of assets and text – Portrait (Chapter 1)	Thomas Leggett
	Layout of assets and text - Portrait (Chapter 2)	Thomas Leggett
	Layout of assets and text – Portrait (Chapter 3)	Thomas Leggett
	Layout of assets and text – Landscape (Chapter 1)	Thomas Leggett
	Layout of assets and text - Landscape (Chapter 2)	Thomas Leggett
	Layout of assets and text – Landscape (Chapter 3)	Thomas Leggett

	Video Introduction	Author
	Construction of Video Introduction, Prezi, Pro Tools and Screenflow	Neville Knott

	User Testing	Author
	Design of Questionnaire with Tasks	N.Knott / T.Leggett
	Design of Survey	N.Knott / T.Leggett
	Conducting User Testing (Boyle)	N.Knott / T.Leggett
	Conducting Survey (DIT)	N.Knott / T.Leggett
	Analysis of results	N.Knott / T.Leggett

	Changes following User Testing	Author
	Redesign of all Buttons on keynote Assets	Neville Knott
	Change of Text Speed on Keynote Assets	Neville Knott
	Redesign of all Section Headings, Landscape	Thomas Leggett
	Addition of Thumbnail Headings, Portrait	Thomas Leggett
	Resolution of technical issues	N.Knott / T.Leggett