



VOLUME 12 ISSUE 3-4

The International Journal of the

Book

Multimodal Books in a Tertiary Context

Bridging the Gap between Traditional Book
Arts and New Technologies

LESLEY KAISER

THE INTERNATIONAL JOURNAL OF THE BOOK
www.booksandpublishing.com

First published in 2014-2015 in Champaign,
Illinois, USA by Common Ground Publishing LLC
www.commongroundpublishing.com

ISSN: 1447-9516

© 2014-2015 (individual papers), the author(s)
© 2014-2015 (selection and editorial matter) Common Ground

All rights reserved. Apart from fair dealing for the purposes of study, research, criticism or review as permitted under the applicable copyright legislation, no part of this work may be reproduced by any process without written permission from the publisher. For permissions and other inquiries, please contact cg-support@commongroundpublishing.com.

The International Journal of the Book is peer-reviewed, supported by rigorous processes of criterion-referenced article ranking and qualitative commentary, ensuring that only intellectual work of the greatest substance and highest significance is published.

Multimodal Books in a Tertiary Context: Bridging the Gap between Traditional Book Arts and New Technologies

Lesley Kaiser, Auckland University of Technology, New Zealand

Abstract: Our relationship to books is mutating dramatically, not just for readers and writers, but also for those who design and create books. This research explores how multimodal books might be used to integrate old and new technologies to retain the prized aspects of printed hand-bound books and complement the enhanced communication potential of eBooks. Combinatorial and transformational approaches to learning, teaching, creating and making were implemented in the first year of the Bachelor of Design (Graphics) degree at AUT University. Emerging theoretical contexts informed research into current issues, theory and formats, and students presented their findings as well-designed books that included both a print and an interactive PDF or EPUB formatted for iPads. Ways in which the traditional book might retain “value” are explored—pop-up books, for example, are discovered to have shape-shifted spontaneously to digital forms as technologies change, enhancing rather than replacing the analog-interactive versions, and multimodal approaches are shown to effectively preserve, renew, and re-invent the book as it morphs into the future.

Keywords: Multimodal, Book Arts, Tertiary Graphic Design, Bookbinding, Pop-Up Books, iPads, eBooks, Teaching

Introduction

The forms and functions of the book are in constant flux, and their future lies in their fluidity of form and ability to evolve and shape-shift to adapt to new publishing technologies and globalised environments. This research explores how old and new technologies might be utilised in the creation of multimodal books that provide an attractive vehicle for the development of necessary cognitive and design skills for tertiary graphic design students today.



Figure 1. Multimodal Bookworks, 2013. Graphic Design Year One Students' Work, AUT University

The term “multimodal” is often interchangeable with “multimedia” but there are significant differences in their usage that should be clarified before expanding on how multimodality is relevant in the context of Book Arts and Graphic Design. Claire Lauer in her abstract for “Contending with Terms: ‘Multimodal’ and ‘Multimedia’ in the Academic and Public Spheres” analyses the terms:

While “multimedia” is used more frequently in public/industry contexts, “multimodal” is preferred in the field of composition and rhetoric. This preference for terms can be best explained by understanding the differences in how texts are valued and evaluated in these contexts. “Multimodal” is a term valued by instructors because of its emphasis on design and process, whereas “multimedia” is valued in the public sphere because of its emphasis on the production of a deliverable text. (Lauer 2009, 225)

Given that this research is about the design and production of books, the term multimodal is used throughout. So what are multimodal texts? A text may be defined as multimodal when it combines two or more semiotic systems. There are five semiotic systems in total:

1. Linguistic: comprising aspects such as vocabulary, generic structure and the grammar of oral and written language.
2. Visual: comprising aspects such as colour, vectors and viewpoint in still and moving image.
3. Audio: comprising aspects such as volume, pitch and rhythm of music and sound effects.
4. Gestural: comprising aspects such as movement, speed and stillness in facial expression and body language.
5. Spatial: comprising aspects such as proximity, direction, position of layout and organisation of objects in space (Anstey and Bull 2010).

Graphic design courses at AUT University have traditionally been about designing for print, using typography and image to create hard copy publications and beautifully bound books. However, in the twenty-first century, graduates entering the workforce need to be able to produce books and design publications that can also be read on mobile media such as iPads and mobile phones, and which engage with new media. The principles of good design need to be applied in multiple contexts. Students also need to understand the implications of the rapid changes in book formats and technologies. “Underpinning the pedagogic developments in design education is the awareness that contemporary design evolves from the intersection of different disciplines and technologies. Indeed, current definitions of the relationship between design, craft and industry denote synthesis as a key characteristic” (Lyon and Woodham 2009, as cited in Kermik 2012, 1).

Context

Traditionally, libraries of books have ensured cultural knowledge has been stored and passed on to future generations, transcending time and place. Many definitions of the book can be found, and definitions continue to shift, but the most enduring include reference to their function as transmitters of cultural knowledge, memes that are shared across distance and time. Traditional definitions include reference to their form, but the definition of what a book is continues to blur:

It used to be so easy to define what a book was: a collection of printed pages bound inside a cover (hard or soft) that you could place on a shelf in your library, or in a store. Now, there are e-books, and blogs that turn into books, and long pieces of journalism that are somewhere between magazine articles and short books ... and a whole series of ongoing attempts to reimagine the entire industry of writing and selling books. If you're

an author, it's a time of incredible chaos, but also incredible opportunity (Ingam 2011, first paragraph).

Until the dramatic changes of the Virtual Revolution in the twenty-first century, the role and form of the book had not changed significantly since the Gutenberg Revolution. The social and political implications of the “mediasphere” that we live in today are succinctly analysed by Régis Debray in “Socialism: A Life-Cycle”:

[It is i]mpossible to grasp the nature of conscious collective life in any epoch without an understanding of the material forms and processes through which its ideas were transmitted—the communication networks that enable thought to have a social existence. Indeed, the successive stages of development of these means and relations of transmission—whose ensemble we might term the mediasphere—suggest a new periodization for the history of ideas (Debray 2007, 5).

Late capitalism is characterised by consumption economies, and the predominance of market interests, but what is changing about book authorship today is the *democratising* of publication avenues. Anyone with internet access can be an author, not just a consumer, as the gate-keeping role of the publisher diminishes. There has been much writing and speculation about the death of the book but this does not take into account its fluidity and shape-shifting potential. Michael Peters in his paper “Opening the Book: (From the Closed to the Open Text)” analyses these major shifts:

I want to discuss one aspect of the new messianism about e-texts that I have called simply “openness”—what I allude to by “Opening the Book”. I do so, first, by foregrounding the concept of the open society as discussed by Henri Bergson and then by Karl Popper; second, by tracing the growth of the Open Access movement as a reaction against the economics of publishing; and third, by entertaining the concept of open knowledge production systems that in my view will not mean the “end of the book” but its radical subsumption in a new electronic textual system that will involve a set of changes in all aspects of the “culture of the book” including all phases of its creation, production and consumption as well as its practices and institutions of reading and writing. (Peters 2007, 11)

In my paper, “Preserve, Renew, Invent [Light Bytes]: The Aphoristic Statement and the Future of the Book” (Kaiser 2008), I looked at the changing nature of the book from a book artists'/designers' perspective. This current project builds on that research as it applies to a tertiary graphic design teaching context, and addresses the rise of eBooks for mobile devices. Multimodal book formats enhance the purely textual academic essay as a more pertinent vehicle for presentation of student research and design skills. Literacy has always been an important component of any university design course, but *digital literacy* has been added to academic literacy as an essential skill in today's world. Emergent research on literacy highlights the imaginative, dynamic, visual, interpretive, nonlinear and mobile features of communication (Coiro et al. 2008), and the growing need for multiliteracy and combinatorial creativity.

The issues that these twenty-first century shifts present us with form the starting point for the content of the research brief that was set for first-year Graphics students at AUT University.

Walter Benjamin's essay, “The Work of Art in the Age of Mechanical Reproduction” (Benjamin 1982 [1955]) provides a crucial theoretical context, and feeds seamlessly into a methodology based on Foucault's notion of an archaeology of history to reveal, not a linear history and progression, but one of division and transformation. In *The Archaeology of Knowledge* Foucault speaks of:

several pasts, several forms of connection, several hierarchies of importance [...]. [T]here are the displacements and transformations of concepts [...] transformations that serve as new foundations, the re-building of foundations. What one sees emerging then is a whole field of questions, some of which are already familiar, by which this new form of history is trying to develop its own theory. (Foucault 1982, 5)

There is a long history of what we broadly categorise as books, and they continue on “as objects of wisdom, artefacts and holders of the social memory” (Online abstract, Owens 2007), even if the forms are fluid and changing.

Tertiary Design Education Context: Methods/Procedure/Approach

Auckland University of Technology is fortunate in having one of the best bookbinding facilities of any tertiary institute in the Southern Hemisphere. The bindery was set up when the then Auckland Institute of Technology ran a seven-year apprenticeship in bookbinding. The Institute became a university in 2000, and the degree courses still have an industry focus and merge craft into the design curriculum. Art and Design students have access to the bindery that is run by a part-time bindery technician. The bindery is equipped with an excellent range of antique hand tools and equipment as well as an industrial guillotine and contemporary bookbinding equipment, though until recently it had no internet connectivity. In power-cuts, the bindery was one workspace that could operate more or less uninterrupted.

To embrace multimodal approaches, studio and bindery workshop spaces were digitally enhanced to create a space for cyber learning by the inclusion of a large TV screen and a connected iPad in a secure kiosk. These have now been permanently installed so that students can access the bindery website, and online tutorials, and staff can digitally present relevant material in workshops and tutorials.



Figures 2 and 3. The Traditional Bindery at AUT. Trajan Swenke Uses an iPad for Internet Research

An AUT latent grant from the Centre for Learning and Teaching (CfLAT) for ten iPads for staff was successfully applied for, and a Graphic Design Community of Practice (GDCoP) established. Weekly lunchtime meetings and a blog site to record findings [<http://gdcop.wordpress.com>] enabled collective and shared learning, and a steep learning curve in staff digital literacy and multimodal book formatting was achieved.

A wide range of shared resources were made accessible to students through the online AUTonline intranet, including relevant readings, videoed lectures, e-TV programmes such as the BBC series *The Virtual Revolution*, and web links. In addition, practical bookbinding tutorials for various hand-made book formats, and paper-engineering demonstrations, were videoed using an iPhone. In a collaboration with staff teaching the computer component of the Graphic Design paper, I videoed their series of lectures, which covered creating an interactive PDF from Adobe

InDesign and formatting it for reading in iBooks on iPads. I also put these instructional videos online for students to access in self-directed time.

The Project Brief

A multimodal book project was set in *History, Culture, Context 1* (115132 02 GD), which is a first-year theory paper in the BDes Graphics degree course at AUT University. One hundred and thirty-three students were enrolled and split into six studio groups for a two-hour tutorial each week along with a combined one-and-a-half hour lecture for this 50% component of a 15-point second semester paper. In order to engage the students in discussion of contemporary issues, and also think about the future of the book, they were each required to research into a twenty-first century issue that they felt passionate about and to communicate their findings in a multimodal bookwork using text and images of their own. Suggested topics ranged from bio-cultural approaches; communication theory and graphic design; the digital revolution; authorship, copyright and the Creative Commons; consumer culture; technology; ethics; social and environmental responsibility; to any twenty-first century social or cultural issue that was relevant to designers today that the individual student felt passionate about and wanted to research. The project was designed to engage students actively in self-generated research projects that integrated theory into practice, and which stimulated their curiosity and desire to learn.

For assessment, students were required to submit their research findings in multimodal formats that could be read both in print and on an iPad. The three different formats were:

1. a well-designed hand-bound printed book using text and image,
2. a videoed short presentation (2–4 minutes) of their bookwork, which was included in the assessment above,
3. an interactive PDF and/or EPUB using text and image designed to be read on an iPad/iPhone in iBooks.

The interactive PDF provides an excellent method of production of a multimodal book and provides a transition between traditional print and multimedia publishing. Jason Lisi summarises their functionality in the abstract for his paper on the media-rich PDF:

Media rich PDF publishing is a unique form of media convergence that allows designers to blend the superior image clarity and typographical power of printed documents with the interactivity and media flexibility of multimedia publishing. Through media rich PDFs, authors can create high quality printable documents that remain economical in file size, allowing them to be disseminated electronically through email or websites. Media rich PDFs are platform independent, easily managed by inexperienced users, and easy to create. [...] One significant advantage of media rich PDFs is that one file can be created and used to create traditional commercial print products as well as an electronic multimedia experience. This can save publishers significant time and money when trying to publish across multiple mediums. (Lisi 2010, 45)

Digital printing has transformed the way in which young designers disseminate their work and also lends itself to a revival of a variety of traditional book formats. Manfred Breede and Jason Lisi, for example, show how the accordion book is “An Old Idea Reinvented for Digital Printing” (Breede and Lisi 2007, 75).

Outcomes of the Brief and the Impact of the Project for Students

This project fills a gap in the area of combining old and new technologies in tertiary Graphic Design education as it involves students in creatively exploring the possibilities of the different

formats and technologies for themselves, in one assignment. Multiple semiotic systems were engaged in learning and teaching approaches.

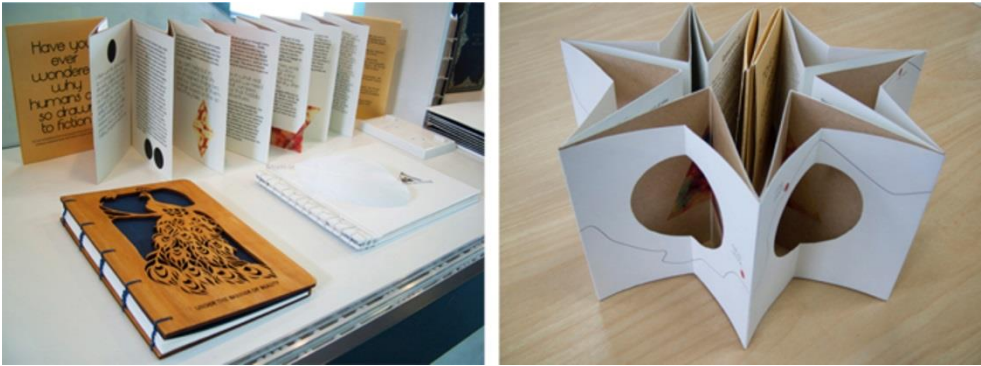
Students were empowered with a multimodal fluency that prepares them for their future professional lives. They produced excellent multimodal books with both print and iPad versions. See examples and student feedback on the summary slideshare at www.lesleykaiser.wordpress.com and at www.gdcop.wordpress.com.



Figure 4. Students Hard Copy Hand-Bound Books Displayed in Glass Cabinets at AUT
Can be Read on an iPad in the Kiosk

Print and Hand-bound Books: Skills Taught

Old and new technologies were creatively used *together* to produce beautiful art objects as well as e-publications. Many traditional techniques and formats were taught, and pre-cut materials were supplied to the students to enable them to make sample books in class. Topics included: paper grain; concertina (accordion) books; Coptic binding; sewn single and multi-section bindings; paper-engineering and pop-up books; perfect binding; Japanese binding; magazine binding (with some stiff page variants); and boxed books, etc. Various media/papers were also used experimentally. Some students independently combined old and new technologies in inventive ways to create attractive book covers, such as the book created by Cindy Tan (Figure 5), who used the Textile and Design Lab (TDL) at AUT University to laser cut a peacock image into a wooden cover, which was then used in a medieval Coptic binding, producing a stunning result. Workshops in the traditional studios involved students in using their hands and minds in what would otherwise be a formal theory tutorial, and students loved the hands-on approach to learning, ranking the paper very highly.



Figures 5 and 6. Old and new technologies combined. *Under the Banner of Beauty*, Cindy Tan, 2012.
* *Fiction*, Julia Telford-Brown, 2012

Julia Telford-Brown's * *Fiction* (Figure 6) is an accordion book designed for "play" that has multiple ways of being presented, and applies contemporary bio-cultural theory in practical ways (her presentation can be downloaded at <http://goo.gl/Ffhg>).

Many students used the traditional gold-blocking machine for titling their books, but others used new digital techniques. One excellent new technique for decorating book covers was pioneered by AUT's print technician Nicol Sanders-O'Shea, who adapted heat-transfer T-shirt printing technology so that it could be used by students to transfer their designs (which could be in full colour and computer generated) to book cloth. This was a great innovation that meant students could title their books much more inventively than merely relying on the gold-blocking machine (with a limited range of metal typefaces and involving a lengthy process of hand typesetting).

The images below show the variety of results obtained, and many students took up this excellent innovation that allowed for visual images as well as text on their covers.



Figures 7 and 8. T-shirt Heat-Set Printing Used on Book Cloth to Create Book Covers

Multimodality in Paper-engineered Movable and Pop-up Books

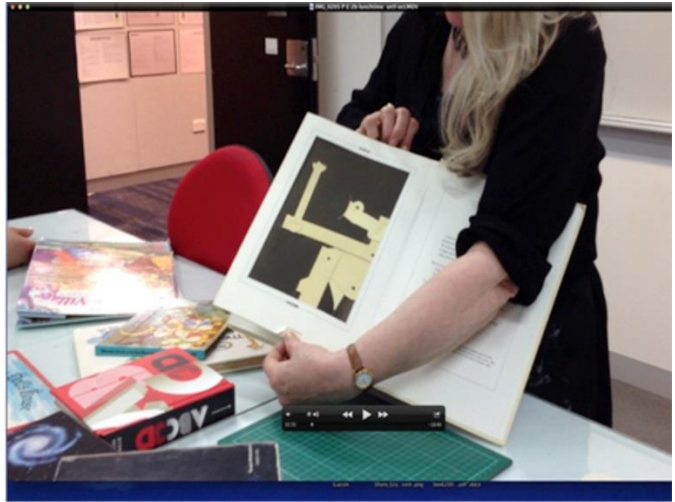


Figures 9 and 10. *The Book & the Brain*. Varnia Carter's Book Includes Paper-Engineering

Multimodality and interactivity were also introduced by the inclusion of traditional paper-engineering demonstrations that were recorded on my iPhone. These workshops, which were extended in an optional lunchtime session, led to several students creating interesting pop-up features in the print version of their books. Pop-up and movable books engage multiple semiotic systems including tactile/spatial and gestural (in terms of movement), as well as visual and textual communication. They are analog-interactive and involve the viewer actively in the experience, and have a playful aspect to them.



Figures 11 and 12. *Raunch Power*, Madeleine Duthie. *Modern Caveman*, Vinnie Bi



Figures 13 and 14. iPhone Used to Video Paper-Engineering Demonstrations and Practical Workshops

The Digital Future of Movable and Pop-up Books

There is great potential for extending this haptic experience in iPad and touch-screen technologies. One area for development of new technologies is in transforming physical paper-engineering to animated GIFs and to pop-ups or movable books as apps. You can download the free PopOut!™ Peter the Rabbit [Lite] app on to your iPad, iPhone or iPod touch to see a brilliant example of a multimodal digital movable book.

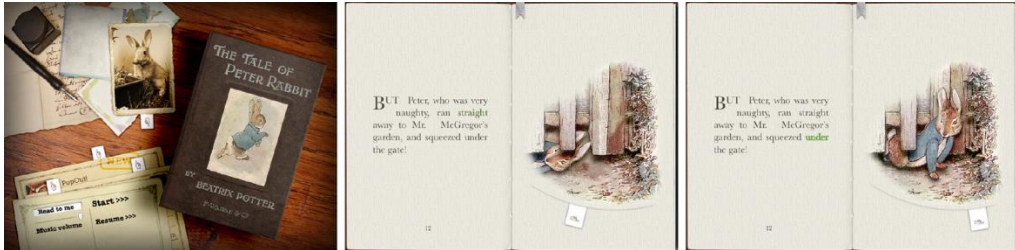


Figure 15. Screenshots of the App *Popout! Peter The Rabbit* on an iPad. Paper-Engineering Cleverly Adapted to the Screen. Download Full Version from iTunes App Store

Source: View video at <http://loudcrow.com/popout-the-tale-of-peter-rabbit/>

My collaborative 1982 pop-up book *The Naughty Nineties* was recently featured on Maria Popova's wonderful blog as animated GIFs: "And, hey, look—I made some animated GIFs of it (though they are no substitute for the analog-interactive real deal)" (Popova, Brain Pickings, 2013).



Figure 16. Screenshots of my 1982 Pop-up Book Concept as an Animated GIF on Maria Popova's Brain Pickings Blog

This brings me to another major connection between the traditional book and digitised versions on blogs. Traditional books are mined by Maria Popova from the New York Public Library archives and have a new life today online (see <http://brainpickings.org/index.php/2012/07/12/the-naughty-nineties-pop-up-book-for-adults-only/>). The seamless synthesis of old and new is characteristic of the ongoing future of the book, and there are massive international projects underway to digitise all books in print, such as the Internet Archive (<http://archive.org/web/web.php>) and Project Gutenberg (<http://www.gutenberg.org/>). As John Warren in "Innovation and the Future of e-Books" notes in his abstract:

The technological development and cultural acceptance of e-books today parallels the state of the printed book in the 15th century. E-books are increasingly available from a variety of distributors and retailers, and work on a myriad of devices, but the majority remain simply digitized versions of print books. Some devices or platforms include such tools as word definitions, highlighting, and note taking, but many of these tools simply mimic what students and researchers have traditionally done with printed texts. (Warren 2009, 83)

Preservation through time seems to be one of the most significant challenges for digital books. Kevin Herrera in his paper "Go, lovely Rose: On the Ephemeral Nature of Interactive e-Books" (2013) makes the very valid point that though attempts are being made to standardise eBook formats, digital information is highly susceptible to degeneration and obsolescence. The beauty of *multimodal* books however, is that they are relatively future-proof when they include a hard-copy archival book component.

Multimodal Digital Editions: Compared and Contrasted

The fixed format of an interactive PDF enabled students to maintain the well-thought-through design of their print document, reinforcing the findings of Jason Lisi that this format is an effective way of bridging the gap between traditional print and multimedia publishing (Lisi 2010, 45).

One or two of our students explored the pros and cons of different digital formats by including an EPUB with flowing text as well as an interactive PDF in their final submission. However the EPUB proved to be problematic in terms of maintaining the sound design principles that were preserved in a fixed format PDF.

Results and Student Feedback

An assessment requirement was a two-minute presentation of the bookwork in a summative assessment presentation. These added another presentation mode involving multiple semiotic systems—oral, gestural, spatial, linguistic and visual (see examples of presentations at

<http://goo.gl/Ffhcg>—James Smith, Julia Telford-Brown, Varnia Carter, and Marina Eichhorn, whose eBook *The Effects of Web 2.0 on Communication, Advertising and Graphic Design* can be downloaded from this site also).

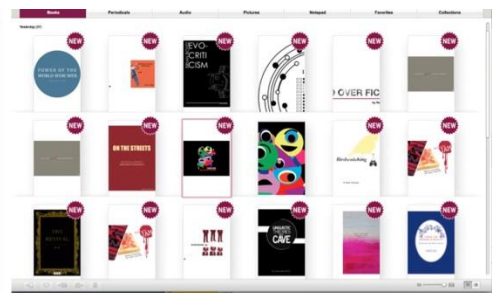
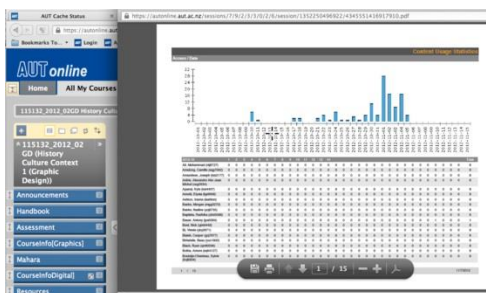


Figure 17. More Student Twenty-First Century Bookworks

Student presentations of work could be viewed, critiqued and communicated to their classmates in a manner that is not possible when they hand in their research as a traditional essay or hard copy bookwork.

In the written and collated student evaluation for the paper, feedback was very good overall, and the paper ranked among the top two for the whole degree. A high point in student feedback was their appreciation of practice-based integration of theory and practice. Students viewed the project as good industry preparation, as indicated in this email from one student: “I have learnt so much. The interactive PDF for the Bookworks was a challenge but I did it and have submitted. It is such an awesome tool to have learnt for the future” (Kirsty Randell, e-mail message to author, 12/11/2012).

The student pass-rate for the paper was 92% in 2012, which was a great improvement on the 80% pass rate the year before. This was at least in part due to the multimodal teaching approach, and the videoed lectures and demonstrations that were placed online for students to refer back to in their own time. Student viewing of these resources was tracked, and one of the sites where videoed lecture resources could be viewed showed that in the week before submission over 100 students accessed these instructional videos (Figure 18).



Figures 18. and 19. A Sample of Student Viewing Statistics for One of the Videos of a Recorded Computer Tutorial. Student eBooks Able to be Checked on Computer in Sony Reader App for Mac

Putting resources, equipment and software in place had a big part to play in the success of the paper. Though only a few students had iPads on which to view their work, a significant proportion had smart phones (and more students are likely to have iPads/smart phones as each year passes). To solve the problem of students without access to mobile devices needing to be able to check their interactive PDF/EPUB formatting, I arranged for the free *Adobe Digital Editions* and *Sony Reader* apps for Mac computers to be installed on all Graphics computers in the labs, and made sure at least one iPad was available in studios in a secure kiosk.

Curriculum Development

The majority of students (55 of 89 students giving 2012 paper feedback) wanted to continue the digital literacy initiative with iPads/mobile technologies in their second year of study. As a result, we built on the multimodal books in second-year teaching, by introducing an EPUB elective in 2013. This gave students knowledge of how to build fully-interactive digital publications from Adobe InDesign Digital Publishing Suite (DPS) and access to AUT's Adobe digital publishing license.

The key to maintaining a vibrant studio culture is learning to use all the advantages of digital technology to enhance and complement traditional skills and craft-based learning. Integrating online learning into physical studio and workshop spaces enhances the viability of the practice-based tertiary design degrees in the age of the MOOC (Massive Open Online Course). In graphic design there is a strong revival of craft running parallel to, and being incorporated into, the move to digital design. As Rosamund Davies writes:

In this context of technological convergence, the future of the book, like the future of other media, is cross or multi-platform. To exploit and innovate such platforms successfully, the book needs to be conceptualised as simultaneously content, interface, and platform: elements that can be articulated separately as well as together (Davies 2008, 52).

Multimodal literacy was encouraged, as well as traditional library research, and online resources were made available to students to facilitate research. Traditional literacy was reinforced with an online referencing test in the first semester, and students were required to reference their research essay within the bookwork itself, as you would find in a real-world publication. Lectures and resources on copyright in the digital age helped students become aware of professional protocols for copyright clearance in the publication process, and students had to create their own images rather than cut and paste from the internet.

A Gap in the Field

As the book moves into the future, exploring the transitional space between the traditional book and digital publication is an important concern for tertiary design pedagogy as book production in any format needs to be guided by aesthetic and design principles.

In terms of tertiary design teaching, the most successful and unique aspect of the AUT bookworks project seems to be in terms of a transformation of learning and teaching to include experimentation with combining old and new technologies, inclusion of multiple format outputs and a multimodal approach to the book, which extends the limitations and strengths of print, e-publishing, and traditional book arts. The other area of research and innovation is in terms of developing "multiliteracy," which is becoming a necessity in the twenty-first century. Anstey and Bull note that:

In the 21st century, the definition of literacy has expanded to refer to a flexible, sustainable command of a set of capabilities in the use and production of traditional

texts and new communications technologies, using spoken language, print and multimedia (Anstey and Bull 2010, 5).

Students in this research project were empowered with multimodal fluency and multiliteracies that prepare them for their future life as citizens, designers and creators. This is an important direction as the book adapts to the future. As Bill Cope and Mary Kalantzis observe: “[A]n enormous body of work has emerged around the notion of multiliteracies [...] a theory of representation in which transformation is fundamental and stability in the forms of meaning is almost invariably an illusion” (Cope and Kalantzis 2009, 191).

In his paper “Design and Craft—A Changing Relationship at the Heart of Design Education” Jüri Kermik also sees the combinatorial approach as a necessary direction:

This transformation of practices through a fusion of processes and methods associated with the industrial, digital and the handmade is an inherent part of changes in the value systems that engage with environmental concerns, the habits of consumption and the way objects and artefacts are made and produced. There is a challenge for the design education to engage with the process of change and to make its existing disciplinary structures compatible with real world transformations (Kermik 2012, 3).

The Book Business Today

The book continues to thrive in multiple forms. Richard Nash suggests that we should view the book “not as the antithesis of technology, but as apotheosis—in the avant-garde of how to apply advances in technology to produce new business models” (2013, 13). He recounts the story of the book as revolutionary, disruptive technology and suggests “the book is not counter-technology, it is technology, it is the apotheosis of technology—just like the wheel or the chair.”

Walk into the reading room of the New York Public Library and what do you see? Laptops. Books, like the tables and chairs, have receded into the backdrop of human life. This has nothing to do with the assertion that the book is counter-technology, but that the book is a technology so pervasive, so frequently iterated and innovated upon, so worn and polished by centuries of human contact, that it reaches the status of Nature (Nash 2013, 6).

I mentioned the New York Public Library earlier in this paper as a wonderful cultural resource where Maria Popova mines hard copy book treasures held in the library for visual and textual content, which she then renews in inventive ways, such as making animated GIFs of *The Naughty Nineties* pop-up book and posting these on her Brain Pickings blog. In this way the book takes on new life through digital distribution. This *adds* value rather than takes it away, as it directs the attention of a new and wider audience to a hand-assembled paper-engineered book published thirty-one years ago. She points out that the GIFs “are no substitute for the analog-interactive real deal” (Popova 2013), but pop-up books have a very limited viewing life because of the fragility of paper. However, they can reach a wide audience as animated GIFs, and the hard copy version increases in scarcity value. The price on Amazon of *The Naughty Nineties* as a second-hand out-of-print item increased ten-fold after her blog, and thus it becomes a niche-market collectors’ item. Just as the Gutenberg printing revolution “made books and other cultural artefacts abundant, digital reproduction makes them all the more so—not because it changes the resources required to create, but because it changes what is required to reproduce” (Nash 2013, 12). One-off and hand-bound or limited print edition books simply shift to fill a collectors’ market.

There will always be a place for innovative books, and new forms are constantly being marketed. Take for example the new 3D interactive Popar™ digital toy and book series that

spring to life in 3D, which are selling very well, and other forms of books, such as transmedia books, which have interactivity with their readers (using various techniques involving social media to permeate their daily lives).

In the field of educational books, major advances are being made. The award winning *Life on Earth* created by the E. O. Wilson Biodiversity Foundation is a new and comprehensive approach to the biology textbook, and features cutting-edge instructional media, such as interactive 3D models of chromosome replication, which present complex biological functions with unprecedented ease of understanding. It can be downloaded for free on to your iPad, and is a shining example of a multimodal iBook.

Conclusion

Good design is always in demand, and tertiary training needs to empower students with increased digital literacy and wide-ranging skills to fulfill this market need. Technology has democratised the book: “[B]ooks not only are part and parcel of consumer capitalism, they virtually began it. They are part of the fuel that drives it” (Nash 2013, 8). As Lindsay Tanner observes:

We’re living through one of the most extraordinary transformations in human history. More recent digital innovations, loosely grouped under the Web 2.0 label, are unleashing possibilities of interactivity, collaboration and creativity that were previously unimaginable. Gatekeepers and intermediaries are under siege as a digital tidal wave of disaggregation sweeps through existing structures. [...]. If universities don’t adapt, they will die (Tanner 2011, 1).

This research shows how, in a tertiary teaching context, old and new technologies can be used inventively in the creation of multimodal books that combine prized aspects of printed hand-bound books with the enhanced communication and reading potential of eBooks. Ways in which the traditional book might retain “value” are explored, and multimodal approaches are shown to effectively preserve, renew and re-invent the book as it morphs into the future. Changing environments require the application of graphic design principles in new ways, and also provide opportunities for new combinatorial approaches to learning, teaching, creating and making. If we can awaken our students’ curiosity and engagement with the world, they will become life-long learners, with rigour, passion, commitment and humanity, but, above all, with pride in standards as they journey to horizons we sense but do not know.

REFERENCES

- Anstey, Michèle, and Geoff Bull. 2010. "Helping teachers to explore multimodal texts." *Curriculum Leadership: An Electronic Journal for Leaders in Education* 8 (16): 164–195. Accessed July 11, 2014. http://www.curriculum.edu.au/leader/helping_teachers_to_explore_multimodal_texts.
- Benjamin, Walter. 1982 [1955]. "Theses on the Philosophy of History." In *Illuminations*, edited by Hannah Arendt. Translated by H. Zohn. Great Britain: Fontana/Collins.
- Breede, Manfred, and Jason Lisi. 2007. "The Accordion Book: An Old Idea Reinvented for Digital Printing." *The International Journal of the Book* 4 (1): 75–84.
- Cope, Bill and Mary Kalantzis. 2009. "Multiliteracies: New Literacies, New Learning." *Pedagogies: An International Journal* 4 (3): 164–95. doi.org/10.1080/15544800903076044
- Coiro, Julie, Michele Knobel, Colin Lankshear, and David J. Leu (eds). 2008. *Handbook of Research on New Literacies*. New York: Routledge. Accessed 11 July, 2014. http://vkc.library.uu.nl/vkc/ci/knowledgeportal/Lists/Document%20Library/Attachments/4/Handbook_of_Research_on_New_Literacies.pdf.
- Davies, Rosamund. 2008. "Narrating the Archive and Archiving Narrative: The Electronic Book and the Logic of the Index." *International Journal of the Book* 5 (3): 45–56.
- Debray, Régis. 2007. "Socialism: A Life Cycle." *The New Left Review* 46 (July–August). Accessed July 11, 2014. <http://www.newleftreview.org/?page=article&view=2676>.
- Foucault, Michel. 1982. *The Archaeology of Knowledge*. Translated by Sheridan A. M. Smith. New York: Pantheon.
- Herrera, Kevin. 2013. "Go, Lovely Rose: On the Ephemeral Nature of Interactive e-Books." *The International Journal of the Book* 11 (1): 22–38.
- Ingram, Mathew. 2011. "What Is a Book? The Definition Continues to Blur." 2014. Accessed July 11, 2014. <http://gigaom.com/2011/04/22/what-is-a-book-the-definition-continues-to-blur/>.
- Kaiser, Lesley. 2008. "Preserve, Renew, Invent [Light Bytes]: The Aphoristic Statement and the Future of the Book." *The International Journal of the Book* 5 (2): 125–132. <http://ijb.cgpublisher.com/product/pub.27/prod.226>.
- Kermik, Dr Jüri. 2012. "Design and Craft—A Changing Relationship at the Heart of Design Education, UK: University of Brighton." Accessed July 11, 2014. http://designedasia.com/2012/Full_Papers/DESIGN_AND_CRAFT.pdf.
- Lauer, Claire. 2009. "Contending with Terms: 'Multimodal' and 'Multimedia' in the Academic and Public Spheres." *Computers and Composition* 26 (December): 225–239.
- Lisi, Jason. 2010. "Media Rich PDF Publishing: Bridging the Gap between Traditional Print and Multimedia Publishing." *International Journal of the Book* 7 (2): 45–50.
- Lyon, Phillipa and Jonathon Woodham (eds). 2009. *Art and Design at Brighton 1859–2009: from Arts and Manufactures to the Creative and Cultural Industries*. Brighton: University of Brighton.
- Nash, Richard. 2013. "What Is the Business of Literature?" *Virginia Quarterly Review: A National Journal of Literature and Discussion (VQR)*. Spring: 89, 2.
- Owens, Brian M. 2007. "What Is Our Future: The Codex and/or Electronic Media?" The International Conference on the Book (B07) presentation abstract. Accessed July 11, 2014. http://b07.cgpublisher.com/proposals/74/index_html.
- Peters, Michael A. 2007. "Opening the Book: (From the Closed to the Open Text)." *International Journal of the Book* 5 (1): 77–84.
- PopOut! Peter the Rabbit—Lite app for iPad. Accessed 11 July, 2014. Download full version from iTunes App store or view video at PopOut! The Tale of Pete#801BFB.

- Popova, Maria. 2012. *The Naughty Nineties* animated GIFS. Accessed July 11, 2014. <http://brainpickings.org/index.php/2012/07/12/the-naughty-nineties-pop-up-book-for-adults-only/>.
- Tanner, Lindsay. 2011. "UNI 2.0: Will the Internet Kill the Universities," Chancellor's Lecture Series, The Hon. Lindsay Tanner. Tuesday 25 October, Victoria University, New Zealand. Accessed July 11, 2014. <http://vu.edu.au/sites/default/files/mcd/pdfs/LECTURE-Uni2.0-Will-The-Internet-Kil-Universities.pdf>.
- Warren, John W. 2009. "Innovation and the Future of e-Books." *International Journal of the Book* 6 (1): 81–94.
- Wilson, Edward O., Morgan Ryan, and Gaël McGill. 2012. E. O. Wilson's *Life on Earth*. Free download for iPad available at iTunes iBookstore. NC: Wilson Digital Inc.

ABOUT THE AUTHOR

Lesley Kaiser: Senior Lecturer, School of Art and Design, Faculty of Design and Creative Technologies, Auckland University of Technology, Auckland, New Zealand

The International Journal of the Book provides a forum for publishing professionals, librarians, researchers and educators to discuss that iconic artifact, the book—and to consider its past, present and future. Do the new electronic media (the Internet, multimedia texts and new delivery formats) foretell the death of the book? Or will they give us greater access, diversity and democracy?

The journal is relevant for anyone in the world of books—authors, publishers, printers, librarians, IT specialists, book retailers, editors, literacy educators and academic researchers. Discussions range from the reflective, reporting on research, history and theory, to the practical examination of emerging technologies, business models and practices of writing, publishing and reading.

The International Journal of the Book is a peer-reviewed scholarly journal.

ISSN 1447-9516

