Digital publishing in the South African trade sub-sector: Lessons to learn from disruptive technology

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Declaration of originality

I declare that the Master's dissertation, which I hereby submit for the degree MIS (Publishing) at the University of Pretoria, is my own work and has not been previously submitted by me for a degree at another university. Where secondary material is used, it has been carefully acknowledged and referenced in accordance with University requirements, I am aware of the University's policy and implications regarding plagiarism.

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ABSTRACT

The traditional print publishing industry has been faced with significant change over the past decade. Advances in technology have led to the increased digitisation of business processes, and have debatably brought e-books to the brink of the mainstream market. With the growing popularity of e-books in the trade market come several opportunities for publishers to expand, improve and differentiate their businesses. But publishers also face a very challenging time ahead to successfully implement digital publishing in their business processes.

This study examines the implications of digitisation and digital publishing on publishing business processes in the traditional print publishing environment. The research considers digital publishing as a disruptive technology in the publishing industry, and draws on the context and predictive value of disruptive technology theory. Disruptive technology theory examines why, when faced with a disruptive technology, some firms succeed in the marketplace, and others fail. The research applied the principles and predictions of disruptive technology theory to the publishing industry to develop a set of recommendations for publishers implementing digital publishing processes.

The research employed a mixed methodology design that included an extensive literature review and an online survey of South African book publishers. The literature provided an overview of the issues surrounding digital publishing, and the opportunities and challenges that publishers are faced with. Literature on disruptive technology theory served to establish trends in industries faced with disruptive technology, and uncovered recommendations for its successful implementation.

The researcher made use of an online survey that was sent to South African trade publishers that had already started experimenting with digital publishing in 2010 or 2011, or had plans to do so during the course of 2011 and 2012. The survey was designed to uncover the current state of digital publishing in the South African trade publishing industry, to discover the approaches that publishers are currently taking, and the barriers to implementation that they are experiencing.

The research confirmed that the current state of digital publishing in South Africa, and the problems that publishers are experiencing, are characteristic of industries faced with disruptive technology. The principles of disruptive technology can therefore be applied to develop recommendations and suggest strategies for publishers planning to venture into digital publishing.

Although the focus of the research was on South African trade publishers, the results and recommendations that emerged from the research can be applied to the wider international publishing industry.

KEY TERMS:

Publishing; digital publishing; e-books; disruptive technology; book publishing value chain; publishing business processes; resources; values; publishing environment

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CHAPTER 1

Introduction

1.1. Background

The hype surrounding electronic books (e-books) and digital publishing has come, gone, and returned with renewed vigour since the first e-book was published in 1971 by Project Gutenberg (Gordon, Kung and Dyck, 2008). In the years that followed many were certain that digital publishing meant the ultimate demise of the printed book and the book publishing industry as we know it.

A high point in e-book optimism was reached in 2000 following the electronic publication of Stephen King's novella *Riding the Bullet*. Over half a million copies were downloaded in the first month after its release (Humphreys, 2004). Excited publishers tripped over each other to start up their own electronic imprints and initiatives. Price Waterhouse Coopers predicted that by 2004, one sixth of the publishing industry would consist of e-books, while Arthur Andersen predicted over half of that market share (Humphreys, 2004). It soon became apparent that these speculations were grossly optimistic, and in 2008 Gordon, Kung and Dyck came to the conclusion that e-books would not exceed 10% to 30% of the total publishing market over the next decade (Gordon, Kung and Dyck, 2008).

This study was undertaken during 2011. At the time, e-books had not come close to usurping the printed book as early fear mongers had predicted. However, technological development – and its market uptake – has been advancing at such an astounding rate that the possibility of a dominantly digital publishing industry does not seem as far-fetched today as it did only a few years ago. Nothing illustrates this as well as Amazon's revelation in July 2010 that the company was selling 180 e-books for every printed book (Teather, 2010). This was quickly reinforced in November 2010 by the news that the international e-book market had reached 1 billion dollars (Gobry, 2010).

Despite these promising reports, the future of digital publishing is still highly speculative: it is not clear when and to what extent publishers will move into digital publishing or if and when the market will truly embrace e-books. This is especially the case in South Africa, where the tiered economy and adolescent infrastructure add more levels of complication to the mix than in First World countries. South Africa has very low Internet access rates among the majority of the population – and where it is accessible, broadband is very expensive and slow (Rasool, 2010). Considering these two substantial barriers to market penetration, it is hardly surprising that local publishers have been more hesitant than their international counterparts to jump on the digital bandwagon. With a few exceptions, large local trade publishers seem hesitant to embrace digital technology. Ben Williams, editor of Book Southern Africa (an online news source and social network for South African books and publishing), says the market for e-books in South Africa is virtually non-existent, mainly because there has so far been no secure method of distributing e-books to computers and other reading devices; but he believed this would change in the years following 2009 and he predicted a steady growth curve for e-books sales (Engelbrecht, 2009). BMI-TechKnowledge MD Denis Smit agrees with this prediction and says that with increased broadband capacity, lowering costs and new connections such as the Seacom cable for example, market penetration will increase significantly over the next ten years (Rasool, 2010). Internet bookseller Kalahari CEO Michael Hadfield agrees that the popularity of e-books will grow as content becomes more available and e-book readers become more affordable (Rasool, 2010).

The Publishers Association of South Africa (PASA) included in their annual industry survey of 2010 and 2011, data on the sales of electronic books in terms of the number of e-book participants, the number of titles made available, and the revenue generated by these sales (PASA, 2012).

Figure1.1. E-books sales profile in South Africa (PASA, 2012)

E-books profile Comparative activity profile	**General trade**	**Religious trade**	**Education**	**Academic**	**All sub-sectors**
Number of survey participants	15	6	20	9	50
Number of e-book participants	5	2	3	1	11
Number of titles available	876	315	287	5	1,483
Total net turnover	R 1,036,000	R 200,000	R 216,000	R 693,000	R 2,146,000

According to this data the total net turnover of the general trade e-book industry in South Africa was R1,036,000 in 2011 (PASA, 2012), compared to R102,000 in 2010 (PASA, 2011). In comparison, the total net turnover for locally-published general print books in the same year was R477,723,000 – comprising all local trade titles including religious titles. From 2012 onwards PASA will be able to track the growth of the digital publishing industry, providing a welcome research tool for academics and industry professionals.

It is not the purpose of this study to speculate if (or when) digital publishing will eventually render print publishing obsolete. What is of interest, is how South African trade publishers perceive the future of digital publishing, and what steps they are taking to prepare themselves for it. The PASA statistics discussed above show that not many e-books are in circulation yet. Yet publishers cannot afford to ignore the vast opportunities created by digital technology, especially in terms of new marketing and distribution models. Guenette et al. (2010) believe that, for publishers and their technology and service partners, the challenge of the next few years will be to invest wisely in technology and process improvement while simultaneously being aggressive about pursuing new business models. Most have realised this by now, but it seems that many publishers are still ignoring e-books, and have failed to incorporate digital technology into their business practices.

When considering the changes necessitated by the digital developments in the publishing industry, it is constructive to consider digital publishing as a potentially disruptive technology. Harvard Business School professor Clayton Christensen first coined the term disruptive technology in his book, *The Innovator's Dilemma: When new technologies cause great firms to fail* (Christensen, 1997). Since publication, his book has sold over 200,000 copies and has become a favourite source for scholars researching a variety of diverse fields, such as new product development (NPD), marketing, strategy, management, technology management, and any area of industry affected by changes in technology (Danneels, 2004).

If digital publishing can be considered as a disruptive technology in the publishing industry, publishers will need concrete data and guidelines to formulate strategies and business processes to deal with this disruption. This study will investigate the correlations between disruptive technology theory, firstly to establish whether digital publishing can be considered a disruptive technology, and then to apply the principles of disruptive technology theory in developing recommendations for publishers going forward.

1.2. Research problem and questions

1.2.1. Focus of research

The main objective of the research will be to investigate the current status of digital publishing in the South African trade publishing industry. The focus of the research will be on the digital publishing strategies of local South African trade publishers, but will also look at the way the digitisation of various publishing processes has changed the publishing value chain. The study will also look at how publishers are using Internet communications channels (websites, social networking, etc.) in their businesses.

For the purposes of this study, digital publishing will be treated from the perspective of a disruptive technology. Disruptive technology is a technology that initially serves only a niche market, but eventually displaces the current technology in the mainstream market (Christensen, 1997). This concept will be used as a theoretical framework for this study.

Within this context, it will be beneficial to examine how traditional print publishers in South Africa view the increasing prevalence of e-books, as well as if and how they are adjusting their business models to ensure their survival. Two factors that become pivotal in a company's ability to survive disruptive technology, are the resource allocation process; and the "RPV" framework – organisational resources, processes, and values (Danneels, 2004). This study will examine publishers' efforts to adjust these processes to rise to the digital publishing challenge.

1.2.2. Research question and objectives

The main research question can be formulated as:

"How do trade publishers in South Africa (1) perceive and (2) utilise the opportunities and challenges presented by digital publishing?"

In order to answer this question, the research will entail the following objectives:

1. Analysing the current digital publishing environment in the South African trade publishing industry.
2. Determining the challenges, opportunities and barriers pertaining to digital publishing that South African trade publishers are experiencing.
3. Investigating the use of the Internet and new communication channels within South African trade publishing companies.
4. Considering digital publishing within the framework of disruptive technology theory.
5. Developing a model of requirements and objectives for publishers to successfully assimilate digital publishing in their business practices.

1.3 Methodology

The research approach consisted of a combination of descriptive, exploratory and explanatory research methods. Data was collected and analysed using a mixed method of data collection, in order to profit from the benefits of both qualitative and quantitative methodologies.

The data obtained by these methods served to firstly *describe* the current digital publishing environment to meet research objectives (1) and (3):

> 1. Analysing the current digital publishing environment in the South African trade publishing industry.
> 3. Investigating the use of the Internet and new communication channels within South African trade publishing companies.

Exploratory and explanatory research approaches were used to discover the issues underlying the results of the descriptive research. This was necessary to address research objective (2):

> 2. Determining the challenges, opportunities and barriers pertaining to digital publishing that South African trade publishers are experiencing.

The philosophical perspective inherent in the research was interpretivism. Data was not deducted and analysed in isolation. Knowledge was obtained through interpretation and social construction, using qualitative methods of data collection and analysis.

The research method thus consisted of a mixed methodology. A mixed method approach is very efficient in that it can combine the advantages of both methodological approaches – qualitative and quantitative – to achieve high quality results (Leahey, 2007). Morse (1991) states that some quantitative data could be "embedded" into qualitative design. It is therefore useful to combine qualitative and quantitative methodologies using "concurrent nested strategy", where both quantitative and qualitative methods are used, the one "nested" in the other.

Quantitative and qualitative data collection methods were used to collect and analyse the data. Firstly a thorough literature review was undertaken of the topics central to the research objectives. A publishers' survey with questions that emerged from the literature was then completed by a sample of publishers. Semi-structured interviews were conducted to build on the data that emerged from the survey.

The findings of the literature review, and the results of the survey and semi-structured interviews were analysed to gain insight into the current status of digital publishing amongst trade publishers in South Africa. During data analysis, digital publishing was viewed as disruptive technology. Data was analysed qualitatively within the context of disruptive technology theory to answer research objectives (4) and (5):

4. Considering digital publishing within the framework of disruptive technology theory.
5. Developing a model of requirements and objectives for publishers to successfully assimilate digital publishing in their business practices.

Disruptive technology theory sets out to analyse the methods companies use to cope with technology disruption. Christensen (1997) found that large, established companies ("incumbents") usually struggle to adapt to integrate new technology, while new entrants flourish. In the case of the publishing industry – faced with technology disruption in the form of digital publishing and new Internet communication channels – disruptive technology theory can be applied to study the response of traditional print publishers (incumbents) and new small publishing companies (new entrants) to new technology in the publishing industry. Reliability was tested using *alternate-form* reliability and *inter-observer* reliability, while validity was tested for *face validity* and *content validity* as defined by Litwin (1995).

1.4. Definitions of key terms

1.4.1. Traditional publishing

In order to understand the effects and implications of implementing digital publishing in a company, one needs to be familiar with the steps and role-players in the traditional publishing process. The following diagram, adapted from Van Rooyen (2005:307), summarises the steps and role-players involved in the traditional print publishing process (see Figure 1.2 on the next page).

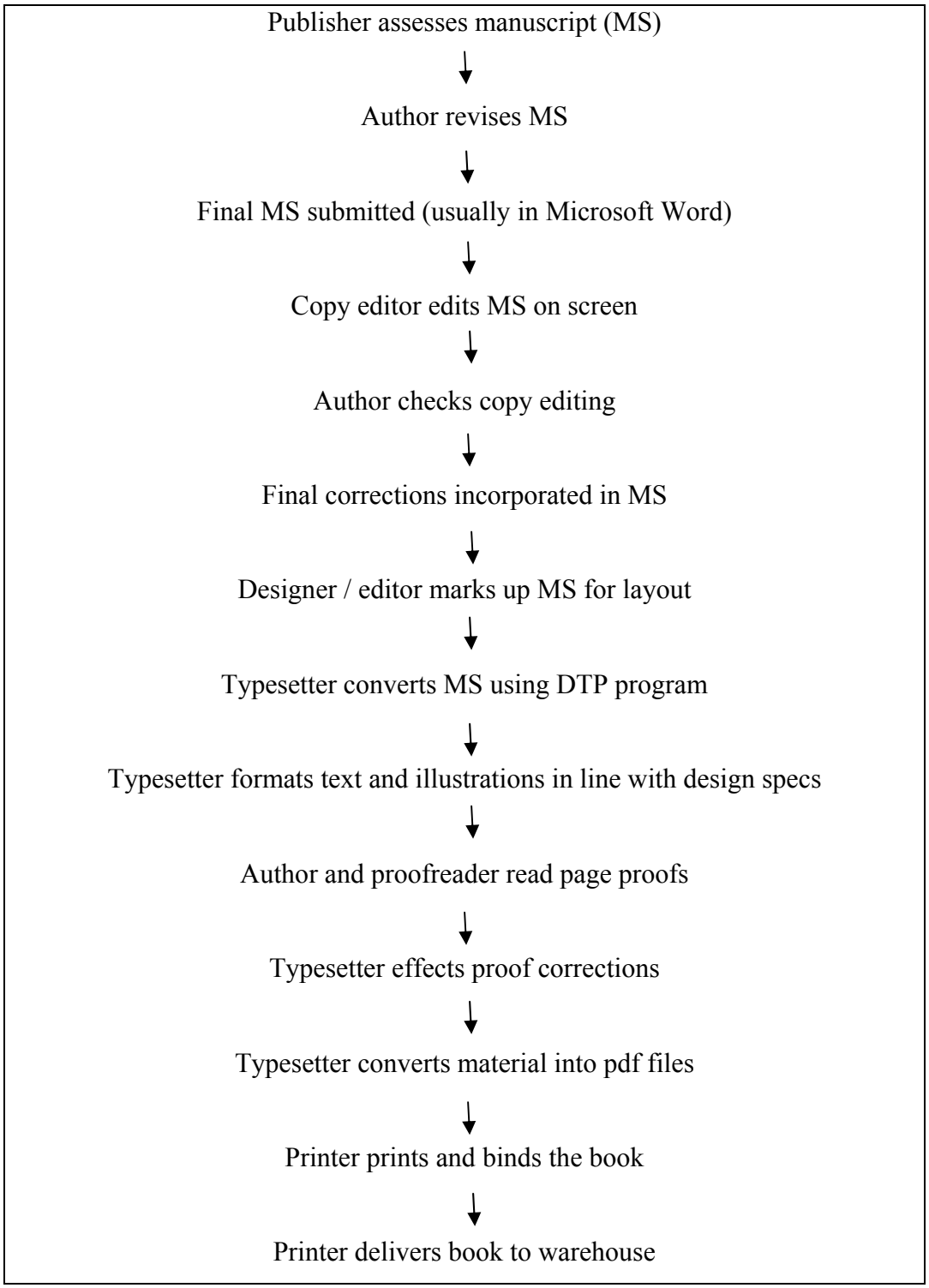
A number of the steps in the production of a book as shown in Figure 1.2. have already been significantly influenced by digital technology. At first glance, the changes to these processes might seem superficial, relating only to digitisation of processing. However, on closer inspection, while most of the steps and processes can be enhanced by new technologies (using Internet communications channels and applications), others would change drastically when publishing an e-book. These changes will be discussed more thoroughly in Chapter 5 (Discussion and Conclusion).

1.4.2. Trade publishing

For the purposes of this study, trade publishing refers to the publishing of books for the general market, that is, not for a specific or a niche market. These books include fiction (novels, storybooks for children, comics, etc.) as well as non-fiction (cookbooks, self-help, DIY, coffee-table books, etc.).

Publishing for the educational and tertiary academic markets was not considered in this study.

Figure 1.2: The publishing process



(Van Rooyen, 2005:307)

1.4.3. Digital publishing

The term "digital publishing" is used quite freely and vaguely in this age of digitisation. It can refer to the physical act of publishing digitally, as well as to the digital processes that are used in the pre-production stages of the publishing process, such as the editorial and reproduction stages. The lines between these digital publishing definitions are becoming ever more blurry as the digitisation of processes and content becomes more prevalent from the very start of the publishing process.

In the context of this study, the term "digital publishing" will refer only to the physical process of publishing a book by digital means to be consumed electronically and read on a computer, tablet, smart phone or dedicated e-reading device.

1.4.4. E-books

In the context of this study, the term e-book refers to any electronic book published on a digital platform to be read on an electronic device such as a computer, a tablet, a dedicated e-reader or a smart phone (the term "m-books" is thus subsumed under the umbrella term "e-books" in this study). This ranges from a PDF (Portable Document Format) document to be downloaded from a publisher's website, to a Kindle e-book (Mobi format) downloaded from Amazon. Most other e-books exist in EPUB format, which works on most e-book readers and e-book reading software applications (Coker, 2010).

E-books have traditionally been defined according to the following criteria:

- An electronic book must have electronic text, which must be presented to the reader visually (Anderson-Inman and Horney, 1999).
- "The software must adopt the metaphor of a book in some significant way" (Anderson-Inman and Horney, 1999).
- "The software has to have a focus or an organizing theme" (Anderson-Inman and Horney, 1999).
- "When media other than text are available, they are primarily used to support or enhance the text" (Anderson-Inman and Horney, 1999).

This definition was, however, written over ten years ago. Since that time assumptions have changed about the e-book.

Vasileiou and Rowley (2008:359) offer a more updated two-part definition to define an e-book:

> An e-book is a digital object with textual and/or other content, which arises as a result of integrating the familiar concept of a book with features that can be provided in an electronic environment. E-books typically have in-use features such as search and cross reference functions, hypertext links, bookmarks, annotations, highlights, multimedia objects and interactive tools.

With the flexibility and interactivity that is now possible with e-books, it does not make sense to simply cram written content onto a digital platform. There is no reason for e-books to be inhibited by the same limitations as the printed book: Imagine "Art books with huge numbers of accessible images; architecture books with 3D plans of buildings; travel books with videos and interactive maps; children's books with games and characters who introduce themselves; and so on and on. The potential is vast" (Du Sautoy, 2010). For example, New Zealand's Kiwa International is using Apple's iPad as a platform for its child-targeted software. Their technology lets children interact with books downloaded on to the iPad by colouring in story characters and swiping words that are then repeated aloud (Brieger, 2010). Books with such an extent of enhanced capabilities beyond reading can be referred to as "enhanced e-books".

1.4.5. Digital publishing technology

Technology that makes digital publishing as defined above possible. This includes the software, web applications, and physical devices that are used in the process of creating, publishing and delivering an e-book.

1.4.6. Disruptive technology

A disruptive technology is a technology that initially serves only a niche market, but eventually displaces the current technology in the mainstream market (Christensen, 1997). Mainstream organisations respond to the demands of their current customers. They carefully

monitor this market, investing in areas where returns are high and markets are large (Lafferty and Edwards, 2004). Upon entry into the market, the products based on a disruptive technology meet the requirements of only a small market segment, which values certain dimensions of performance at which the disruptive technology excels (Danneels, 2004). Then, as R&D investments increase over time, the technology invariably improves to such an extent that it can eventually meet the requirements of the mainstream market, displacing products based on the current technology. The mainstream market in turn adapts to the new technology. In many cases, this displacement also translates into the displacement of "traditional" businesses that continue to focus on the traditional technology, and fail to invest R&D in the disruptive technology.

1.4.7. Internet communication channels

Any channel of communication hosted on or reliant on the Internet, that publishers can use to communicate with consumers: this ranges from email applications and websites to social network sites such as Twitter and Facebook.

1.4.8. E-commerce

E-commerce is a broad term used to refer to any commerce that is conducted electronically over the Internet; i.e., the selling and buying of goods or services through websites. E-commerce is applicable to publishing where books are sold over the Internet via online bookshops or a publisher's website.

1.5. Field and value of the research

The field of research falls under the broad scope of information technology and publishing studies, with aspects of business management, marketing, consumer studies and general business studies playing pivotal roles. Disruptive technology, a concept applicable to any industry affected by technology, will be applied to the trade sector of book publishing in South Africa.

Digital publishing and e-books have been topics of interest for over 30 years, yet e-books have not yet come anywhere near usurping the printed book. Explanations for this range from the lack of a good enough e-reader, to standardisation and rights issues, to lack of new skills and perspectives leading to poor resource allocation; but these reasons remain speculative nonetheless. In South Africa, there is a significant lack of research and empirical knowledge in this field. Publishers are at sea with no empirical knowledge to base decisions and e-strategies on.

With the industry now showing a renewed interest in e-books, mostly thanks to the greater market acceptance of e-readers like the Kindle and the iPad, it is expected that digital publishing will penetrate markets at an increased rate over the next few months and years. No publisher can afford to miss out on the opportunities presented by digital publishing and Internet communication channels. We need more insight in the industry into the local situation to successfully plan for the future. We need to identify barriers and challenges in order to learn how best to deal with them and turn the situation to our advantage. Thus, this study aims to uncover the opportunities and barriers that publishers face when devising their digital publishing strategies, and will also suggest strategies to help publishers stay abreast of the digital times.

This is especially important considering the effects that disruptive technologies have had on industries in the past, the most recent example being the shift from CDs to MP3s in the music industry. Cloud computing also presents a disruptive shift in this field, as music can now be stored in a virtual server, in a variety of formats. This technology has completely changed how music is released, distributed and stored – similarly to what we see happening in the e-book industry. It will be highly beneficial to look at the theory on disruptive technology to learn how businesses can best manage to deal with the changes and challenges inherent to the introduction of new technology in an existing playing field. The research will reveal some changes and innovation required in traditional book publishing models to successfully implement digital publishing and access new markets and distribution channels.

Tian (2008) comments on the need for research into the transitional phase from traditional to digital publishing. She says of the Australian book publishing industry: “There is no dominant trend in digital publishing nor any detailed analysis of its limitations and challenges for the Australian book publishing industry” (Tian, 2008). There are no clear guidelines

regarding the selection and implementation of the significant new technologies that are available to publishers. Digital technologies such as e-books are predicted to have a profound effect on publishing, but are yet to impact seriously on the industry. With the emerging transition from traditional to digital-based processes, business models will need to be revised to encompass new value-adding processes as supply chains and value chains undergo change. However, there is still no general consensus on a business model or framework that can be proposed for commercial publishers (Tian, 2008).

This is even truer for the South African publishing industry, where there has been next to no research into the field of digital publishing and no standards for implementation exist. This study will be a first in the South African academic sphere of publishing, as there has been no prior research on the specific topic of local digital publishing for the South African market. The application of disruptive technology theory to publishing business models will not only be beneficial to the international and South African publishing industries, but will also provide the backdrop for further cross-disciplinary research where theories from one academic field can be used to enrich others.

1.6. Limitations of the research

Three main limitations were problematic in the research. The first pertained to the lack of local sources for secondary and tertiary research, the second to the timeline and the quick-changing nature of the digital publishing industry. The third limitation arose due to companies' protectiveness of strategic information and their reluctance to share such sensitive information. These three limitations are discussed below.

The secondary research (the literature review) is limited in its application to the local South African publishing industry. The main sources for the literature review were taken from international journals, and were in most cases applicable to specific regional contexts, such as the United States, the United Kingdom, South Korea and Australia. As such those results could not necessarily be safely translated into the South African context, where the economy, infrastructure, and market are significantly different.

Very few academic sources on the topic of digital publishing in South Africa could be found. General sources (online newspapers and blogs for example) were easier to come by. In these cases the same author names tend to crop up throughout the local literature, possibly providing a biased and one-sided view of the situation.

The rate of change in the digital publishing realm (internationally and locally) has proved to set a severe limitation on the research. It has prevented the research from presenting an industry snapshot that would be 100% relevant for an extended period of time. Since the start of the research in 2010, e-reader technology has improved significantly. New e-readers have entered the market with improved capabilities and features. Market-share figures have changed and new digital publishing initiatives have surfaced in the industry. With this in mind, the focus of the research has been on the theoretical underpinnings and universal conclusions; not on specific readers, companies or technologies.

Companies' protectiveness of their information also proved a limitation on the primary research. Especially seeing as many of the questions posed to participants dealt with strategic policies for the future, participants were hesitant to provide detailed answers and were often quite vague in their responses.

1.7. Division of chapters

Chapter 1: Introduction

The introduction provides a brief overview of the background of the study and outlines the research problems and questions. The methodology is introduced and briefly justified. A list of definitions for key terms is provided to ensure clarity and consistency throughout the work. The field and value of the research, as well as its limitations, is discussed briefly for the sake of objectivity.

Chapter 2: Literature Review

The literature review focuses on the evolution and current state of e-books and the digital book publishing industry, and the nature and effect of disruptive technology on industries. The history of e-books is touched upon, followed by an in-depth analysis of the advantages

and disadvantages of e-books discussed in the literature. Christensen's concept of disruptive technology is laid out and its characteristics compared to the changes experienced in the publishing industry. A small selection of South African sources is discussed as very few relevant articles could be found on the subject in question.

Chapter 3: Methodology

The methodology chapter provides an overview of research approaches (descriptive, exploratory and explanatory) and motivates the use of a mixed combination of all three approaches. Qualitative and quantitative research methods are discussed and the choice of aspects from both methods is justified.

Three philosophical research approaches are discussed: positivist, interpretive and critical. Although these three methods are inherently different, all three allow the use of both qualitative and quantitative research methods. The advantages of using a mixed method approach is discussed to explain the need for using both qualitative and quantitative data collection methods, as well as both qualitative and quantitative methods of analysis.

The chosen methods of data collection, namely the literature review, publishers' survey and semi-structured interviews, are discussed. The methods of designing and implementing these methods are explained, as well as the qualitative and quantitative aspects of analysing the data.

Ethics, reliability and validity are briefly discussed to convey how the research was undertaken ethically, and to explain what measures were taken to ensure the reliability and validity of the results of the study.

Chapter 4: Data Analysis

The data analysis chapter takes a closer look at the results of the publishers' survey and the semi-structured interviews. The results of the survey were analysed to obtain information on the following factors:

Profile of respondent publishers, in terms of size and publishing activity

- Digital publishing activity, in terms of amount of books published and size of responsible business units
- Challenges, opportunities and barriers experienced by publishers
- Publishers' resources, values and processes
- Use of technology throughout business processes.

The semi-structured interviews were analysed to gain further insight into the issues that emerged from the analysis of the publishers' survey. The following issues were focused on:

- Changes in publishing processes faced with new technology
- Publishers' perceptions and attitudes towards the future of e-books in South Africa.

Chapter 5: Discussion

In this chapter, information and predictions that emerged from the literature review are discussed and compared to the results of the survey and interview results.

The size and scope of digital publishing activity in South Africa is discussed. A section is dedicated to discussing the changes that have occurred in the publishing industry since the completion of the survey, as the industry is moving at a very quick pace that requires constant updates. Changes to each business process in the publishing value chain are discussed, as necessitated by a move to digitisation and digital publishing. A careful look is taken at how publishers have so far embraced the opportunities of digital publishing, and how they have changed each aspect of the publishing process to accommodate these changes.

The strengths, weaknesses, opportunities and threats experienced in the publishing industry are discussed as these emerged from the literature review and the empirical research. This leads to a discussion of the digital publishing challenges and considerations that publishers are faced with in a move to digital publishing. Publishers' perceptions and attitudes to the e-book industry in South Africa are discussed.

Digital publishing is then discussed as a disruptive technology. Firstly, it is established that digital publishing can indeed be considered a disruptive technology in the publishing industry. The factors that contribute to industry disruption are then considered within the context of the South African publishing industry. The predictive value of disruptive technology theory is then considered and a discussion of recommendations for managing digital publishing as a disruptive technology in the publishing industry follows. The focus is on resource allocation, processes in the publishing value chain and habit-forming values in publishing companies.

The chapter is concluded with a section of specific recommendations for publishers going forward with digital publishing in the South African trade market.

1.8. Conclusion

The purpose of this study is to provide the South African publishing industry with information on the current international and local trends in digital publishing, and to provide a theoretical framework to guide publishers in their transition from traditional print publishing to digital publishing. In order to do this, digital publishing will be considered as a disruptive technology, a theory that provides business models for industries where great technological shifts necessitate changes in business strategies and operations.

Although global trends have indicated that the market for e-books has been growing at a very fast rate, and will continue to do so, the situation is much more unpredictable in South Africa where the economic situation is very different and there is no empirical research to back up theory or assumptions.

The next chapter, the literature review (Chapter 2), will focus on disruptive technology, digital publishing and e-books, as these are areas where we have very little local empirical data at our disposal. The literature review will aim to establish the nature of disruptive technology and its application relevant to the publishing industry. It will also investigate the international trends in the e-books market, relating to what is available (content, format, devices, etc.) and what the advantages and disadvantages of e-books are – both to the consumer who is the end-user, and the publisher who creates the product.

The primary research will attempt to unearth an understanding of the current digital publishing situation in South Africa: what publishers are doing, trying and thinking for the future.

CHAPTER 2

Literature review

The literature was examined to gain insight into and provide context to two main topics: the evolution and current state of e-books and the digital book publishing industry – both worldwide and in South Africa specifically – and the nature and effect of disruptive technology on businesses. The literature established a background and context for these topics and helped to shape the research methodology. The knowledge that emerged from the literature review was essential in addressing the research objectives, as discussed below.

2.1. Overview of the evolution of the e-book industry

The literature review was used to understand and contextualise the evolution of publishing e-books, the different formats and platforms that exist, and the related barriers to implementation that both publishers and consumers are faced with. Understanding these issues is vital as a starting point to addressing research objective 2:

> 2. Determining the challenges, opportunities and barriers pertaining to digital publishing that South African trade publishers are experiencing.

The "lack of useful and reliable statistical data on the South African book publishing industry has been noted by various role-players" (Galloway & Venter, 2009). Due to the significant lack of South African-specific sources, the literature review covered mainly international sources to serve as examples to contextualise the South African situation as accurately as possible from a theoretical starting point.

Herther (2005) provides a succinct summary of the history of the e-book, from the first attempts at digital publishing to the e-book as we know it today on the Kindle, Nook and other readers. The initial hype that surrounded digital publishing peaked during the late

1990s – also called the dot.com years–a time when venture capital was readily available and hopes for Internet-based business were very high. Very optimistic e-book expectations prevailed for a few years, accentuated by selected success stories. Many articles mention *Riding the Bullet*, the novel self-published by Stephen King in March 2000 (e.g. Humphreys, 2004; Hyatt, 2003; Clark et al., 2008), which sold over half a million copies in the first month after its release. This, and a few other e-success stories, spawned many optimistic predictions about the impending boom of e-books. Looking back it is clear that 1999 and 2000 were "binge years" for electronic books and digital publishing. Authors started dabbling with using their own distribution channels and software tools online, publishers started e-book initiatives, and libraries experimented with lending e-books (Hyatt, 2003).

Booksellers and publishers like Barnes and Noble and Random House braved the new digital sphere by launching e-book imprints, encouraged by the lavish predictions of economists, who estimated that the e-book market would dominate as much as a third of the publishing industry (Humphreys, 2004). Compared to the optimism of the late 1990s, the early 2000s brought an emerging conservatism, concern and cynicism. With the dot.com bust came the realisation that the e-book market had failed to grow as expected. Initiatives were withdrawn and several businesses were closed down (Hyatt, 2003). For example, many e-book initiatives like the e-book provider netLibrary and e-publishing imprints (Random House, Barnes and Noble) were shut down (Hawkins, 2002; Humphreys, 2004). By 2003, many publishers had abandoned their short-lived digital imprints (Herther, 2005). By 2004, total e-book revenue was less than a tenth of what had been predicted three years earlier (Humphreys 2004:5).

Fast forward a few years, and we are today again faced with a high level of e-book optimism. In July 2010, Amazon revealed that the company was selling 180 e-books for every printed book (Teather, 2010). Not long after that, the publishing industry was surprised at the news that the e-book market had exceeded expectations and had reached 1 billion US dollars (Gobry, 2010). Even before these figures were released, publishers like Simon & Schuster, Penguin USA and the bookseller Waterstones had reported significant growth in their e-book sales (Neill, 2009; Wyatt, 2008). When considering the advantages and disadvantages of digital publishing to both publishers and consumers, the literature revealed many factors that have played a part in the publishing on the one hand and market acceptance on the other. These are discussed in detail under sections 2.3.1 and 2.3.2. The release of Amazon's latest Kindle and Apple's iPad definitely played a large part in reigniting e-book fever (Neilan,

2009; Neill, 2009; Wyatt, 2008; Reuters, 2010), suggesting that one of the most important factors that had been inhibiting the growth of the digital publishing industry was the lack of an e-reader sophisticated enough to entice readers to the digital realm.

Much of the literature paints a positive picture of the future of e-books: Publishers report that their sales of electronic books are growing exponentially. Simon & Schuster says its sales grew 40% in 2007 from 2006, and the figures are on the increase. David Shanks, the chief executive of Penguin Group USA, says his company sold more electronic books in the first four months of 2008 than in all of 2007 (Wyatt, 2009), and Waterstones claims that it sells an e-book every two minutes (Neill, 2009).

2.1.1. Size of the trade e-book market

In 2002, the Open e-book Forum conducted a consumer survey on e-books (Herther, 2005) that was distributed to consumers in America. The survey found that 70% of respondents would buy an e-book if it could be read on any computer. The survey also revealed the demographics of the e-book customer base to be very interesting. Initially, the audience mainly consisted of early adopters – libraries and other technologically savvy users like male "techies" (Herther, 2005). Since then, vendor reports indicate that the e-book audience has grown to include a far wider demographic. Many are of the opinion that younger Generation Y audiences, born between 1980 and 1995, will be increasingly more accepting of e-books. They grew up with computers and have a significant impact on growing global mass markets, leading in market growth for cell phones and other devices (Herther, 2005). These users grew up with technology and for them, the printed page is assumed to be less of an obstacle to overcome in accepting e-books. Michael Smith, IDPF Executive Director, says that awareness of e-books is starting to filter down to younger generations (Mussinelli, 2011). He makes the point that an important success indicator for the digital book industry is when the young (digital natives, as he calls them) start reading e-books for pleasure and not for school. The wider availability and improving capabilities of devices is creating better conditions for the development of a real market for e-books (Mussinelli, 2011).

In 2010, The Open e-book Forum conducted Outsell's Gilbane Group survey of 2010 (Guenette et. al, 2010), a publisher survey that aimed to establish the growth and size of the publishing industry. In sizing the international e-book market, Outsell found as follows:

- Educational e-book market: $1.8 billion or 11.5% of the global education book market.
- Professional e-book market: $1.3 billion or 10.5% of the global professional book total.
- Consumer (trade) e-book market: $1.5 billion or 4.2% of the global consumer book market (Guenette et. al, 2010).

This amounts to a total e-book market of roughly $4.6 billion. Outsell estimates that the global e-book market expanded by 48% in 2009. The dominant markets at this stage are the US and Japan, but the sources differ in their estimations of the sizes of these (Guenette et.al, 2010; Mussinelli, 2011). Guenette et. al (2010) estimate the size of the US e-book market at just over $3 billion, whereas Mussinelli (2011) provides a much lower figure of $0.6 billion. The Japanese e-book market is estimated at $0.48 billion in Guenette et. al (2010) and at $0.6 billion in Mussinelli (2011). These discrepancies in size estimations can partly be attributed to the difficulty of tracking sales of still loosely-defined e-books, where, for example, any electronic book-related product could be lumped into the e-books category in reporting sales. These loose parameters and definitions of e-books make it extremely difficult to control and track sales of actual e-books as defined in this study. The differences in figures could also be attributed to different times at which the information was gathered, and the different sources and statistics that the authors relied on in gathering their data. In coming years, actual sizes and growth of markets should become easier to track and figures more reliable as definitions and processes of sales, distribution and reporting methods stabilise in the global e-book market.

As predicted by the literature (Overdorf and Barragree, 2001; Herther, 2005; Humphreys, 2004; O'Leary, 2003), and as shown by Guenette et al. (2010), trade publishing has so far been the least affected area of the e-book market. However, sales figures from the online bookstore Amazon.com look promising for the future of e-books (Amazon, 2012). Since dropping the Kindle's price from $259 to $189, they have sold 180 Kindle books for each hardcover book. Popular authors like Stieg Larsson and Stephenie Meyer have sold more than 500 000 Kindle books (on Amazon.com), proving that there is indeed a significant market for trade books. Amazon also now has a "club" for e-book authors who have sold more than 1 million copies.

In Outsell's Gilbane Group survey of 2010 (Guenette et. al, 2010) the authors provide the following breakdown of trade titles available on the Kindle per genre, as found on Amazon.com:

Table 2.1.: Breakdown of e-book genres available on Amazon.com

Category	Number of titles	Category	Number of titles
Fiction	158,277	Kindle Default Dictionaries	15
Non-fiction	282,904	Lifestyle & Home	23,736
Advice & How-to	33,797	Literary Fiction	13,316
Arts & Entertainment	35,169	Mystery & Thrillers	20,678
Biographies & Memoirs	17,286	Parenting & Families	9,944
Business & Investing	36,399	Politics & Current Events	14,724
Children's Books	17,736	Reference	15,688
Comics & Graphic Novels	753	Religion & Spirituality	35,432
Computers & Internet	17,101	Romance	26,056
Cooking, Food & Wine	5,044	Science	42,115
Fantasy	7,293	Science Fiction	9,332
History	41,655	Sports	6,210
Humor	10,046	Travel	6,447

Source: Outsell Gilbane, 2011

The same online search undertaken in March 2012 showed an average increase of 153.30% across all categories (See Table 2.2 on page 28). These tables show that the number of e-books available on Amazon.com has increased significantly over all trade publishing categories. The genres that have shown the most significant growth are children's books (227% growth) and fantasy (296% growth). It is important to note, though, that one category (Comics and graphic novels) was removed between 2010 and 2012. Considering the growth of both the children's and fantasy categories, it is most likely that the comics and graphic novels category has been merged into those two categories; as comic books and graphic novels usually fall under either fantasy or children's books.

The categories that showed the least growth are literary fiction (8.7% growth) and computers and internet (64% growth). The majority of categories, however, showed a growth of over

100%. These figures show that the market for trade e-books is growing at an impressive rate, and bodes well for publishers aiming to start publishing digitally.

Table 2.2.: Breakdown of e-book genres available on Amazon.com 2010 and 2012

Category	Number of titles 2010	Number of titles 2012	Growth %
Fiction	158277	446085	181.84%
Non-fiction	282904	695244	145.75%
Advice & How-to	33797	94775	180.42%
Arts & Entertainment	35169	64644	83.81%
Biographies & Memoirs	17286	50930	194.63%
Business & Investing	36399	71000	95.06%
Children's Books	17736	58038	227.23%
Comics & Graphic Novels	753	Category removed	
Computers & Internet	17101	28093	64.28%
Cooking, Food & Wine	5044	13605	169.73%
Fantasy	7293	28892	296.16%
History	41655	94826	127.65%
Humor	10046	26554	164.32%
Lifestyle & Home	23736	64743	172.76%
Literary Fiction	13316	14482	8.76%
Mystery & Thrillers	20678	53820	160.28%
Parenting & Families	9944	24593	147.31%
Politics & Current Events	14724	28367	92.66%
Reference	15688	37862	141.34%
Religion & Spirituality	35432	110889	212.96%
Romance	26056	75900	191.30%
Science	42115	75286	78.76%
Science Fiction	9332	24443	161.93%
Sports	6210	17909	188.39%
Travel	6447	18813	191.81%

Source: Amazon, 2012

2.1.2. Overview of the international digital publishing industry

In the US, the publishing industry has embraced e-books. Publishers have effectively reacted to consumers' reception and fast-growing acceptance of new e-reading devices by constantly revisiting and expanding on the concept of e-books. The popularity of e-books is reflected by impressive growth rates. According to data from the Association of American Publishers, e-books sales in North America grew by more than 210% between 2010 and 2011, and in 2011 accounted for 28 % of all adult fiction and non-fiction sales in the US. According to the consultancy PwC, e-books will make up as much as 50% of the US book market by 2016, as readers will become more and more comfortable with reading e-books as e-readers become cheaper and easier to obtain (Cookson, 2012).

The main distributor of e-books in the US is Amazon; more than 70 % of e-book buyers use the store to buy e-book titles (Wischenbart, 2011).Amazon's strongest competitor is Barnes & Noble, with more than two million e-books available (Wischenbart, 2011).

In the UK, digital publishing is also growing at a very fast rate. In its annual report for 2010, the British Publishers Association (BPA) revealed rapid rises in digital sales figures (Wischenbart, 2011).The overall size of the digital market in the UK is around £180 million (British pounds), with an increase of 38%between 2009 and 2010. According to the BPA, academic publishers started publishing digitally before trade publishers did, mainly because many of the bigger scholarly journal publishers also happen to be the largest academic and professional publishers. The trade side started to grow significantly only after a local UK Kindle store opened in 2010, and with the arrival of the Apple iPad in the UK (Wischenbart, 2011).The main e-book distributors are Amazon, Overdrive, and the EBL e-book Library (Wischenbart, 2011).

Mussinelli (2011) provides a general overview of the digital publishing situation in Europe, and also discusses the trends, perspectives and applications of technological innovation at an international level. She stresses that information on e-book markets is still in a very early stage of development, making it difficult to assimilate data that trace the comparison of this emerging segment with the overall publishing industry.

The growth of Japan's e-book market is a good example to illustrate how the convergence of widespread device availability (in particular cell phones), broadband Internet connections with affordable rates and a wide catalogue of titles, can create a market in a quite short time (Mussinelli, 2011). Japan is the world's largest e-book market according to some sources, exceeding $0.6 billion. This example suggests that the affordability and prevalence of technology that allows easy access to e-books are the main drivers in creating e-book markets.

The situation in Europe is more unclear because the data are not yet collected in a standard way, neither at national nor at European level (Mussinelli, 2011). This makes it very difficult to compare the situation in different countries. In some cases, the data represent revenue coming not only from e-book sales but also from CD or DVD sales. Although these are also digital formats, they cannot be considered in the same product tier as e-books if accurate statistics on digital publishing as defined in this thesis are to derived. These reporting issues make it very difficult to generate an accurate, clear picture of the real state of the e-book market. In France, informal numbers estimate the sale of French e-books to have grown 2.5% in 2009 (Mussinelli, 2011). There are three main e-book publishers in France, who together offer about 62,500 titles, 40% of which are published in French (Mussinelli, 2011). According to Mussinelli (2011), only a few thousand e-readers had been sold in France by 2010, but no official data are available as stores and producers do not communicate their sales.

The e-book market in Germany is estimated to be less than 1% of the overall trade in books (Mussinelli, 2011). Of particular interest is the development and experience of Libreka.de, the German equivalent of Google Book Search. Libredka.de was created by the *Boersenverein*, which is the German publishers' and booksellers' association. Libreka brings together the products and services of over 1,200 publishers and 600 booksellers. It offers publishers a wide range of services: full range of DRM (digital rights management) solutions, full range of formats, and a full range of sales channels (central web portal (libreka.de), individual websites, brick-and-mortar stores). This is exactly the type of support and infrastructure that national publishing industries need to grow their e-book output and market share.

In Italy the e-book market is in an embryonic stage. In 2009 the market share was 0.03% and the estimates for 2010 were 0.1% (Mussinelli, 2011). Innovative small and medium publishers have announced that they would start publishing a wide range of e-book titles, both new and from their backlists. A consortium of three large publishers also announced the creation of Edigita, a distribution platform that will be used by the more than 40 brands owned by the publishers. Importantly, it will also be opened to all the others interested publishers. Again, this is the type of support network that nurtures the industry.

In Spain the e-book market is also very small, estimated at 1.3% of the overall publishing market (Mussinelli, 2011). Three Spanish publishers have launched an online e-book distribution platform similar to the German and Italian initiatives mentioned above. Almost 85 publishers are already on board and 22 agreements with online retailers are in place to sell the e-book titles in their stores.

Mussinelli (2011) states that the e-book markets in Europe are at the same point that the United Kingdom and United States markets were at a couple of years ago, and that they will follow the same route. The United States of America (including the Americas) today has an e-book market worth $0.6 billion. Mussinelli (2011) stresses the importance of collecting and sharing relevant, uniform and comparable data on e-book sales in different countries, in order to provide the international publishing industry with useful information on market trends.

2.1.3. Market acceptance

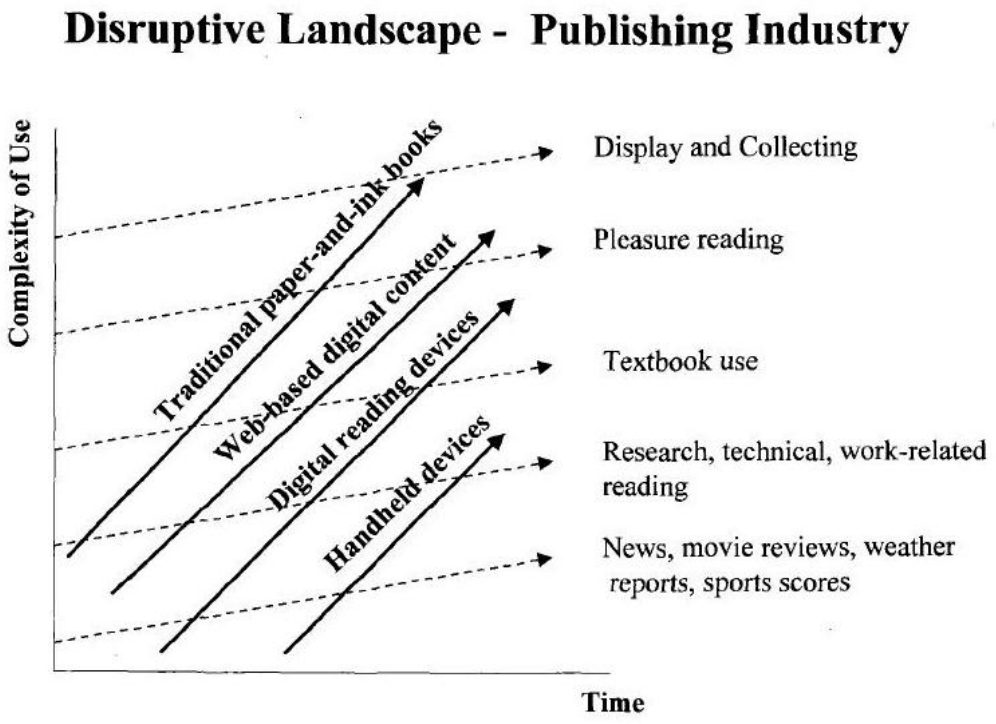
The future market share and acceptance of e-books will be determined by the combination of market acceptance on the part of consumers and implementation on the part of publishers and content providers. The interplay between content provision on the one hand and consumption on the other forms a symbiotic feedback loop that will determine the future of the digital publishing industry. Therefore it is vital to consider the advantages and disadvantages of e-books to consumers, as well as the opportunities and constraints experienced by publishers that venture into digital publishing.

When discussing market uptake of e-books it is also important to differentiate between “immersive” and “extractive” texts (Humphreys, 2004). Immersive texts, as the term suggests, refers to books that are usually read cover to cover, like fiction and general non-

fiction; books aimed at the popular market. Extractive texts on the other hand, include reference works and academic or professional books. Humphreys (2004) goes on to show that while the latter proves to be well suited for electronic publishing, this has so far not been the case with immersive texts.

Overdorf and Barragree (2001) discuss the potential encroachment of electronic publishing by analysing five levels or tiers of distribution (see Figure 2.3). The lowest tier represents the distribution of material like news, weather reports, and entertainment – a category very receptive to electronic distribution; moving upwards to material to be found in trade publishing, where electronic publishing is not taking off as it is in, for example, scholarly publishing.

Figure 2.3: Tiers of distribution in the publishing industry



Source: Overdorf and Barragree, 2001:13

O'Leary (2003) agrees that the most viable area for commercial advancement of e-book publishing was in the area of journals, magazines, and newspapers, whereas the general retail market seems to have the lowest potential for growth.

According to Outsell's Gilbane Group survey of 2010 (Guenette et. al, 2010), some segments of book publishing, which include STM (scientific, technical, and medical) and professional, reached the digital revenue tipping point long ago. The report concludes that other segments of the industry will start to tip soon too (Guenette et al., 2010).

2.2. Advantages and disadvantages of e-books for consumers

Publishers need to understand the needs of consumers before attempting to throw their hats into the digital publishing ring. The following advantages are identified in the literature as the main drivers for market acceptance on the part of consumers (Overdorf and Barragree, 2001; Burk, 2001; Clark et al., 2008; Danneels, 2004; Gordon, Kung and Dyck, 2008; Hyatt, 2003; Mierzejewska, 2008; Neilan, 2009):

- Convenience, ease of access and portability: In the case of dedicated e-readers, one can enjoy the luxury of always having one's library at hand for unforeseen reading opportunities. E-books can be ordered with the click of a button, providing immediate access and customer satisfaction.
- Improved access: the search and navigational functionalities of e-books improve the accessibility of the reading experience. For example, full-text searching and inter-relatedness with other reference materials such as dictionaries.
- Durability: Damage and depreciation are no longer an issue.
- Access to a wider range of independent, self-published material: Publishers no longer have exclusive control over what is published and what not. Authors can self-publish freely. While this is an advantage to consumers, it is detrimental to publishers.
- Environmentally friendlier than print: The reduced need for printing eliminates paper waste and reduces carbon emissions during one stage of the publishing process. The distribution process may also have a lower carbon footprint.
- Fewer disadvantages than physical books. Physical books are "far from ergonomically and aesthetically perfect: people with vision problems, motor-coordination problems and wrist-strength problems have significant reading challenges with physical books" (Hyatt, 2003: 128). E-readers have built-in features that resolve these issues. For instance, font size is adjustable on most e-reading devices. Most also include a text-to-speech feature for people with vision problems.

Despite these enticements, consumers face many barriers that might discourage them from buying e-books:

- Digital Rights Management (DRM): In an attempt to prevent piracy and copyright violation, publishers are implementing austere DRM measures that place strict limitations on how consumers can use e-books (Burk, 2001). For example, territorial rights – which are one aspect of copyright – limit the availability of a title to certain territories only. This means that users in one country, South Africa for example, might be prohibited from downloading certain books published in the United States or the United Kingdom.
- Pricing: The expensive price tag of e-books on the one hand, and the inconsistent standard of e-book pricing on the other, remain a big problem for consumers. Pricing has to be set which balances profits against acceptable price points for users (Herther, 2005). The current price of e-reading devices also presents a barrier to mainstream consumption. According to Marsh and Prodhan (2008) and Mahlong (2009) the current price tag that comes with e-readers will prevent them from becoming mainstream, especially in the current economic climate.
- Lack of a standard format: A variety of competing e-book formats exist, with no standard. Without standards, users must not only choose titles and devices to read them with, but they must work to become comfortable with the limits and imposition imposed by each system (Herther, 2005). Each e-reading device comes with its corresponding e-book format, for example, e-books in Mobi format can only be read on a Kindle.
- Lack of a standard e-reader: “No iPod for books exists yet” (Neilan, 2009). The industry needs a device that does for e-books what the iPod did for music: make them easily downloadable and completely portable (Mierzejewska, 2008). E-reading devices are not sophisticated or cheap enough yet to strike a fair balance of price and value for money. Although it is by far the most popular e-reader in the market at the moment, not even the Kindle is affordable enough, user-friendly enough, and flexible enough to break barriers yet.
- Nostalgia for print: The limitations of the e-reading experience compared to the traditional experience of reading a print book remain one of the biggest barriers to mainstream adoption of e-books (Clark et al., 2008). Readers are still mentally

enamoured of the idea and experience of reading traditional print books – touching and smelling the book, turning its pages and feeling the weight of it in their hands.

- Depreciation: Depreciation and damage of physical books is no longer an issue, but e-reading devices are most certainly vulnerable to depreciation. The current rate of technological improvement and growth of e-readers means that devices and formats might outstrip current standards, potentially rendering current e-books unusable on new devices.
- Selection: A limited selection of e-books is available at the moment. Few trade publishers produce e-books and those that do are focusing on their front list. Few backlist titles are available, with the exception of classics and popular classics (Neilan, 2009).

The factors listed above are problems that publishers, booksellers and other industry professionals will have to overcome if they are to break into the mainstream market with their digital publications. These are discussed in more detail in section 2.3.2., from the perspective of both publishers and consumers.

2.3. Advantages, disadvantages, opportunities and threats of digital publishing experienced by publishers

The literature provides an in-depth assessment of the various advantages and disadvantages involved in adopting a digital publishing process. A thorough discussion of the points raised in the literature follows below.

2.3.1. Opportunities and advantages

A. Shortened production line and supply chain

Digital publishing eliminates the need for warehousing and shipping. In traditional print publishing, publishers follow a "print and distribute" model. This involves publishers estimating the number of copies required, and then printing and shipping them to distributors, booksellers, and warehouses. This system translates into significant shipping and warehousing costs, as well as the cost of return shipping unsold books (Hyatt, 2003).

Due to the impact of the World Wide Web, the publishing distribution model has been "freed from the shackles of print and paper" (Carreiro, 2010). With a move to digital systems, the publishing industry's traditional supply chain will become faster and shorter, and the associated costs (of mainly distribution and warehousing) will be proportionally less. This will lead to an overall increase in returns for publishers and authors. This in turn should translate to cheaper prices of e-books and e-readers for consumers (Carreiro, 2010).

With e-books, the entire process is changed, in effect eliminating two steps of the supply chain (printing and warehousing) and significantly simplifying another (distribution). Distributors and e-booksellers are now able to "stock" e-books without having physical copies taking up warehouse space. An e-book can be available on a bookseller's digital shelf on the same day as it is published and can be sold to users at the click of a button.

B. Blurring of boundaries: New marketing and cross-merchandising opportunities

Digital publishing has brought with it a blurring of boundaries in the division of labour that has developed over centuries of technological advances related to the printed book (Hyatt, 2003). Publishers can become their own booksellers via the web, while authors can aid publishers in marketing their titles online: e.g. through blogging, tweeting or advertising on Facebook (Hyatt, 2003). If used strategically, this blurring of boundaries can help identify and access new markets directly. However, inherent in the scenario is also the fact that publishers lose control over content; and can even become redundant if authors choose to take the entire publishing process on themselves.

C. Greater flexibility and creativity of books

The potential for new, creative content, flexibility, and interactivity of e-books is vast (Du Sautoy, 2010). E-books need not be inhibited by the constraints of the traditional printed book: with new technology available to them, publishers can experiment and create books with capabilities and features that a paperbound book could never allow, for example children's books with games and characters who introduce themselves, art books with accessible images; architecture books with 3D plans of buildings; and travel books with videos and interactive maps.

2.3.2. Disadvantages

A. Copyright and Digital Rights Management (DRM)

The barrier presented by copyright issues is widely discussed in the literature (see Gordon, Kung and Dyck, 2008; Clark, 1996; Page, 2009; Neilan, 2009; Nichols, 2009). Copyright in the case of traditional print books is more difficult to subvert and easier to enforce than with digital books. Photocopying a hard copy novel, though it might happen, is not as practical or nearly as easy as downloading a pirated copy of an e-book, which takes no more than a click of a button. Territorial and distribution rights become difficult to enforce. Understandably, authors and publishers are wary of the implications for their intellectual property and are reluctant to make digitised content readily available until technology can provide adequate protections.

Publishers say that there is a concern that the improving quality of e-book devices will make piracy easier and more appealing (Italie, 2009). In an attempt to have control over their content, publishers have turned to DRM.

DRM and encryption place strict limitations on how consumers can use e-books. Burk (2001) argues that publishers' unwillingness to give users the same rights they would have with print books has proved a significant limitation in the growth of technology. Publishers seem to be so afraid of digital piracy that they are insisting on a level of DRM that places severe restrictions on how readers can use the books they buy. This makes it almost impossible for e-books to succeed in the marketplace (Burk, 2001).

In 1999, the Open e-book Authoring Group (which includes large e-book manufacturers, a a few major publishers, and Microsoft Corporation) released Open e-book Specification OEB 1.0, which was based on Extensible Markup Language (XML) (Rao, 2001). Open e-book Specification OEB 1.0 did not support any non-OEB format, and did not reduce problems with DRM or copyright protection (Rao, 2001). Since the Open e-book Forum first formed, standards in electronic publishing have come a long way. The Open e-book Forum is now called the International Digital Publishing Forum (IDPF), and is at its core a trade and standards organisation for the digital publishing industry (International Digital Publishing Forum, 2011). The goals of the IDPF are as follows:

- "Promote industry-wide adoption of electronic publishing through standards development, conferences, best practices, and demonstrations of proven technology
- Develop, publish, and maintain common standards (e.g. EPUB) relating to electronic publications and promote the successful adoption of these specifications
- Encourage interoperable implementations of EPUB publications and reading systems and provide a forum for resolution of interoperability issues
- Identify, evaluate, and recommend standards created by other bodies related to electronic publishing
- Provide a forum for the discussion of issues and technologies related to electronic publishing
- Accommodate differences in language, culture, reading and learning styles, and individual abilities". (International Digital Publishing Forum, 2011).

The OEB was a forerunner to the Open Publication Structure (OPS) (International Digital Publishing Forum, 2011). The EPUB format is a file extension of XML, and currently has two more open standards other than OPS. These are Open Packaging Format (OPF) and Open Container Format (OCF) (International Digital Publishing Forum, 2011). With EPUB, publishers can create and send a single digital publication file through distribution. For consumers, the EPUB format has the advantage of allowing compatibility and interoperability between software and hardware for unencrypted, reflowable e-books.

Unfortunately, not all e-books and e-reader devices conform to the DRM standards that the IDPF has created (Carreiro, 2010). DRM controls at the moment are not standardised, not accessible enough and too expensive for most publishers (Attwell, 2009a). The lack of DRM standards is an issue that is inherently linked to the standardisation of formats. It creates many accessibility and flexibility issues for users, problems that ironically might encourage piracy in cases where users struggle with compatibility and accessibility of their e-books on their e-reading devices.

The challenge for publishers is to protect content and the rights of the content owner, while still giving users flexibility and ease of access; creating a system that is so acceptable to users that there is little incentive to cheat (Herther, 2005). Gordon, Kung and Dyck (2008) feel that

these issues need to be addressed before larger gains can be attained in the market acceptance of e-books.

B. Pricing

Lack of acceptable pricing and licensing mechanisms is also hampering the acceptance and growth of the e-book industry (Hyatt, 2003).

In 2010, large publishers' transition to the agency pricing model from the standard wholesale model sparked controversy in the publishing industry. This model allows publishers to set fixed retail prices on their e-books, not allowing agents like Amazon to lower the price. The obvious advantages of the agency model to publishers are that they gain a greater degree of control over e-book pricing, and large publishers now have a permanent advantage over smaller players on e-book margins (Shatzkin, 2010). However, the shift from the wholesale to the agency model has been challenged in a number of lawsuits, claiming that Apple and a number of trade book publishers adopted the agency model in order to force Amazon to abandon its low-pricing policies for e-books. At the time of writing, settlements in an antitrust lawsuit filed by State Attorneys General had been reached with publishers Hachette, HarperCollins, and Simon & Schuster about the prices of electronic books. A separate lawsuit with similar claims continues against Penguin Books, Macmillan and Apple (Kinsella Media, 2012).

Purcell (2010) feels that the skirmishes over e-book pricing demonstrate the lack of reasoned, long-term manoeuvring by publishers. Ultimately the sales price of one form of content monetisation (e-books) is not the critical concern – publishers should be more focused on developing the expertise to sell content in many different forms, at many different prices to different audiences. This might be more challenging than it appears, as there seems to exist a perception amongst consumers that a digital book should be significantly cheaper than its printed counterpart, as the printing costs are eliminated. Standardisation of pricing models would help put an end to this misconception. Tied to rights issues, pricing has to be set which balances profits against acceptable price points for users (Herther, 2005).

C. Software: Lack of a standard for e-book formats

The electronic reading experience is made up of a few components. The first is hardware, referring to the device on which the e-book is read, such as a desktop computer, a laptop, a tablet or a dedicated reading device such as the Kindle or Sony Reader (Hyatt, 2003). The second component is the software that the e-book is published in, for example EPUB, PDF, .mobi or AZW. The software facilitates the "searching, navigation, font appearance, functionality and presentation of information" (Hyatt, 2003).

One disadvantage that is wrought with speculation is the confusing variety of e-book formats and platforms available at the moment – sometimes referred to as the Tower of eBabel (Rothman, 2006).Lack of clear, industry-wide standards is a major obstacle for any product, especially with products that are distributed to the mainstream market, where mass consumption is the goal."As long as competing, incompatible standards exist, e-books will remain a small market" (Hyatt, 2003). Without standards, users are faced with strict limitations and restrictions related to the specific format they have chosen. Readers then need to make an effort to become accustomed to the limits and imposition imposed by each system (Herther, 2005). This in turn affects publishers. The formats that users choose directly impact the format that the producer (the publisher) must choose to ensure sales. Financially sustainable high performance electronic publishing can only take place within a framework of standards for content and structure, based on sound principles of information processing (Tian, 2008).

According to a 2010 survey that analysed 500,000 downloads on e-book vendor Smashwords' site (Coker, 2010), the three most popular e-book formats are PDF (Portable Document Format), EPUB (which works on most e-book readers and e-book reading software applications) and AZW (for Kindle), in that order. It is not surprising that PDF is at the top of the list. Adobe's PDF is a familiar, trusted product that works on most devices, computers and e-readers alike, and it is likely to remain the favourite until e-book formats are standardised. Reading a PDF on an e-reader is not ideal as the text is locked down and cannot flow in the same way as EPUB or AZW can. For example, the small screens of most e-readers necessitate that users have to constantly scroll right and down to view a page in its entirety.

Hillesund and Noring (2006) argue that the only way for e-books to flourish is for the acceptance of an open standard, fully cross-platform, end-user format. This also brings up another potential problem for consumers. At the incredible rate that technology is advancing, it might happen that a completely new, superior, standardised format usurps all others in the future. It is not unreasonable for consumers to fear that the digital book collection they build up over the coming years might be rendered unreadable in the future. In the domain of video hardware, when VHS entered the scene and challenged Betamax, VHS survived, and those who had purchased Betamax players were left with equipment that could no longer play the content being produced (Burk, 2001). In that case the problem arose not only due to a lack of compatible standards, but also because there was no natural "migration path" for the new technology to follow. As such it was more a question of the hardware becoming redundant. In the publishing industry, there will be more opportunity to create compatible versions of software that can be used when migrating to more advanced hardware (e-readers).

2.3.3. Consumer issues for publishers' consideration

A. Hardware: Device dilemma

The e-book industry has been trying to bring e-books into the mainstream for years, but hardware issues with the reader devices have held back significant market acceptance (Miller, 2006). Although this issue presents a more immediate problem to consumers and to hardware manufacturers than to publishers, publishers need to take the experiences and preferences of consumers into account when creating their digital products.

Burk (2001) discusses eight distinct features that should make dedicated e-readers attractive to the consumer:

1. Customisation of text, font size and display: A compelling feature for the sight-impaired.
2. Convenience: Readers can buy and download content in a matter of minutes.
3. Searchability: Keyword searching of electronic text is much more accurate and quick than searching through an index or table of contents.

4. "E-book devices can be loaded with dictionaries, which are linked to other content, so that any word within the text of an e-title can be tapped and its definition will appear on the screen" (Burk, 2001).
5. E-book reader software usually allows readers to make changes such as highlight, annotate, underline and bookmark, without doing any physical damage to the book.
6. Backlighting: Most e-readers have built-in backlighting or an adjustable light that makes it possible to read in the dark.
7. Endurance: E-books are not nearly as prone to physical damage as printed books.
8. Storage space and portability: A single hand-held device is very light yet can contain a book shelf full of books.

New e-readers with new technology and capabilities enter the market every few months. In November 2007, Amazon released its Kindle e-book reader, which was an immediate success: the initial release was sold out in five and a half hours (Clark et al., 2008).The Kindle differed from earlier e-readers like the Rocket e-book in the sense that it allowed for wireless download of content directly from an Amazon account. This vital factor added the significant value of immediate gratification to consumers. Now, one could browse, buy and read in a matter of minutes. Add to that the technology of e-ink, which reads like paper, and the introduction of many new "next-generation e-readers", and the industry is theoretically not far from the elusive iPod for e-books. However, much of the literature evaluating such claims finds value in not focusing on the amazing strides in technology of e-readers, but on specific problems still experienced by users. Both media analysts and participants in studies report that while the technology is becoming more promising, the e-book reader still presents many obstacles (Clark et al., 2008).

A survey on consumer satisfaction conducted by Clark et al. (2008) concluded that users identified the following hardware and software alterations that would improve the Kindle Reader:

- Touch screen navigation
- Colour display and sharper display contrast
- Larger screen

- Back lighting
- Auto-scroll
- Higher screen resolution
- More graphic content
- More zoom and font size options.

Since the research was undertaken in 2011, several new readers have been released with improved capabilities and features (Anscombe, 2012). The latest generations of the Kindle "Kindle Fire" and "Kindle paperwhite" at the time of writing (Amazon, 2012) show vast improvements since 2008, and address most of the issues raised in the list above. For example, the Kindle Fire has a larger screen, back lighting, and more zoom and view options. The Kindle paperwhite has a touch screen, a built-in light, much sharper resolution and high contrast (Amazon, 2012). Beyond the Kindle, new e-readers have features that range from touch screens to colour ink, and the market is responding very positively to these devices (Anscombe, 2012). In 2011, 1.33 million e-reading devices were sold over Christmas in the UK.

Although the technology has improved in leaps and bounds since 2007, Clark et al. (2008) make the point that the difficulty of the e-book/e-reader designer is not purely technical: it is also pulled in different directions by the expectations of readers. Is the e-book intended to replicate the reading experience of the printed book, or should designers attempt to create a new reading experience? The Kindle has attempted to do the first, the iPad the latter. The goal is not quite clear yet for designers and publishers.

B. Emotional connotations and restrictions of the electronic reading experience

Regardless of the hardware sophistication or ease of use of hypothetical future e-readers, much of the literature still maintains that limitations of the e-reading experience remain the main barrier to mainstream adoption of e-books (Clark et al., 2008). Despite all the convenience and cost-related advantages of e-books, lovers of the printed book always return to the same basic argument: that e-books cannot compare to the smell and feel of a real book. That the reassuring weight of an old musty novel, and the emotions of sentimental bliss that it conjures, could never be replaced by a clinical digital publication. Forrester analyst James

McQuivey believes this argument will ultimately become irrelevant to publishers (Meadows, 2010). He posits that the real arena in which the e-book adoption battle will be fought is economic. Publishers make decisions based on production costs vs. revenues: "Sooner or later, they will begin making decisions based on e-books, and printed books will become a secondary consideration, in much the same way as CDs are a secondary consideration to the digital market now" (Meadows, 2010). According to him, the emotion that people associate with e-books is more about the idea of the book than the physical aspects. As people experiment with e-books, more and more of them will recognise this – enough to eventually change the economics of publishing.

It should also be taken into account that Generation Y (those born in the '80s and '90s) and the generations that follow are increasingly comfortable with computers and digital media – the uptake of e-books will be much easier for this generation according to some (Agee, 2003; Burk, 2001; Ronte, 2000). They grew up with computers and have a significant impact on growing global mass markets, leading in market growth for cell phones and other devices (Herther, 2005). It should follow that for these users, the printed page is less of an obstacle to overcome in accepting e-books. More research is needed to determine if this is indeed the case, as it is a controversial issue, with a complicated mix of factors involved beyond age. For example, some argue that the content of a book is the factor that ultimately decides how successful it is as an e-book amongst readers. Consider reference materials such as dictionaries and encyclopaedias, where the content changes so often that it is uneconomical to produce print books when the electronic format is an option.

2.3.4. Internet communication channels

It makes little sense to discuss digital books outside the context of the Internet (McAllister and Vivian, 2002). The Internet has had a major impact on content production and supply chain distribution in publishing (Tian, 2008).The new production and distribution opportunities afforded by the Internet have the potential to reduce distribution costs, establish direct one-to-one relationships between publishers and consumers, and connect consumers with a vast network of content sources throughout the world.

The vast amount of new Internet communication and networking platforms are changing the way companies interact with their customers. The print industry has already taken advantage

of the Internet's especially strong potential as a marketing channel (McAllister and Vivian, 2002). Authors and publishers are making good use of the Web's unique promotional capabilities: "With a few well-placed hyperlinks, publishers and authors can draw consumers into a quite rich virtual reality of text and of course promotional offers" (McAllister and Vivian, 2002). The Internet has become a platform not just for the marketing and distribution of content, but also for readers to communicate and interact with publishers, other trade stakeholders and each other, and critically, to wield an ever-increasing influence (Tian and Martin, 2009).

On the other side of the coin, the freedom and variety of choice offered by the Internet is giving consumers more choice and taking power out of the publisher's hands:"Customers have more control than ever before. They take your products out of your carefully constructed contexts of channel, branding, pricing and packaging and consume them on their terms on their connected devices in contexts of their own creation. And they can exercise that power in more places and at more times than before" (Mulligan, 2010). With publishers no longer able to dictate what is published or distributed, the traditional line between producers and consumers has blurred, leading to a significant power shift in the market (Tian and Martin, 2009).

2.4. Disruptive technology

A thorough literature study on the theory of disruptive technology was undertaken in view of addressing research objective 4 and 5:

> 4. Considering digital publishing within the framework of disruptive technology theory.
> 5. Developing a model of requirements and objectives for publishers to successfully assimilate digital publishing in their business practices.

2.3.1. Definition and relevance to the book publishing industry

Clayton Christensen first coined the term disruptive technology in his book *The Innovator's Dilemma* (Christensen, 1997). The potentially devastating impact that these technologies can have on successful industries is discussed in numerous books and articles (e.g. Christensen et

al., 2001; Christensen, 1997; Danneels, 2004; Moore, 1991; Kostoff et al., 2004; Lafferty and Edwards, 2004; etc.). Nowhere in the literature does Christensen offer a clear-cut definition of the term "disruptive technology". He instead focussed his efforts on the process of technology disruption and its effects on existing industries and markets. A brief summary of Christensen's view of disruptive technology follows below.

Disruptive technologies initially underperform established ones in serving the mainstream market, as they do not satisfy the minimum requirement along the "performance metric" most valued by customers in the mainstream market (Danneels, 2004). Thus they are not considered appropriate by established companies (incumbents) in the mainstream market for meeting the expectations and needs of their customers. Products incorporating the disruptive technology will initially only satisfy a small niche market, that recognises and values the specific new characteristics or "dimensions of performance" that the disruptive technology offers. Over time, as companies invest in research and development (R&D), the technology improves and matures, until it is sufficiently improved to meet the needs and requirements of the mainstream market. During this process, those firms that initially supported the disruptive technology (often entrant firms) will displace incumbent firms that only supported the prior technology. As such, disruptive technology often goes hand in hand with the displacement of incumbents by new entrants.

Recent interest in the field of disruptive technology has sparked disagreement about the exact definition of the term disruptive technology (Kostoff et al., 2004). According to Kostoff et al. (2004) disruptive technologies "can be considered scientific discoveries that break through the usual product/technology capabilities and provide a basis for a new competitive paradigm". Danneels (2004) agrees and expands on this definition: "A disruptive technology is a technology that changes the bases of competition by changing the performance metrics along which firms compete." Consider a publisher's new, multi-functional website – now a direct line to its customers, booksellers' discounts (the publishers' bane) potentially forgotten. Consumers can buy their books directly from a publisher's website. Not only is this extremely convenient for the customer, but it also enables the publisher to sell the book at shelf price, without having to lose a large slice of the profit to booksellers' discounts. Consider direct marketing through social networking sites, RSS feeds and blogs. And now, e-books – nonchalantly ignoring the many debates surrounding their advantages, shortcomings and future for over 30 years – slowly but steadily gaining market share. It should be noted

that disruptive technology need not be the result of an entirely new technology (the Internet and e-books are certainly not "new"). Kostoff et. al (2004) point out that disruptive technology can evolve from the confluence of seemingly diverse technologies, to create new commercialisation challenges and cause major product paradigm shifts.

Customer needs drive customers to seek certain benefits in the products they use and form the basis for their choosing one product over another. Benefits sought by customers determine which product attributes they value, and different customer groups (i.e., market segments) may value different attributes (MacMillan and McGrath, 2000). By this reasoning, the introduction of e-books to the publishing industry and consumer market can be considered disruptive if the "performance metrics" that determine readers' buying decisions are significantly influenced. The variables within these performance metrics will be discussed in more detail later in this study.

The literature identifies a few main points of contention regarding the definitive boundaries of disruptive technology that is important to take note of:

1. The difference between sustaining and disruptive technologies:
In addition to the concept of disruptive technology, Christensen also introduced the complementary concept of sustaining technology. Like disruptive technologies, these technologies may be radical and innovative, but they support an incumbent organisation in its core business – i.e. helping to improve or expand what it currently does. "Disruptive technologies, on the other hand, disrupt the market, change the industry paradigm and create a whole new market for a new product, often driving out the incumbent organisations" (Lafferty and Edwards, 2004). In many cases the distinction between disruptive and sustaining technologies could become blurred, especially when its definition might be reliant on the way that organisations react to it. This brings us to the next issue, which addresses whether the measure of disruption caused by a new technology is a function of the company's reactions to it.

2. Is a new technology inherently disruptive or is "disruptiveness" a function of the perspective of the companies subject to it?
Christensen has argued that the Internet can be seen as disruptive to some companies, but sustaining to others, all depending on whether implementation of the technology is consistent

with their business model (Christensen et al., 2000; Christensen and Raynor, 2003; Danneels, 2004). For example, the Internet can be sustaining to catalogue retailers and discount brokers, but it is disruptive to department stores and full-service brokers (Daneels, 2004).

3. At which point does a technology actually become disruptive?
Danneels (2004) raised this question, asking whether a new technology is considered immediately disruptive when it enters the marketplace or only when it actually usurps the existing technology. Consider the case of disruption by digital imaging. Several markets could potentially be disrupted by digital imaging disruption, for example photo-processing labs, film manufacturers, and camera manufacturers. Is the technology considered disruptive when photographers start using digital cameras rather than film-based cameras, or only when chemical photo processing laboratories go out of business because of a lack of business?

2.3.2. Lessons to learn from disruptive technology theory

Publishing is not the first industry to face a potentially disruptive new technology. The spread of cell phone technology offers a good example of a disruptive technology that entered the market at a very high price. The cellular phone initially was accepted only by corporate executives who could make good use of its convenience and portability, despite the relatively high cost at the time (Dan and Chieh, 2008). But the mainstream market still preferred land-line phones because of their reliability, cost and coverage. Over time, further developments in mobile phone technology allowed companies to offer reliable coverage at a price that mainstream consumers could afford. This was the turning point that caused disruption in the land-line telecommunications industry (Dan and Chieh, 2008).

Overdorf and Barragree (2001) offer many further examples of disruptive technologies that severely impacted on incumbents in industries: Transistors nearly usurped electronics giants long reliant upon vacuum-tube technology. Small, inexpensive steel mills displaced “industry behemoths”. Disk-drive manufacturers were repeatedly outsmarted by upstart competitors, and personal computers left mainframe computer companies redundant (Overdorf and Barragree, 2001). Analysing these cases can provide a valuable how-to manual for companies facing potentially disruptive technologies. “By recognising the patterns common to past

failures, it is possible to anticipate the potential disruptive effect of electronic commerce and technology on the publishing industry" (Overdorf and Barragree, 2001).

Digital publishing, in the Web environment, could prove so successful that the traditional publishing houses lose their market dominance and even disappear (Burk, 2001). Mierzejewska (2008) feels that industries often fail to cope with radical technological innovation (disruption) when they are of high strategic value and vital to the survival of the entire sector. She uses the example of the music industry, where digital formats and peer-to-peer sharing networks have had a significant impact on the music supply chain and the dominant market players. Also consider disruptive technology in the news media, where news content, traditionally only available in newspapers and on radio, gradually came to be distributed on networks, then cable television, and now online news sources (Sterling, 2008). Mierzejewska (2008) concludes that research into disruptive technology theory can provide valuable tools to evaluate the potential danger of new technologies to the publishing industry.

The literature shows the value of studying the theory of disruptive technology to learn from failed companies that mismanaged or did not identify the new opportunities (Overdorf and Barragree, 2001; Burk, 2001; Christensen et al.,2001; Danneels, 2004; Dhillon et al., 2001; Mierzejewska, 2008).According to Dhillon et al. (2001) success in the face of disruptive technology will be defined by the ability of a company to differentiate between sustaining and disruptive technologies, their ability to allocate and manage resources successfully, competence in matching the market to the technology and systematically identifying and positioning their capabilities. The literature identified several factors that will determine a company's decisions and actions when faced with disruptive technology.

Christensen (2000) posits five explanations for incumbent firms' reluctance to embrace disruptive technology. These are discussed below, with additional arguments incorporated from Lafferty and Edwards (2004) and Dhillon et al. (2001).

- Companies are dependent on customers and investors for resources (Christensen, 2000). Companies that do not meet the needs of their current customers and investors will not survive. They are not in a position to spend money or resources on disruptive technologies. Innovative new ideas need to be stifled if they do not serve the needs of customers and investors (Lafferty and Edwards, 2004). Dhillon et al. (2001) state that

the inherent argument of this theory is that it is really the current customers and the investors of a company who control the flow of resources.

- Small markets do not satisfy the needs of large companies to grow (Christensen, 2000). Entering an emerging market can provide companies with an early advantage, but if the market is too small, the returns won't be enough to support the needs of large organisations. However, waiting for new markets to be large enough to be profitable is not a strategy that will work with disruptive technology either (Lafferty and Edwards, 2004).
- It is impossible to analyse markets that don't exist yet (Christensen, 2000). It is standard practice in companies to base decisions and planning on sound market research. But this only works in situations where market growth and other factors are very predictable. With disruptive technologies, it is not possible to predict future growth or returns (Lafferty and Edwards, 2004). Since research about future success of new technologies and their impacts can only be carried out after the fact, it is basically impossible to analyse a market for disruptive technology (Dhillon, 2001).
- An organisation's capabilities also determine its disabilities (Christensen, 2000). An organisation's capabilities lie in its processes and values. These processes and values provide guidelines as to what an organisation can do, but in the same way it also restricts companies in terms of what they cannot do. By definition, processes rely on things being done the same way over and over again. This is not conducive to an environment that encourages change. In the same way, a company's values determine what it chooses to prioritise. If a company's values prioritise a high profit margin, it will not risk looking at a new, small market (Lafferty and Edwards, 2004).
- Technology supply may not equal market demand (Christensen, 2000). With a disruptive technology, the pace of technological advances and improvement usually outstrips the performance improvement rate that mainstream customers can keep up with. Companies' whose technological features match customer demands today could easily overshoot mainstream market needs tomorrow (Dhillon, 2001). Small, disruptive technologies develop until they are capable of competing with established products. Then they develop beyond the current technological need in the market. In the initial stages of product development, when no product or service is available in a given market, the emphasis of improvement tends to be on functionality. This

emphasis then gradually shifts to reliability, convenience and price (Dhillon et al., 2001).

Christensen's posits above suggest that it does not make financial sense for an incumbent company to switch to a disruptive technology while the market is still small. But at what cost? If traditional print publishers do not embrace digital publishing, they might find themselves in a dire situation in a few years, with new entrant companies usurping their market share, as predicted by disruptive technology theory.

Danneels (2004) poses some valuable questions that are useful in analysing the respective success and failure of incumbent firms vs. new entrants:

- What characteristics do the incumbents that survive in the face of disruptive technology have in common compared to those that don't?
- What innovation processes with regards to resource allocation, processes and values and decision-making are characteristic of successful and failed incumbents?
- How do the established operating procedures, resources and skills of incumbent firms affect their ability to successfully implement technological change?
- Where do new entrants come from? Why do they succeed?
- How do methods of additional resource acquisition, for example joint ventures, alliances, acquisitions affect entrants' and incumbents' ability to harness disruptive technology?
- How does marketing capability influence the fate of incumbents in the face of a disruptive technology?
- What role does the competence of individual middle- and top-level management play in incumbent firms?
- How does the national context affect the outcome of incumbents and new entrants faced with disruptive technology? (Daneels, 2004: 248).

Overdorf and Barragree (2001) identify a set of five characteristics that need to be harnessed in publishing business models to successfully implement disruptive technology:

1. Explore and exploit the new technology's attributes in new applications, rather than simply using them to continue meeting the needs of the current mainstream market.
2. "Only attempt to disrupt markets in which customers are currently being over-served by prevailing offerings" (Overdorf and Barragree,2001:15).
3. Aim to offer the mainstream market the means to do something simply, conveniently, and cheaply, where previously it was expensive, exclusive, or required great skill.
4. Make use of existing patterns of customer behaviour, so that the success of the business does not depend on fundamental changes in customer behaviour. "Disrupt your competitors, sustain your customers" (Overdorf and Barragree, 2001:15)
5. Start small, simply and cheaply, then slowly migrate to the mainstream market once it is clear what the best path to follow is.

Dan and Chieh (2008) also attempt to determine which factors essentially contribute to firms' success when faced with disruptive technology. They consider the problem from four perspectives:

a. Internal perspective, the business model and organisational challenges of incumbent firms;
b. External perspective, the context and environment;
c. Marketing perspective, customer orientation under disruptive change;
d. Technology perspective, technological roadmapping of disruptive innovation.

For the purposes of this study, which focuses on the adaptation of new technology and its impact on a publisher's business model, we will focus on the internal perspective, the business model and organisational challenges of incumbent firms. Dan and Chieh (2008) identify seven aspects relating to a firm's business model and organisational challenges: Leadership, Organisational Structure, Organisational Culture, New Product Development Process, Employees, Spin off or Ambidextrous Organisation and New Growth Engines. These are discussed below.

2.3.3. Business Models and Organisational Challenges

A. Leadership

The mind sets, actions and competencies of a company's senior managers play a definitive role in the company's strategic decisions. Managers might not understand the value of a new technology for various reasons: their views of the world are usually entrenched in their current experiences. They are obviously trained to serve their established markets within well-defined product lines (Dan and Chieh, 2008). Middle management are also usually resistant to change, as it potentially endangers their positions or undermines their skill sets. Christensen therefore advises that companies should establish a core team at corporate level that is exclusively responsible for collecting disruptive technology ideas and coming up with implementation proposals.

B. Organisational structure, organisational culture and employees

The organisational structure of a company determines if and how disruptive technology is implemented. The number and size of business units which could facilitate development of disruptive technology is an important strategic consideration (Dan and Chieh, 2008). A study by DeTienne and Koberg (2002) hypothesised that the size of the firm will be negatively related to disruptive innovation. If companies are eager to capture values from disruptive technology, keeping business units as small and as many as possible to obtain flexibility would be advisable for organisational structure (DeTienne and Koberg, 2002).

It is important for publishers to consider their internal structure whilst moving towards a digital publishing environment. Increasingly this has led to the creation of digital divisions within companies, frequently under the control of digital directors (Tian, 2008).

When faced with great changes such as a disruptive technology, organisational culture tends to generate cultural inertia which is so difficult to attack directly that it is a key reason managers often fail to introduce revolutionary change even when they know that it is needed (Dan and Chieh, 2008). It is therefore very important that companies prepare for and encourage organisational change in their employees as soon as they decide to implement disruptive technology. This will avoid inertia, negativity and resistance amongst employees.

It is incumbent on senior management to initiate a transformation of culture within the book publishing industry as there are many instances where traditional culture is firmly entrenched to the detriment of progress (Tian, 2008). Organisational culture is critical to the process of change.

C. New Product Development (NPD) Process

The inability of large, successful companies to allocate sufficient resources to technologies that initially cannot find a foothold in mainstream markets, but later invade them, has caused the demise of many once-successful companies (Dan and Chieh, 2008). On the flip side, small companies' less formal resource allocation processes allow managers to proceed intuitively rather than having to be backed up by careful research and analysis, so that they can refrain themselves from parts of the structured routines which constrain the actions of large companies and evaluate emerging disruptive projects by the same criteria applied for existing businesses.

Companies generally respond to new competitively threatening technologies by intensifying their investments to improve the conventional technologies used by their current customers, and in so doing they miss the opportunity presented by new disruptive technologies. Because of the initially inferior performance of products based on disruptive technologies, the low profit margins of new businesses look poor compared with those of existing businesses where moving up-market feels pretty good financially. Therefore, financial results in the new product development process are a particularly bad tool to manage disruption (Christensen, 1996).

D. Spin-off or ambidextrous organisations

Christensen proposes that companies set up autonomous organisations, or spin-offs, to develop and commercialise new ventures to deal with disruptive technology (Christensen, 1996). New start-ups always have innovative and potential disruptive technology strengths, but they lack complementary assets that belong to current market leaders (such as infrastructure, existing market base, resources, etc.). Hence, different kinds of collaborations

between new start-ups and incumbent leaders are strongly recommended such as stake ventures, joint ventures, and acquisitions (Dan and Chieh, 2008).

Tushman and O'Reilly propose the concept of ambidextrous organisations (Tushman and O'Reilly, 1996). In such companies, the disruptive technology would be developed within the company itself, taking advantage of its resources and asserts while also pursuing the new technology in specific business units. This approach is very relevant especially to the publishing industry, where dual publishing modes (publishing both printed books and e-books) are likely to become very prevalent. It will likely take several generations (if at all)before consumers stop depending on the paper book medium, embrace a new way of reading, and fully take advantage of new technologies. Therefore, there is no need for publishers to make a distinct choice between print or digital just yet: "At least for now, the printed book will live alongside the e-book" (Carreiro, 2010).

E. New growth engine

Dan and Chieh (2008) refer to literature that "focuses on how to make disruptive innovation a repeatable process that successfully generates a series of disruptions to make sustainable growth systematic rather than an idiosyncratic, ad hoc undertaking". This approach is very relevant, especially to industries where technology is constantly changing and is an inescapable feature inherent to the business, for example the computer hardware and software industries. As such it is not entirely relevant to the current research question in the context of publishing and will not be discussed here.

2.3.4. External perspective: Context and Environment

Organisations are often inhibited by their commitments to current customer expectation, invested capital, personnel decisions, investors and analysts, employee skills, public promises and goals, and existing relationships with suppliers and customers. This makes it useful to look beyond the organisation itself, at the context and environment surrounding the organisation (Dan and Chieh, 2008).

A. Customer orientation under disruptive changes

Dan and Chieh (2008) discuss literature that elaborates on the customer orientation under disruptive changes and attempts to seek solutions from the customers' perspective. Danneels (2002; 2004) proposed that a second-order marketing competence is an ability to add new customers to address new markets. "If established companies are not really blind-sided by the development of new technological capabilities, then it is likely they fail to link the development of such technological advances to changes in the marketplace, changes in consumer needs or market conditions" (Dan and Chieh, 2008). The key to avoiding the negative effects of disruptive technologies is to focus on what is happening with customer and operational needs. This is exactly what Christensen originally proposed in *The Innovator's Dilemma* when he spoke of Customer Competence (Christensen, 1997). Dan and Chieh (2008) conclude that only gathering information on mainstream customers' needs and responding only to such needs is detrimental to implementing disruptive technology, whereas an orientation towards small but emerging customer segments might aid in the development of such technologies. How to find the emerging market and understand the needs of new customers is still a question of tremendous interest (Dan and Chieh, 2008).

B. Technological roadmapping of disruptive innovation

Dan and Chieh (2008) point out that it is not enough to be vigilant and quick to spot the opportunities presented by disruptive technologies. Development of the technology itself is extremely challenging from a purely technical perspective. This is of great relevance in companies that develop their own technologies such as IT companies – but is not relevant to publishing where the technology is developed externally.

Dan and Chieh (2008) summarise the possible inhibitors and enablers of disruptive innovation that they identified in Table 2.4 on pages53-54 (Dan and Chieh, 2008:407).

Christensen (1997, 2001) identifies two factors that play the most important part in a company's ability to survive disruptive technology: the resource allocation process; and the "RPV" framework – organisational resources, processes, and values (Danneels, 2004).

Table 2.4: Potential inhibitors and enablers of disruptive innovation

Inhibitors/ Problems	Enablers/ Solutions
(1) Senior managers are limited by their current experiences. (2) Senior managers were trained to manage well-defined product lines. (3) Middle managers have the most to lose in disruptive change.	(1) Create a core team to collect disruptive ideas and mould them into propositions. (2) Design long-term-oriented, subjective-based incentive plans instead of short-term-oriented formula-based incentive plans for key executives. (3) Founders are better positioned to tackle
(1) The size of the firm and business units will be negatively related to disruptive innovation.	(1) Large corporations keep the flexibility to have small business units within them, they can continue to have decision makers who can become excited about emerging opportunities.
(1) The cumulative culture becomes cultural inertia which is so difficult to attack directly.	(1) Prepare for and institute organisational change and unlearn its deeply entrenched values (2) Some integral parts of culture should be preserved and valued such as entrepreneurship,
(1) Resource allocation process evaluates emerging disruptive projects by the same criteria applied for existing businesses. (2) Financial results in new product development process are a particularly bad tool to manage disruption.	(1) Less formal, allows managers to proceed intuitively rather than having to be backed up by careful research and analysis. (2) Two distinct portfolios to manage the new product development projects separately from the operational projects such as cost reductions, line extensions and quality improvement. (3) Experimentation, transitioning across projects. Intra-firm linkages provide a free-flowing exchange and cross pollination of information.

Inhibitors/ Problems	Enablers/ Solutions
(1) Knowledge and creativity lack in creating potential disruptive innovations. (2) Disruption from outside due to brain drain of talents and disruptive ideas.	(1) Team members are composed of carefully selected risk-takers and they also recruit outside expertise. (2) Capturing ideas from people in direct contact with markets and technologies.
	(1) Typical form of autonomous business units is spin-offs. (2) Open Innovation: stake ventures, joint ventures, and acquisitions.
(1) Very few companies could make a repeatable process that successfully generates a series of disruptions.	(1) New Growth Engine model.
(1) Difficult for a firm to operate locally and simultaneously to protect itself against intellectual piracy from abroad.	(1) Creating disruptive innovations nearly always require an international perspective.
(1)Fail to link the development of technological advances to changes in the market. (2) Focus too much on existing customers and high-margin opportunities.	(1) Focus on what is happening with customer and operational needs. (2) Emerging customer orientation. (3) Mainstream and emerging customer orientation can co-exist. (4) Develop techniques to understand new customers needs.
(1)An over-detailed road-map might be disastrous as disruptive innovation is discontinuous in nature and the research has focused on the “fuzzy” front end.	(1) Purposeful creation of technologies as options for potential disruptive innovation.

Source: Dan and Chieh, 2008:407

Looking at the way a company allocates resources and adjusts processes and values, would give one an indication of the company’s ability to turn the disruptive technology into competence-enhancing technology. In cases where the company does not have access to the

necessary resources, alliances, joint ventures, licensing, and acquisitions are options they can consider to gain access to these resources (Helfat and Lieberman, 2002). Overdorf and Barragree (2001) stress that the leading publishing companies should harness, not fight, the principles of disruption. Developing internal capabilities and either creating or partnering with other organisations – whose capabilities are consistent with those required to successfully develop and commercialise new technologies – is key.

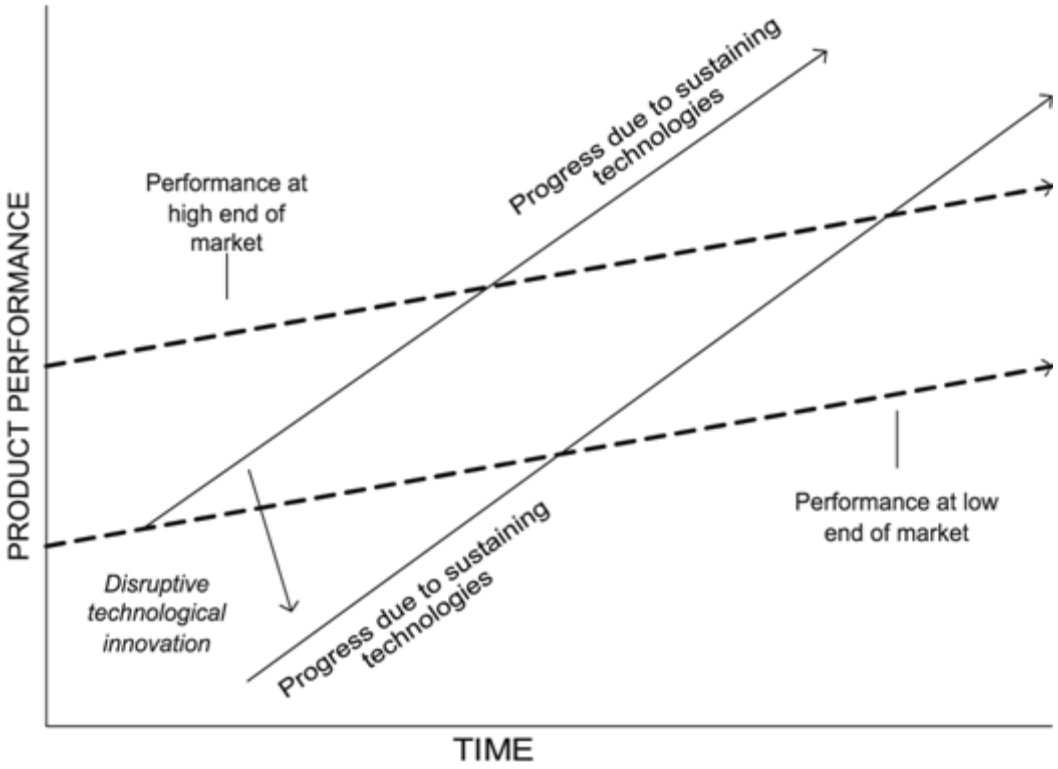
But timely R&D and successful resource management are not enough to guarantee success in the face of disruptive technology. Added to this is the importance of "customer competence" – knowing the new market, its needs, habits and distribution channels (Christensen, 1997; Danneels, 2004). Without competent marketing and customer relations, new technology cannot reach the mainstream market.

Lafferty and Edwards (2004) agree, and interpret Christensen's findings (1997; 2001) to revolve around the issue of large firms being unable, either because it is financially not viable, or because they do not have the resources, to serve the new market segments. Gordon, Kung and Dyck (2008) state that for a traditional publishing company to change into an electronic publisher demands a huge reorganisation and investment, therefore it is understandable and wise of trade publishers to diversify gradually.

It is important to note that Christensen made a clear distinction between what he called "competence-destroying" versus "competence-enhancing" technology (Danneels, 2004).Christensen found that companies that used new technology to enhance their competence would have no problem surviving technology disruption, whereas companies that ignored the new technology would by default become less competent in the market.

The most powerful analytical tool provided by Christensen is a diagram that portrays "trajectories over time of (1) performance demanded by different market segments; and of (2) performance provided by alternative technologies". Disruption occurs "when the trajectory of performance provided by the disruptive technology intersects with the trajectory of performance demanded in the mainstream market" (Danneels, 2004). This is represented in Figure 2.4.

Figure 2.5: Disruptive technology: product performance over time



Source: Christensen, 1997:12. Reprinted with permission of Harvard Business School Press.

It is very difficult for established players to simultaneously manage the steady state of exploiting current capabilities focused on sustaining innovations and the discontinuous state of exploring and developing disruptive opportunities (O'Reilly and Tushman, 2004). Christensen (2000) and Lafferty & Edwards (2004) suggest a number of different strategies to address disruptive technology in an organisation:

- Create separate divisions or organisations to carry the responsibility of commercialising disruptive technologies. These organisations should be free from the demands of existing investors and customers, and should be small enough to operate with smaller revenues and profits.
- Give the market time to become large enough to justify entry, or attempt to accelerate the growth rate of the market as it emerges so that it quickly becomes viable to enter.
- Allow enough resources in reserve to have a second or third attempt at the market, should the first attempts prove unsuccessful.
- Engage in "discovery-driven planning" (Christensen, 2000: 181) – the wait and see approach.

- Engage in "agnostic marketing" – market from the perspective that it is impossible to know to what extent the market will accept the disruptive technology until they have actually experienced using it (Christensen, 2000: 182).
- Try to change the processes and values of the current organisation to encourage change and innovation.
- Analyse trends to discover how customers use products to avoid performance oversupply. Once basic functional requirements have been met, start focusing on convenience, reliability and price.

Christensen and Raynor (2003) reiterate these recommendations. They suggest the following methods to deal with technology disruption:

- Create an independent organisation where new processes can be explored and values developed free from the constraints of the incumbent organisation.
- Build new structures in the organisation, within the current corporate boundaries, but with the freedom to develop new processes.
- Acquire a new organisation with processes and values that are better suited to deal with the disruptive technology.

All of the questions and recommendations presented in the literature can be combined to develop a useful set of research objectives and recommendations for companies facing disruptive technology. The recommendations that emerged from the literature are summarised in the Conclusion of Chapter 2. These recommendations will be adapted within the context of the publishing industry and will be discussed in Chapter 5.

2.3.5. Criticism of the predictive value of disruptive technology

Dan and Chieh (2008) discuss the fact that many research scholars have questioned and challenged the predictive value of disruptive technology theory. Some feel that successful companies might just be "lucky in their technology choices" (Dan and Chieh, 2008). Those companies with "lucky choices" are then examined, and a retrospective explanation for their success can be formed. The obvious problem with this method is that, in hindsight, any and all factors can be considered as rationale for explaining their success, but this does not mean

that there is any predictive value in the concept of disruptive technology theory. Christensen (2006) has responded to such critique and refutes that disruptiveness can only be defined after the fact. His disruptive technology model was derived from histories and case studies, but the definition of disruptiveness exists regardless of the outcome. The complete replacement of existing firms and technologies is a common but not necessary effect of disruptive technology, as disruptive technology does not always imply that entrant business should completely replace the incumbent business (Dan and Chieh, 2008).

Some researchers have attempted to address criticism of disruptive technology theory by better understanding its potential predictive value. Schmidt proposed a model which may give the firm some tools to use in assessing whether a market is ripe for disruption (Schmidt quoted in Dan and Chieh, 2008). Paap and Katz (2004) pointed out general guidance to predict future disruptions. For example, they advise companies not to ignore their customers, both current and potential. The important thing is to identify the drivers of the future that will determine markets once old drivers have reached their limits (Paap and Katz, 2004).

Govindarajan and Kopalle believe that disruptive technology theory indeed helps us make predictions about the type of firms likely to develop disruptive technologies (Govindarajan and Kopalle quoted in Dan and Chieh, 2008). Based on the reasons for incumbent firms' success or failure and subsequent solutions, companies will be in a better position to tell the fate of a firm faced with a new wave of disruptive technology.

2.3.6. Digital publishing and disruptive technology

Electronic publishing and e-books have arguably caused the greatest transformation to the long-established publishing industry since Gutenberg and his printing press (Carreiro, 2010).

Developments in technology have included advances in applications and digital networks, technologies for e-commerce and specific developments such as e-books, rights management technology and digital print-on-demand technologies (Tian, 2008). The adoption of digital technology provides opportunities to re-engineer publishing value chains to ensure maximum benefits for both participants and customers. The implementation of digital technologies and processes, therefore, carries implications for existing business models (Tian, 2008).

"E-books, e-reader devices, and the like have made it necessary for publishers and booksellers alike to establish a digital strategy" (Carreiro, 2010). Tian (2010) says that, although the publishing industry has so far adopted a fairly conservative approach to digital strategies, she believes they have largely accepted the inevitability of digital technology's lasting impact on the publishing industry. Tian (2010) highlights the following drivers of publishers' acceptance of digital technology in publishing:

- Digital technology removes the geographical boundaries inherent in print publishing;
- Physical distribution channels associated with traditional publishing models have changed;
- Production costs are significantly lower in a digital publishing model, and additional copies can be created at a very low cost after initial production;
- New, non-traditional intermediaries such as digital distributors, booksellers and marketers are inevitably changing the publishing value chain;
- "Unique content assumes a greater role, such as exclusive access, editorial enhancement and authority, exclusive distribution, timing and electronic security" (Tian, 2010: 2).

Tian (2010) also summarises significant issues that publishers will be faced with in the transition to digital publishing. Digitisation of publishing processes and products will inevitably lead to more products, formats and fragmented content. This will require major changes to production processes and work flows, and will also bring about opportunities for new sales channels, intermediaries, and direct contact with customers. Managing the variety of new formats is currently a complex task. Intellectual property rights need to be carefully monitored, and digital assets will need to be in a format that is easily accessible for re-use, with the necessary rights in place. The primary threat for publishers is the risk of investing in an industry with so many unknowns. Risk increases dramatically in such a rapidly evolving market (Tian, 2010).

The literature emphasises that the advantages of e-books are not yet enticing enough for users of immersive (trade) texts (Overdorf and Barragree, 2001; Humphreys, 2004) for them to replace their print reading habits, and such commentators speculate that the e-book market

will not likely make up more than 10% to 30% over the next decade (Gordon, Kung and Dyck, 2008). Guenette et al. (2010) paint a more optimistic picture and expect a high rate of growth in EMEA areas (Europe, the Middle East and Africa) – of up to a three-year compound annual growth (CAGR) of 51% through 2012 (Guenette et al., 2010).

Whether e-books will eventually usurp printed books or not is not the focus of this study. But the danger of a potential disruption in Christensen's (1997) sense of the word is very real and should not be ignored by publishers. Lafferty and Edwards (2004) argue that regardless of whether digital publishing meets all theorists' criteria for disruptive technology, the publishing industry is definitely vulnerable and subject to the effects of such disruption. According to Hyatt's (2003) new business rules, new publishing expectations and new audience expectations generated by a digital world are transforming the book world steadily and surely. The challenge of the next few years for publishers will be to invest wisely in technology and process improvement while simultaneously being aggressive about pursuing new business models (Guenette et al., 2010).

Carreiro (2010) summarises the factors that a publisher should take into consideration before pursuing an e-publishing strategy. Technology, cost, titles, user-friendliness, ownership, fair use and privacy are the main issues that Carreiro (2010) highlights. Crucial concerns that emerge from these factors are related to content justification, interoperability (flexibility of formats between devices), integration of various sources, accessibility, usage, and functionality. "Once these factors have been recognized and appropriately addressed, publishers can move forward with an e-publishing strategy" (Carreiro, 2010).

E-book format standards need to emerge in the publishing industry as a start to addressing the above-mentioned issues of technology, user-friendliness, ownership, interoperability, integration, accessibility, usage and functionality. Carreiro (2010) feels that the best way for the industry to arrive at such standards is for publishers and manufacturers to make a concerted effort to develop a system of "cooperating structures, representation, storage, identifiers, indexing and organisation, distribution and access management, and preservation and archiving" (Carreiro, 2010). The beginnings of such a system is evident in current DRM approaches.

2.4. South African Context

Literature about e-books local to South Africa is few and far between and highly speculative. In recent years, the lack of useful and reliable statistical data on the South African book publishing industry has been noted by various role-players (e.g. Galloway & Venter, 2010). A quick glance at the main local publishers' websites shows very few e-book initiatives, with the exception of scholarly and reference publishing, yet Mahlong (2009) states that local publishers have stepped up their efforts to keep up with digital trends.

2.4.1. Current state of digital publishing in South Africa

Much as in Europe, where the size and nature of the e-book industry is difficult to gauge due to a lack of standardised data (Mussinelli, 2011), digital publishing activities in South Africa are difficult to track. E-book markets are in a very early stage of development, making it difficult to compare this emerging segment with the overall publishing industry (Mussinelli, 2011). According to PASA's annual industry survey of 2011 (PASA, 2012), the total net turnover of the general trade e-book industry in South Africa for 2011 was R1,036,000, compared to R102,000 in 2010 (PASA, 2011). Even though these figures are indicative of an impressive growth rate, the South African e-book market seems to be in an embryonic stage and can be compared to that of Italy or Spain. In these countries, the e-book market is being driven by a few innovative small and medium publishers who run small e-book initiatives and are establishing a national distribution platform where all publishers can combine their strengths to distribute e-books (Mussinelli, 2011). If the South African e-book market is to thrive, a similar system needs to be established to nurture and encourage the creation and distribution of e-books.

2.4.2. Distribution platforms

The current fragmented distribution platform of e-books is seen as a problem in the literature. Arthur Attwell, CEO of digital publishing company Electric Book Works sees it as a problem that there is no one-stop shop to quickly search for and buy a specific book: no Amazon for South Africa or iTunes existed at the time of writing (Attwell, 2009b). In contrast to Attwell, Jared Friedman, co-founder of social publishing website Scribd, says that publishers have to

encourage a more competitive marketplace than is seen in the digital music industry (Nichols, 2009).The year 2011 saw the launch of Apple's iBookstore, which should provide healthy competition for Amazon.

Attwell says the local e-book market is still very much a niche industry, and that local publishers only recently began planning or thinking about strategies for e-book distribution around 2009 (Engelbrecht, 2009). He feels that one reason for this, is that the technical costs of setting up a digital distribution system might outweigh the potential sales of e-books.

Book SA recently introduced an e-book store, Little White Bakkie (LWB), selling South African and African books via document sharing service Scribd.com – but currently only to the US market (Engelbrecht, 2009). In 2010, Kalahari.net and Exclusive Books became the first stores to sell e-books in South Africa (Rasool, 2010). However, of the 60 000+ titles on offer at Kalahari, very few are South African. It is important to note that both LWB and Kalahari are focusing on the international market. This speaks of a general hesitance in the South African publishing industry to produce and distribute e-books locally: Spokespeople for BMI-TechKnowledge and Exclusive Books ascribe this hesitance to penetration worries in the South African market. Low Internet access rates and the high cost of broadband mean that e-book penetration in South Africa will be smaller initially than it has been in First World countries (Rasool, 2010).

At the time the study was undertaken (2011), no publishers offered direct sales of e-books on their websites. Some publishers do now allow direct sales on their websites, but the majority still link to external distributors such as Kalahari.

2.4.3. The challenge for South African publishers

Ben Williams, editor of Book Southern Africa (Book SA) agrees that the e-book market in South Africa is virtually non-existent, but feels that this will change in the years following 2009 (Engelbrecht, 2009). Williams describes the e-book challenge in a local context as two-fold: infrastructure (many South Africans have neither computers nor access to the Internet) and consumer take-up (simply consumer willingness to give e-books a try).

Locally – as a country where more people own cell phones than have electricity (Engelbrecht, 2009) – some believe m-books (mobile books to be read on cell phones) are a more cost-effective option than e-books. Penguin SA has started preparing content for cell phones (Mahlong, 2009), Mxit has started making M-books available on their network for download, and in 2009 CellBook distributed over 100 000 books on cell phones for a number of publishers (Engelbrecht, 2009).Mobile literacy projects have seen great support and growth, with initiatives like the Shuttleworth Foundation's m4Lit Project aiming to get teens reading and writing through "m-novels" (Engelbrecht, 2011).In this study, what some authors specifically call "m-books" is included under the umbrella term "e-books". It was explained to publishers who took part in the study that the term "e-books" referred to books published in electronic format for any digital medium, such as a mobile phone, e-reader or tablet. As such the study did not differentiate between e-books for different devices, but rather focused on different formats.

Attwell (2009) discusses the importance of publishers not being blinded by technology and buying into automation. Regardless of the medium, publishing will remain a "human" enterprise: "Content acquisition, editing, design and the continuous, creative improvement of systems will remain as important and competitive as ever" (Attwell, 2009).

2.5. Conclusion

The literature on the history and evolution of e-books reveals that e-book optimism peaked during the late '90s and early 2000s. Spurred on by economists' predictions of an inevitable digital publishing boom, publishers invested heavily in e-book imprints and initiatives. But the market failed to grow as expected, causing most of these initiatives to close down again (Herther, 2005; Humphreys, 2004).

Over the last few years the interest in the digital publishing market has flared up again and grown at a startling rate. The literature suggests that the main driver for the renewed interest in e-books was the release of the Kindle and the many dedicated e-readers and tablets that have entered the market since (Neilan, 2009; Neill, 2009; Wyatt, 2008; Reuters, 2010). The technology of these e-readers is constantly improving and their prices gradually dropping. Sales of e-books in turn are increasing at an almost exponential rate. Mid-2010, Amazon revealed that the company was selling 180 e-books for every printed book (Teather, 2010).

Outsell's Gilbane Group survey of 2010 (Guenette et. al, 2010) found that the global e-book market expanded by 48% in 2009. Many in the industry expect that younger generations will be ever more accepting of e-books, as they are growing up with computers and will have a significant impact on global markets (Herther, 2005; Mussinelli, 2011).

Considering the impressive rate that the digital publishing industry is growing at, publishers should not falter to implement digital publishing of e-books into their business practices. The literature provided an in-depth assessment of the various advantages and disadvantages involved in adopting a digital publishing process (Overdorf and Barragree, 2001; Burk, 2001; Carlson, 2005; Clark et al., 2008; Danneels, 2004; Gordon, Kung and Dyck, 2008; Hyatt, 2003; Marsh and Prodhan, 2008; Mahlong, 2009; Rogers, 2006; Mierzejewska, 2008; Neilan, 2009). Advantages mentioned are mainly related to the streamlining of business processes and the shortening of the publishing supply chain. This also results in lower costs. Disadvantages revolve around Digital Rights Management (DRM), content standardisation and conversion issues for publishers, and the lack of an elegant, sufficiently user-friendly reader (Clark et al, 2008).

The literature review revealed past trends in digital publishing and e-book market acceptance, and also identified the relevant challenges and opportunities that publishers are faced with. This insight serves as a starting point to answer research objective 2:

> 2. Determining the challenges, opportunities and barriers pertaining to digital publishing that South African trade publishers are experiencing.

The second part of the literature review was undertaken to answer research objective 4:

> 4. Considering digital publishing within the framework of disruptive technology theory.

Disruptive technologies are defined as technologies that initially underperform established ones in the mainstream market, as they do not satisfy the minimum requirement along the performance criterion of most value to customers in the mainstream market segment (Christensen et al., 2001; Christensen, 1997; Danneels, 2004; Moore, 1991; Kostoff et al., 2004; Lafferty and Edwards, 2004). As research and development investments are made to

improve the disruptive technology, the performance it supplies improves to the point where it can also satisfy the requirements of the mainstream market.

Within the context of digital publishing, the "minimum requirements" for e-book readers would be basic functionality and price. The consensus in the literature is that the current high price of e-readers and their lack of sophistication; accessibility and DRM issues, and the lack of a standard e-book format are the main barriers preventing e-books from flourishing in the mainstream market. However, this situation is changing rapidly as e-readers are becoming cheaper and more sophisticated. The literature attributes much of the current growth rate in the e-book market to the improvement of e-readers like the Kindle (Neilan, 2009; Neill, 2009; Wyatt, 2008; Reuters, 2010). Disruptive technology theory goes on to say that over time, firms that supported a disruptive technology (in our case, publishing companies that venture into digital publishing) will displace incumbent firms that only supported the prior technology (companies that continue to publish only printed books).

The literature suggests many explanations for companies' reluctance to implement disruptive technologies in their businesses (Overdorf and Barragree, 2001; Christensen, 2000; Dan and Chieh, 2008; Danneels, 2004; Gordon, Kung and Dyck, 2008; Dhillon et al, 2001; Lafferty and Edwards, 2004). Those of relevance to the publishing industry can be summarised as follows:

- Entering an emerging market is not financially viable for large organisations, as the returns are too small.
- Companies tend to focus too much on existing customers and high-margin, instantly-gratifying opportunities
- With disruptive technologies, it is impossible to predict future growth, success or returns, as markets that do not exist yet can't be analysed.
- Companies base management decisions on financial results. With new product development, financial results are not indicative of the eventual potential success of a new product, and it is not wise to use these results in decision-making.
- Resource allocation: Companies depend on current customers and investors for resources, and are unable to allocate resources to disruptive technologies.

- A company's values (the criteria used when making prioritisation decisions) determine its processes, which forms habits and customs that are hard to change.
- Organisational structure: "The size of the firm and business units will be negatively related to disruptive innovation" (DeTienne and Koberg,2002)
- Limitations of management: Senior managers are limited by their training and their current experiences. They are trained to do very specific tasks well-defined product lines, and stand to lose much if current processes are changed and their current skill sets might be rendered redundant.
- Cultural inertia: The values and habits that comprise the organisational culture is resistant to change.
- Companies that lack knowledge, creativity and foresight might not recognise the potential of a new technology to cause disruption.
- Implementing disruptive technology requires huge reorganisation, restructuring and investment.

The literature also provides some recommendations and guidance for companies to successfully implement disruptive technology in their businesses. Dan and Chieh (2008:407) provide a set of "enablers" for disruptive technology. These are discussed below:

- Place responsibility for implementing disruptive technologies in separate divisions or business units, so that autonomous decision-making can take place unhindered by the demands of existing customers and investors
- Create a "core team" to collect and explore ideas for implementing disruptive technology. Team members should be risk-takers. recruit outside expertise if existing employee skill sets are not sufficient.
- Allow enough resources in reserve to have a second or third attempt at the market.
- "Design long-term-oriented, subjective-based incentive plans instead of short-term-oriented formula-based incentive plans for key executives" (Dan and Chieh, 2008:407).

- Prepare for and initiate organisational change. Important aspects of organisational culture should be kept and nurtured, such as entrepreneurship and risk-taking, but cultural inertia and resistance to change should be "unlearned".
- "Experiment and transition across projects. Intra-firm linkages provide a free-flowing exchange and cross pollination of information" (Dan and Chieh, 2008:407).
- Cater for existing, mainstream customers as well as emerging customers with new needs. Develop techniques to understand and reach new customers, but do not ignore or neglect current customers' needs.
- Analyse trends in how customers use products to avoid performance "oversupply". It is very important to conduct research to understand what consumers want from a new technology, and how they want it. "When functional requirements have been met, look to reliability, convenience and price" (Dan and Chieh, 2008:407).
- "Creating disruptive innovations nearly always require an international perspective" (Dan and Chieh, 2008:407).
- Strive to keep management less formal, allowing managers to act intuitively, unhindered by the needs of the larger business or immediate financial results.
- Look to "open innovation": stake ventures, joint ventures, and acquisitions are ideal ways to gain skills and investment to enter a new market.
- "Exploit the technology's unique attributes in new applications, rather than stretching them to meet the product or service requirements in the mainstream market" (Overdorf and Barragree, 2001:15).

These "enablers" of disruptive innovation are echoed throughout the literature (Overdorf and Barragree, 2001; Christensen, 1997, 2001; Dan and Chieh, 2008; Danneels, 2004; Helfat and Lieberman, 2002; Lafferty and Edwards, 2004; Gordon, Kung and Dyck, 2008; O'Reilly & Tushman, 2004; Christensen and Raynor, 2003; Dan and Chieh, 2008). These recommendations and lessons learned from disruptive technology theory can be used to develop a set of objectives to serve as guidance for publishers venturing into digital

publishing. The solutions discussed above, combined with the data that emerges from the primary research, will be used to address research objective 5:

> 5. Developing a model of requirements and objectives for publishers to successfully assimilate digital publishing in their business practices.

The literature showed that the South African publishing industry is very much in its embryonic stage. Very few sources on local digital publishing exist, and it is a field that has only been empirically tracked since 2010 by PASA. If the worldwide trend of growth in the e-book market continues – and nothing in the literature suggests that it will not– it follows that other small digital publishing industries (like Spain, Italy and South Africa) should follow the same trend.

CHAPTER 3

Methodology

3.1. Research approaches and considerations

It is important to understand the advantages and disadvantages of the various approaches to research – descriptive, exploratory and explanatory – before committing to any particular one (Tian, 2008).

Descriptive research provides a detailed picture, focusing on "how" and "who" questions (Tian, 2008). This is characterised by an in-depth description of what is being evaluated, the circumstances under which it is being used, the characteristics of the people involved in it and the nature of the community's location. This form of research can use both qualitative and quantitative formats, as descriptive researchers utilise various data collection methods, for example surveys, field research, content and historical analyses (Neuman, 2003).

Exploratory research deals with "what" questions and frequently uses qualitative approaches, as these tend to be more open to using a broad range of evidence, leading to the discovery of new issues (Tian, 2008). Quantitative methods like surveys and experiments can also be employed. Descriptive and exploratory research exhibit a number of similarities, and it is feasible for research to have a combination of both.

Explanatory research attempts to answer "why" questions and can employ both qualitative and quantitative research methods (Tian, 2008). This methodology builds and elaborates on exploratory and descriptive research, with the aim of discovering causes or reasons why something occurs.

3.2. Knowledge claims, strategies of inquiry and related data collection formats

Creswell (2003) identifies three basic concepts to use as a starting point in selecting a suitable research methodology: knowledge claims (also referred to as research paradigms or philosophical perspectives), strategies of inquiry, and data collection methods and analysis formats. These are discussed below:

3.2.1. Knowledge claims

It is essential for researchers to understand the theory of knowledge that is hidden behind their theoretical perspective (philosophical stance). This can be knowledge resident in epistemological perspectives such as positivism, interpretivism or critical realism (Tian, 2008).

A. Positivist research

Positivists assume that reality is objective and that it can be described by observable, measurable properties that are independent of the researcher and the research methods and tools. Positivist studies generally attempts to "increase the predictive understanding of phenomena" by testing a theory (Meyers, 2009). Research can be considered positivist when formula propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about a phenomenon from the sample to a stated population involved (Orlikowski and Baroudi, 1991:5).

B. Interpretive research

Unlike positivist research, interpretive studies examine phenomena through the subjective meanings that people assign to them (Meyers, 2009). Interpretive researchers do not assume that reality can solely be understood through measurable, objective means, but that a true understanding of reality can only be attained through social constructions such as language, consciousness and shared meanings (Meyers, 2009). Interpretive research does not have pre-defined dependent and independent variables, but develops ideas and variables as the

research is underway, within the complex context of "human sense making" (Kaplan and Maxwell, 1994).

C. Critical Research

Critical researchers place emphasis on history and social constructions. They assume that society and reality are historically constituted and continuously being created by people. Critical researchers also believe that people's ability to consciously change their social and economic circumstances is constrained by various social, cultural and political inhibitions and limitations (Meyers, 2009). As such, critical research is mostly used for social critique, focusing on the oppositions, conflicts and contradictions in contemporary society, in an attempt to emancipate society from those constraints.

Although these three research knowledge claims are philosophically distinct, their use is not always clear cut in the practice of social research. There is considerable disagreement in research theory as to whether these knowledge claims and their assumptions and inferences can be combined in one study, or if they are always distinct. However, all these paradigms facilitate the application, often in combination, of quantitative, qualitative and mixed methodologies (Meyers, 2009; Tian, 2008).

3.2.2. Strategies of inquiry

Strategies of inquiry involve the details of the various methodologies, strategies or plans of action governing the research, how they will impact on processes and link methods to outcomes. Once knowledge claims have been considered, specific data collection methods must be decided on and research strategies formulated. Creswell (2003) explains the three standard strategies of enquiry (quantitative, qualitative and mixed approach) to establish a clear line of approach for research design.

A. Quantitative methodology

Quantitative methods were originally developed to study natural phenomena in the natural sciences. Quantitative research methods include survey methods, laboratory experiments,

formal methods like econometrics, and numeral methods such as mathematical modeling (Myers, 2009).

"The purpose of quantitative methods is to prove the truth of theories and provide a more concentrated, measured analysis of causal relationships between variables" (Tian, 2008). Identifying such relationships and trends, and testing hypotheses and theories, can then result in new or amended theories (Tian 2008).

B. Qualitative methodology

Qualitative research methods were originally developed in the field of social sciences to study social and cultural phenomena (Myers, 2009). Qualitative research methods aim to help researchers understand people within their social and cultural contexts. Qualitative research normally involves an in-depth investigation of knowledge, using methods such as observation, interviewing, archival or other documentary analyses. This type of research allows researchers to collect complex information from participants (describing, interpreting, and explaining a research problem) which would be difficult to obtain through a quantitative approach (Tian, 2008).

C. Mixed methodology

Kaplan and Maxwell (1994) argue that the goal of understanding a phenomenon from the point of view of the participants and its particular social and institutional context is largely lost when textual data are quantified. However, that does not mean that the qualitative researcher should ignore quantifiable data derived from quantitative research methods.

Many researchers advocate the use of a combination of qualitative and quantitative research methods. Such a mixed method approach allows data to be derived from both numeric (quantitative) and text (qualitative) sources.

Cresswell (2003) describes using sequential procedures to derive the most valuable information form data: implement one method before another, such as a study beginning with the use of a quantitative method in which theories or concepts are tested. This is then

followed by a qualitative method involving detailed exploration with a number of cases or individuals.

3.3. Methodological approach of this thesis

After careful consideration of the research approaches, philosophical perspectives and methodological options discussed above, the methods that were best suited to meet the research objectives were chosen.

3.3.1. Research approach

This thesis will employ a combination of descriptive, exploratory and explanatory research. Data will firstly be collected to *describe* the current digital publishing environment. This is necessary in particular to meet research objectives (1) and (3):

1. Analysing the current digital publishing environment in the South African trade publishing industry.
3. Investigating the use of the Internet and new communication channels within South African trade publishing companies.

Descriptive analysis answers "who" and "how" questions (Creswell, 2008). Empirical, numeric data is required to establish who the players in the South African digital trade publishing industry are, and to provide an accurate snapshot of firstly their digital publishing activities up to date, and secondly the ways in which they use the Internet and its various communication channels in their businesses. A quantitative method of data collection will be used to obtain information for descriptive analysis.

Descriptive research will only serve the research question up to a point. Once a descriptive understanding of the South African digital publishing industry is attained, it will be necessary to delve deeper. Exploratory and explanatory research approaches will be required to discover the issues underlying the publishing industry as portrayed by the descriptive research (to answer the "what" and the "why"). This will be necessary to address research objective (2):

2. Determining the challenges, opportunities and barriers pertaining to digital publishing that South African trade publishers are experiencing.

Qualitative methods of data analysis will be used to build and elaborate on the facts that emerged from the descriptive research.

3.3.2. Knowledge claims

The philosophical perspective inherent in the research was interpretivism.

"Interpretive methods of research start from the position that our knowledge of reality, including the domain of human action, is a social construction by human actors. Our theories concerning reality are ways of making sense of the world, and shared meanings are a form of inter-subjectivity rather than objectivity" (Walsham, 2006:320). As such the data analysis took an interpretive form. Data was not analysed in isolation. Instead knowledge was obtained through interpretation and social construction, acknowledging that data collection is a subjective endeavour that requires further interpretation and construction.

3.3.3. Research methodology

To gain a clear understanding of the publishing industry, its markets, players, digital products and strategies, the researcher needs to view aspects from a wide range of perspectives. This research adopts a mixed methods approach in order to provide a rich and contextual basis for interpreting and validating results.
A mixed method approach was chosen for the following reasons:

- A mixed method approach combines the strengths and weaknesses of quantitative and qualitative methods, ensuring results of high quality (Leahey, 2007).
- A mixed method approach produces enriched explanations for results. "It provides the opportunity to consider problems from different angles, and to obtain opinions from various perspectives" (Tian, 2008). This ensures confidence in results and greater understanding.

- Some questions cannot be answered by using quantitative methods, but must be accessed with qualitative methods (Tian, 2008). Cavana, Delahaye and Sekaran (2000) indicate that a qualitative approach is the most effective means of uncovering the hidden or tacit knowledge of respondents.

This thesis also follows the "concurrent nested strategy". This strategy uses both quantitative and qualitative methods, one "nested" in the other. Morse (1991) states that some quantitative data could be embedded into qualitative design. Although the primary design of this thesis is qualitative, a quantitative data collection method in the form of surveys is employed to gather empirical data. During the analysis phase of this project, this data will then be enhanced and supported by qualitative analysis and findings on publishing trends, digital technology and business models.

3.3.4. Data collection

A mixed method of data collection was used in this study to profit from the benefits of both qualitative and quantitative methodologies.

Elements of both qualitative and quantitative research methods were used to investigate research objective1:

> How do trade publishers in South Africa (1) perceive and (2) utilise the opportunities and challenges presented by digital publishing?

The first part of the research question is open and invites subjective input from participants. In order to arrive at a comprehensive aggregate of publishers' perceptions about digital publishing in South Africa, qualitative research methods were used. Qualitative data sources include interviews and questionnaires, observation and participant observation (fieldwork), documents and texts, and also incorporates the researcher's impressions and reactions (Meyers, 2009). In this study, structured questionnaires and semi-formal interviews were used to gather information from the point of view of participants.

Part 2 of the research question relates to the processes and practicalities of digital publishing within publishing companies. In order to gain a realistic understanding of the changes that publishers are making to their businesses processes, elements of quantitative research methods were vital to gather empirical information about the current state of the digital publishing industry in South Africa.

A. Literature review

Prior to the choice of data collection methods, a comprehensive literature review was conducted. This involved an extensive reading programme covering a diverse range of material including journal articles, books, conference papers, website content, statistical industry reports, results of previous studies and newspaper articles. The literature review was conducted to gather background information and gain insight into the topics of the evolution and current state of e-books and the digital book publishing industry, worldwide and in South Africa specifically, and the nature and effect of disruptive technology on businesses.

Webster (2002) advocates the use of a concept matrix when compiling a literature review. The concept matrix helps to divide authors' work into categories of relevant information, rather than investigating single sources in isolation. This is conducive to comparing and contextualising information on key points from the very start of the literature review. The concept matrix that emerged from the research is represented in the table on pages 77–79

Because of the scarcity of information on the situation in South Africa – as can be seen in the table – further empirical research was required to supplement the data available.

Table 3.1. Literature review concept matrix

ARTICLES	CONCEPTS							
	Disruptive technology			E-books				SA Context
	Definitions	Case Studies	Approaches	Time - line	Pros/ Cons	Copyright	E-readers	Digital initiatives
Agee, J. 2003				X	X		X	X
Atwell, A. 2009					X	X	X	X
Atwell, A. 2009					X	X	X	X
Atwell, A. 2010					X	X	X	X
Barry, I. 2001	X	X	X	X	X	X	X	
Brieger, P. 2010				X	X		X	
Burk, R. 2001				X	X	X	X	
Carlson, S. 2005				X	X	X	X	
Carreiro, E. 2010				X	X	X	X	
Christensen, C. M. 1997	X	X	X					
Christensen, C.M., Craig, T., Hart, S. 2001	X	X	X					
Christensen, C.M., & Raynor, M. 2003	X	X	X					
Christensen C.M. 2006	X	X	X					
Chua, W.F. 1986	X	X	X					
Clark, C. 1996					X	X	X	
Clark et al. 2008				X	X	X	X	
Coker, 2010					X	X	X	
Danneels E. 2002	X	X	X					
Danneels E. 2004	X	X	X					
DeTienne D.R. and Koberg; C.S. 2002	X	X	X					
Dhillon et al. 2001	X	X	X		X	X	X	
Engelbrecht, L. 2009				X	X	X	X	X

Engelbrecht, L. 2011					X	X	X	X
Gall, J.E. 2005					X	X	X	
Gobry, P. 2010				X	X		X	
Gonzales, G. 2010				X	X	X	X	
Gordon, Kung and Dyck, 2008	X	X	X			X	X	
Haslam, K. 2012				X		X		
Hawkins, D.T. 2002				X	X	X	X	
Helfat et al. 2002	X	X	X					
Herther, N. 2005		X		X	X	X	X	
Hillesund, T. and Noring, J.E. 2006				X	X	X	X	
Humphreys, A. 2004				X	X	X	X	
Hyatt, S. 2003				X	X	X	X	
Italie, H. 2009						X	X	X
Kostoff, R.N., Boylan, R., Simons, G.R. 2004	X	X	X					
Kovak, M. 2007			X	X	X	X	X	
Lafferty, S. and Edwards, J. 2004	X	X	X	X	X	X	X	
Mahlong, A. 2009				X	X	X	X	X
Marsh, S. and Prodhan, G. 2008				X	X	X	X	
Mawson, 2010				X	X	X	X	X
McAllister, N. and Vivian, S. 2002			X	X	X	X	X	
Miller, R. 2006				X	X	X	X	
Moore, G. 1991	X	X	X					
Mulligan, M. 2010	X	X	X		X	X	X	
Mussinelli, C. 2010				X				
Neilan, C. 2009				X	X	X	X	

Neilan, C. 2009					X		X	
Neill, G. 2009				X	X	X	X	
Nichols, M. 2009				X	X	X	X	X
O'Leary, M. 2003				X		X	X	
Overdorf, M. and Barragree, A. 2001	X	X	X	X	X	X	X	
Paap, J. and Katz; R. 2004	X	X	X					
Page, B. 2009					X	X	X	
Purcell, E. 2010				X	X	X	X	
Rao, S.S. 2001				X	X		X	
Reid, C. 2010				X	X	X	X	
Reuters. 2010				X		X	X	
Rogers, M. 2006				X	X	X	X	
Rothman, D. 2006				X	X	X	X	
Singh, 2010				X	X	X	X	
Teather, 2010				X		X	X	
Thompson, J. 2005			X	X	X	X	X	
Tian, X and Martin, B. 2009		X	X	X	X	X	X	
Tushman, M. L and O'Reilly, C.A. 1996	X	X	X					
Vasileiou, M. and Rowley, J. 2008				X	X	X	X	
Warnick, B. 2005				X	X	X	X	
Wyatt, E. 2008				X	X	X	X	
Yu Dan, Hang Chang Chieh. 2008	X	X	X					

Primary research consisted of an online survey, and three follow-up interviews with selected participants to incorporate a concurrent nested research design as discussed above. An online survey was considered the best way to gather information, as this was the easiest and quickest way to get the survey out to respondents. It also presented respondents with a very simple

procedure to follow. They could simply click on the link that was sent to them and complete a form online. Follow-up interviews were vital to gain a more in-depth understanding of the issues that emerged from the literature review and the survey.

B. Surveys

Both qualitative and quantitative methods were used to collect and analyse data from survey questionnaires. An online survey was distributed to publishers through Google Documents' Online Survey tool in February 2011. The questionnaire included open and closed-ended questions and invited respondents to add additional comments.

C. Sampling

In order to arrive at samples for the surveys, sampling was used. Neuman (2003) and Tian (2008) emphasise that sampling is a major process in any research investigation, either quantitative, qualitative or mixed, and enables selection of "a few from the many" in order to carry out empirical research.

Neuman (2003) says that the purpose of sampling for the qualitative approach is to collect cases, events, or actions that clarify and deepen understanding. Sampling processes are different in qualitative and quantitative approaches. Qualitative sampling by researchers focuses on how the sample highlights the main areas of social life. Researchers aim to find cases that will enhance what they learn about the processes of social life in a specific context (Neuman, 2003). Neuman also points out that as opposed to qualitative sampling, quantitative researchers aim to obtain a small sample from a large group and study the sample, leading to an accurate generalisation of the larger group.

This thesis employs qualitative purposive sampling, as the nature of the research objectives required information from very specific sets of respondents. The respondents selected for the publishers' survey were South African trade publishers that publish local content for the trade market and who were involved in or had considered involvement in digital publishing.

The publisher sample was small and focused. This ensured a more concentrated and dedicated investigation on the backdrop of each participant's context and environment. The Publishers' Association of South Africa (PASA) has an online database of publishers registered in South Africa. This database is a valuable tool for searching for publishers in a specific field. This database was used to identify publishers in South Africa that publish books for the trade market. Nineteen suitable publishers were identified that publish local content for the trade market. These 19 publishers were then contacted by email or telephone to request their participation in the research. Of the publishers originally contacted to take part in the study, 16 publishers (84% of the original sample) responded positively and expressed an interest in digital publishing and a desire to contribute to the research. Some publishers failed to respond at all, and some indicated that they were not interested in taking part as they were not planning on publishing e-books in the foreseeable future. Of the 16 publishers that responded positively, three turned out on further investigation to not actually be publishers of books for the trade market, and so they were excluded.

This left a sample of 13 trade publishers, which is 68% of the publishers originally contacted. This included incumbent firms (well-established, traditional print publishers) and new entrant firms (recent small publishing start-ups).

The sample was made up as follows:

- Eleven established, traditional publishers:

1. An established, medium-sized local publisher publishing in a range of categories, from fiction to academic works.
2. A large, established publisher that recently merged with an international publishing house.
3. An established, medium-sized publisher that is the local trade division of a large international publishing house.
4. A large, well-established publisher of general books that also acts as a distribution agent for overseas publishers.
5. An established, small publisher of children's trade and educational books.
6. A large, well-established general publisher that is the local division of an international publishing house.
7. An established, medium-sized publisher of general books.

8. A well-established, large publisher of mainly tertiary, but also some trade books.
9. A well-established, large publisher of educational, tertiary, reference and trade books, that is the local division of a large international publishing house.
10. A well-established, large publisher of educational and trade books.
11. A well-established, medium-sized publisher of trade books.

- Two new entrants with a focus on digital publishing:

1. A new entrant, small publisher of only e-books. A division of an established local publisher.
2. A new, small publisher of trade non-fiction.

D. Structure of the publishers' survey

The publishers' survey (see Appendix A) aimed to establish the current state of digital publishing in the South African trade industry, to investigate the related barriers and opportunities publishers perceived, and to assess the impact that new technologies are having on publishers' business models. In designing the survey, the choice of variables was derived from what was uncovered in the literature review. The questions were also framed to address the research question and sub-questions.

The survey questions were organised into four sections. The first section (Section A) of the publishers' survey was used to establish the profile of each participant – to establish the size (in terms of staff and publication lists) and current publishing activities. Turnover from e-book sales was not investigated, as this data might be a sensitive and confidential issue to publishers at this early stage of digital publishing activities.

The second section (Section B) was aimed only at those participant publishers that were already publishing digitally. The questions in this section firstly established the current level and rate of digital publishing in participants, and investigated the digital publishing process in terms of decision making, timeframe, barriers, practicalities and resources. The third section (Section C) was aimed at those participants that had not to date published digital books. Questions investigated their reasons for not venturing into digital publishing and their digital strategies for the future. Section D aimed to establish to what extent publishers use

technology in their companies, and especially to what extent they make use of Internet communication channels, and how these activities have changed their business models. Lastly, participant publishers' views on the future of digital publishing in South Africa were tested through open-ended questions.

The publishers' survey consisted of a mixture of open-ended, multiple-choice and Likert scale questions. As stated by Cooper and Schindler (2003), the Likert scale is the most used variation of the summated rating scale, which enables the recording of the participant's attitude toward an item of interest. This was instrumental in rating the perceptions that participants held about e-book acceptance and the future of digital publishing. Open-ended questions were also included, as this type of question invites clarification and influences the respondent less than multiple-choice or dichotomous questions (Struwig & Stead, 2001). These were vital in understanding publishers' subjective perceptions.

The survey was restrictive in the sense that responses were not always elaborate, and in a survey situation the researcher has no means of controlling respondents' responses to ensure that they answer comprehensively. Issues were mentioned without further information being provided. In order to gain further insight into certain issues that emerged from the survey, semi-structured interviews were held with a small selection of participants. Findings on publishing trends, value chains, supply chains, digital technology and business models were investigated in more depth in the interviews to complement the largely quantitative information that emerged from the survey responses. The perspectives of various publishers on the subject of the digital revolution provide alternative data and viewpoints on digital technologies, and on the comfort levels of respondents with their existing business models (Tian, 2008). The semi-structured interviews served to delve into these issues where the survey responses fell short.

E. Semi-structured interviews

Semi-structured interviews were thus undertaken mid-2011to gain further insight into the issues that emerged from the literature review and the results of the publishers' survey. Fontana and Frey (2000) refer to three types of qualitative interviews: structured, unstructured and semi-structured.

Structured interviews follow a pre-determined and standardised list of questions that are posed to the interviewee in a formal manner and setting. Unstructured interviews on the other hand are much more informal, with the interviewee taking the lead by sharing information of his or her choice, in the sequence and manner of his or her choice (Fontana and Frey, 2000). In a semi-structured interview, the researcher may have prepared some questions beforehand as with structured interviews, but the tone is much more informal and there is room for improvisation (Fontana and Frey, 2000).

Semi-structured interviews are reasonably informal or conversational, and flexible in that they can be used in conjunction with a variety of other research methods and theories (Fontana and Frey, 2005). The informal and flexible nature of semi-structured interviews is ideal for mixed methodology research such as the current research project, where a combination of qualitative and quantitative methods was employed.

The sample for the interviews was selected using purposeful sampling. Based on their responses in the publishers' survey, four respondents were chosen who: (a) were in executive positions that enabled them to understand their companies' approach to developing digital publishing strategies; and (b) were in companies that showed the most innovation and growth in digital publishing activities, i.e., those that had already engaged in digital publishing to the largest extent. These requirements in selecting interviewees ensured that they were the best equipped to supply informed, knowledgeable information on their companies digital publishing habits and strategies.

Some of the questions were formulated before the interviews took place. These questions were designed to elaborate on the feedback that interviewees gave in their survey responses, focusing on areas where further information was required or where interesting factors were raised that had not been taken into account before the survey. Other issues that were raised during the course of the interview were discussed informally to allow interviewees to speak their minds freely without influence or guidance from the researcher.

The interviews were held telephonically approximately one month after the results of the survey had been analysed and assimilated. Interviews lasted approximately twenty minutes

and were followed up by a series of email communications between the researcher and the interviewees to clarify issues.

3.4. Data Analysis

The mixed method of data collection through both qualitative and quantitative methods necessitates both qualitative and quantitative methods of data analysis. Concurrent nested strategy was used, where both approaches are used, one nested in the other. The data collected using both qualitative and quantitative methods are mixed during the analysis phase of the project (Creswell, 2003).

3.4.1. The role of disruptive technology theory

Data will be analysed qualitatively against the backdrop of disruptive technology theory to meet research objectives (4) and (5):

4. Considering digital publishing within the framework of disruptive technology theory.
5. Developing a model of requirements and objectives for publishers to successfully assimilate digital publishing in their business practices.

The information that emerges from quantitative and qualitative data collection methods (survey) and qualitative data collection methods (literature review and interviews) will be analysed qualitatively through such methods as comparison and integration. Analysis of the empirical research is vital in building knowledge from a South African perspective, as there is a significant lack of local sources on digital publishing practices in South Africa.

3.4.2. Data analysis methods

Descriptive methods were used to analyse the responses quantitatively. For each question, the main descriptive summary produced was determined by frequency distributions. The two types of responses elicited by this survey are categorical and ordinal:

- Nominal choices have no numerical or "preferred" values. The answers to each question consist of nominal data (age groups, university roles, gender, different kinds of digital devices and technology, and online activities) (Tian, 2008).
- Ordinal choices refer to situations where respondents are asked to rate or scale choices, for example from very important to not important (Tian, 2008). Ordinal data consists of the number and percentage of people who select each point on a scale.

Data analysis in qualitative research is a process that is less distinct and measurable than that found in quantitative research (Struwig & Stead, 2010). Kaplan and Maxwell (1994) argue that the goal of understanding a phenomenon from the point of view of the participants and its particular social and institutional context is largely lost when textual data are quantified. In this case, there is a lack of previous research on the chosen topic and participants' subjective perceptions will be vital to understanding and analysing the results.

Exploratory and explanatory methods were used to analyse survey responses qualitatively. Data was entered into an MS Excel spreadsheet to categorise responses. The data was then assimilated and analysed on the backdrop of the context provided from the literature review, taking the interpretive approach.

Spiggle (1994) describes the following data manipulation operations for analysing data qualitatively:

Categorisation – This consists of "coding" or identifying units of data (like a passage of text) as an example of a more general phenomenon.
Abstraction – Builds on categorisation and surpasses it in that it collapses empirically grounded categories into more general constructs of interest.
Comparison – Comparison explores differences and similarities in the data currently collected and provides guidelines for collecting additional data.
Dimensionalisation – This involves identifying properties of categories. Once a category has been established, it is possible to further explore the unique attributes and characteristics (the dimensions) of the units that belong in the particular category.
Integration – Requires the mapping of relationships between conceptual elements. May take

the form of gestalt connections, causal linkages, circular connections or other explicit associations.

Iteration – Research does not take place in sequential steps, but is a constant process of feedback and iteration between different stages, allowing one stage to shape others and vice versa.

Refutation – Refutation involves deliberately questioning and scrutinising one's results and inferences to establish validity.

These operations do not occur in an ordered, sequential fashion but are utilised throughout the data analysis procedure. In this study, categorisation was employed by entering the data that emerged from the publishers' survey into an MS Excel spreadsheet. This was firstly used to extract quantitative information, and to extract more precise numbers and statistics from the data. Abstraction was then used to assimilate the data in order to identify trends and issues that emerged from the survey responses.

Comparison was a useful method of gaining insight into how responses measured up against each other. This was useful to find similarities and differences in the data, which is not only necessary to identify trends, but is also vital in validating the data. The data from the survey responses was compared to the data that emerged from the in-depth interviews, and also to the assumptions and trends that were inferred from the literature review.

Dimensionalisation was used to further explore each trend or issue that emerged from the data categorisation. Integration also came into play here, as the issues present in the data categories were compared and integrated with the corresponding issues that were explored in the literature review. Iteration was inherent in the research process as the approach was interpretive and qualitative. Research was not a sequential procedure but was done in a constant feedback loop of discovery and investigation. Issues that emerged gave rise to new issues and perspectives, which meant the researcher continuously had to switch back and forth between different stages of research to include new insights.

Although it was difficult to refute results with empirical data, the results of the survey and interviews were subjected to criticisms of certain issues found in the literature review.

3.5. Ethical issues

Creswell (2003) and Tian (2008) emphasise that ethical issues apply to all research approaches and are a vital part of research. This research project was subject to the Ethics Policy of the University of Pretoria, South Africa.

All survey and interview participants were provided with an explanatory statement and were requested to give formal written permission for their data to be used. The explanatory statement served the following purpose:

- To provide the background to the research, the need for it, and the nature and objectives of the project.
- To acknowledge that input from respondents would provide extremely crucial insight into the research objectives and would benefit the publishing industry in South Africa
- To assure respondents that the research was subject to the official ethics process of the University of Pretoria, and to reassure participants that their names and contact details would not appear anywhere in the thesis.
- To confirm that all information would be treated in complete confidence, although the findings would be aggregated and written up in the project thesis.
- To assure the anonymity of all respondents.

All respondents and interviewees agreed to the terms of the statement and were comfortable with the ethical conduct of the research.

3.6. Reliability and validity

Reliability is a statistical measure of how reproducible a survey instrument's data are, while validity provides the basis of how well a survey instrument's data measure what they should (Litwin, 1995).

Litwin (1995) points out that any set of data collected by means of surveys will inevitably contain errors. That is why it is important that before a survey instrument can be used to

collect meaningful data, researchers must conduct tests for reliability and validity to verify accuracy, irrespective of the quantity of data involved (Litwin, 1995; Tian, 2008).

The following two methods for testing reliability of the surveys were used:

- *Alternate-form reliability*: Uses differently worded stems or response sets to obtain the same information about a specific topic. This requires two items in which the wording is different but aimed at the same specific variable and at the same vocabulary level (Litwin, 1995).
- *Inter-observer reliability*: Measures how well two or more respondents rate the same phenomenon. This may be used to demonstrate reliability of a survey or may itself be the variable of interest in a study (Litwin, 1995).

The questions in the survey were structured to support and confirm each other by enabling key topics to be investigated more than once, with slightly different wording or a different type of question. For example, the two questions below serve to establish each other's reliability:

- *Has the publisher's backlist been converted to digital format?*
- *What percentage of the publisher's backlist has been converted to e-books? If none have been converted, are any being considered for digital publication?*

To test validity, the following two methods were used, as described by Litwin (1995):

- *Face validity*: Testing the face value involves a casual review of how good an item or group of items appear to be, and is assessed by individuals with no formal training in the subject under study.
- *Content validity:* Requires a formal review of how good an item or series of items appear to be, as assessed by individuals with expertise in some aspect of the subject being studied.

To test face validity, the surveys were sent to five individuals with no formal training or expertise in the subject of the publishing industry or digital publishing. They found that the

surveys were accessible and understandable, and thus valid. To test content validity, the surveys were sent to the researcher's supervisor for assessment. The criticism gained from this assessment was used to further shape the surveys until the supervisor was satisfied with the content validity.

3.8. Conclusion

This thesis will employ a combination of descriptive, exploratory and explanatory research. The research will be approached from an interpretive perspective, attempting to first describe the status of the digital publishing industry in South Africa and then to interpret the findings. Data collection methods will also take a mixed-method approach to gather information qualitatively and quantitatively. A concurrent nested strategy as described by Morse (1991) will be used whereby some quantitative data will be embedded into qualitative design. However, the research will be more qualitative in nature than quantitative.

Data collection methods consisted of:

- Literature review
- Publishers' survey
- Semi-structured interviews.

Qualitative analysis was used to gain insights from the literature review, while both quantitative and qualitative methods were used to analyse the survey responses. Spiggles' (1994) data manipulation techniques of *abstraction, configuration, comparison*, *dimensionalisation, integration, iteration and refutation* were used, not sequentially, but throughout the analysis process. Reliability was tested using *alternate-form* reliability and *inter-observer* reliability, while validity was tested for *face validity* and *content validity* as defined by Litwin (1995).

The next chapter provides an analysis of the data that was gathered, as arrived at using the methodology discussed in this chapter.

CHAPTER 4

Data Analysis

4.1. Profile of respondent publishers

Thirteen publishers, identified in terms of the criteria set out in 3.4.2., participated in the survey. The first section of the publishers' survey took the form of descriptive research. Data were collected to describe the current digital publishing environment in order to address research objectives 1 and 3:

1. Analysing the current digital publishing environment in the South African trade publishing industry.
3. Investigating the use of the Internet and new communication channels within South African trade publishing companies.

The survey results provide empirical data establishing a profile of each participant in terms of the size of the company, and its digital publishing activities to date. Descriptive analysis answers "who" and "how" questions (Creswell, 2008).Analysis of this data helps to establish who the players in the South African digital trade publishing industry are, to provide an accurate snapshot of their digital publishing activities as well as the ways in which they use the Internet and its various communication channels in their businesses.

The survey data established a profile of participant publishers in terms of the following factors:

- The number of full-time staff employed
- Number of titles published annually
- Categories of publication
- Number of trade titles published annually.

Figures 4.1, 4.2 and 4.3 below present a summary of the respondent profiles that emerged from the data:

Fig. 4.1. Number of full-time staff employed by participant publishers (n = 13)

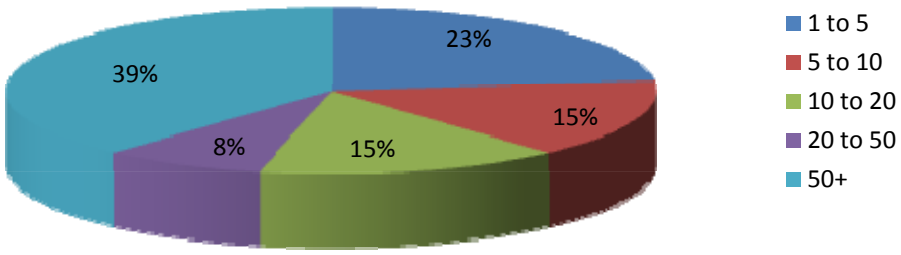


Fig. 4.2. Number of titles published annually by participant publishers (n = 13)

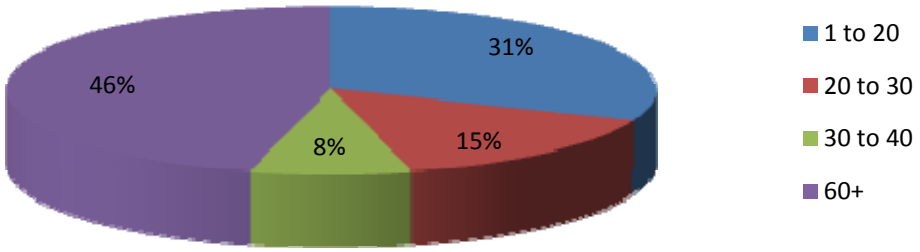
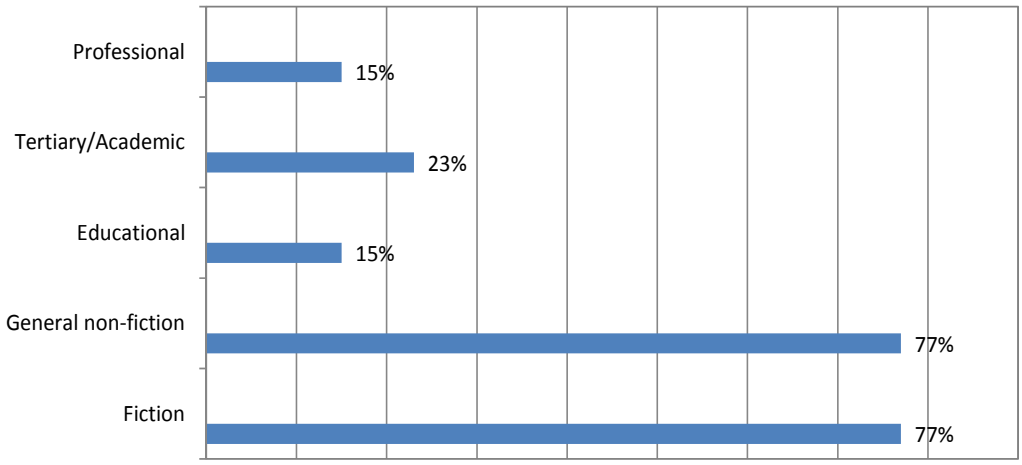


Fig. 4.3. Participants' categories of publication* (n = 13)



*Percentages may add up to more than 100%, as participants could select multiple choices.

The data revealed that a large section of respondents were small to medium-sized publishers. Thirty nine percent (or 39%) of respondents indicated that they employ over 50 full-time employees. The second-largest group of respondent (comprising 23%) were small publishers employing between one and five full-time employees only.

It is interesting to note that the two largest groups of respondents fall at opposite ends of the demographic spectrum in terms of size and output. This was reiterated by the data showing that the largest group of respondents (60%) publish between 30 and 40 titles annually, and the second-largest group (31%) publish only one to 20 titles per year. Keeping this in mind, it is significant that three of the participant publishers are also international publishers, some serving as South African agents for a number of UK and US publishers. These publishers/distributors import hundreds of titles each year. This aspect of their operations was not included in the research. Only e-books published locally were considered for the purposes of this study. The remaining respondents that did not fall under one of these two extremes indicated that they employ between five and 50 full-time staff and publish between 20 and 40 books annually.

In terms of the larger publishing industry, this data correlates to the results published in the PASA industry survey of 2010 (PASA, 2011). The report showed that the majority of trade respondents had either between one and 10 full-time employees, or more than 20, with more than half of the latter group having more than 50 full-time employees.

One of the prerequisites for publishers to be included in the sample was that they needed to publish local trade books. All of the respondents met this prerequisite: 77% of respondents indicated that they publish both fiction and non-fiction titles for the trade market, while the other 23 % publish either fiction or non-fiction for the trade market. In addition, some respondents publish for other segments: 15% of respondents publish titles for the professional and educational markets, and 23% publish tertiary or academic titles. These figures will become significant in the discussion in Chapter 5, in light of Overdorf and Barragree(2001), O'Leary (2003) and Guenette et. al (2010), who analysed the potential encroachment of digital publishing across different tiers of distribution – reflected by the different publishing categories.

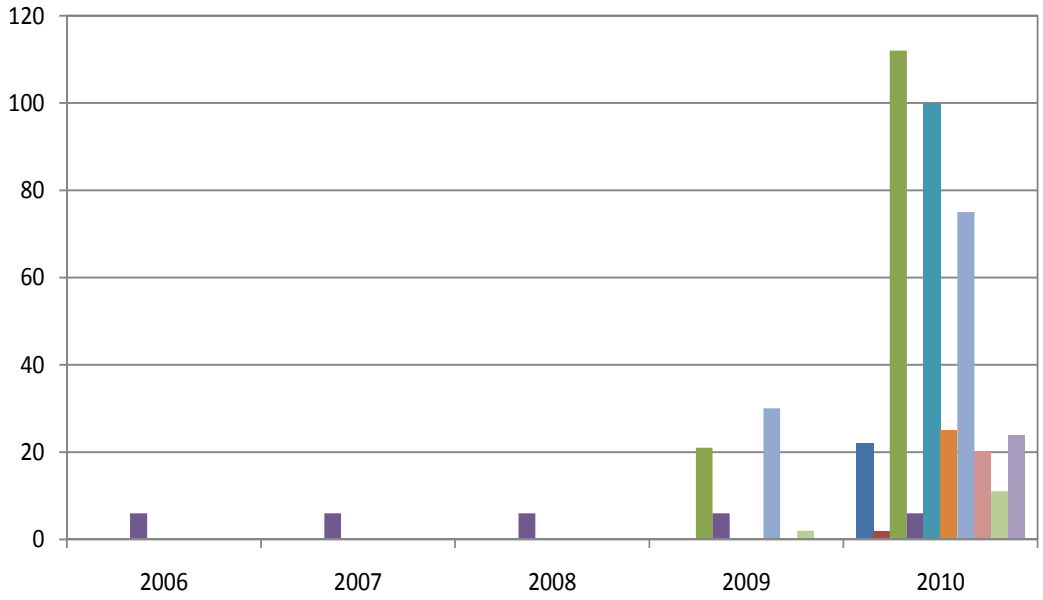
The data reveals that the majority of respondents are split between large publishers that publish more than 60 trade titles annually, and small publishers that publish less than 10.

4.2. Digital publishing activity

Of the 13 participant publishers, only three (23%) indicated that they currently do not publish any e-books. Two of these publishers started publishing digitally in November/December of 2010. The remaining publishers all – with the exception of one participant, that has been publishing digitally since 2006 – started publishing e-books over the course of 2009 and 2010.

Figure 4.4 below shows how each participant publisher's digital list has grown since inception, with each coloured bar representing a participant publisher. There has been a significant increase in e-books published between 2009 and 2010.

Fig. 4.4. Number of e-books published annually by each participant (n = 10)

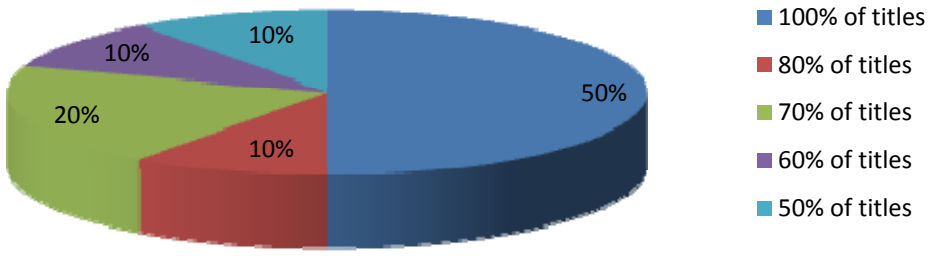


As this figure shows, 80% of participants that are actively publishing digital books indicated that *all* their e-book titles are trade publications. One participant indicated that none of their e-books are for the trade market, as they only publish e-books for the tertiary market at this

point. Another participant publishes 60% of e-books for the trade market, and the remaining 40% for the professional market.

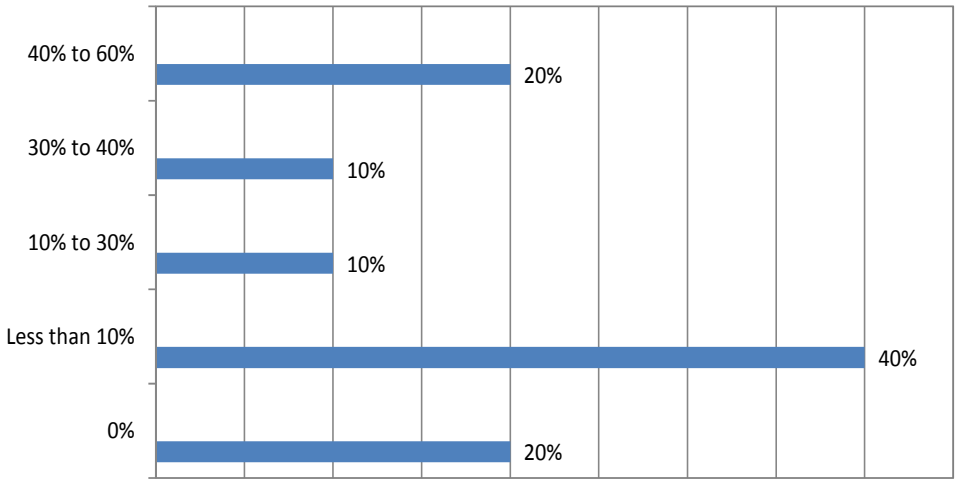
Those publishers with digital publishing activities indicated that the majority of their new titles are considered for digital publishing. Figure 4.5 below represents the percentage of new titles consider for digital publishing as indicated by each participant. The factors that play a part in publishers' decision to publish titles digitally were explored further in the second section of the survey.

Fig. 4.5. Percentage of new titles considered for digital publishing (n = 10)



Most publishers indicated that a significant portion of their backlist has been converted to digital books. See Figure 4.6 below:

Fig. 4.6. Percentage of publishers' backlist titles converted to digital (n = 10)

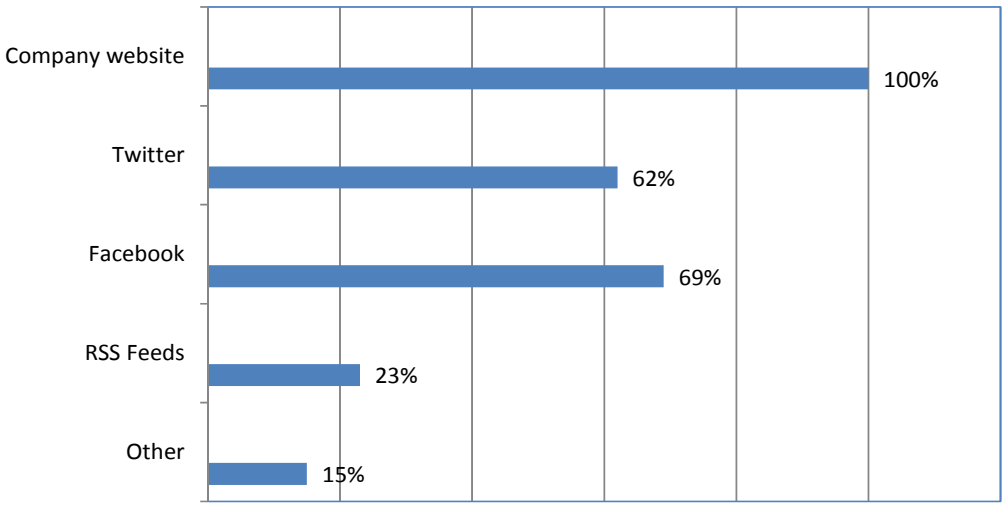


Those publishers that have converted some of their backlists to digital books, explained that the process was ongoing. One publisher specified that their target for backlist conversion is 50%. They did not specify a specific deadline for this backlist conversion. Another publisher explained that converting back-list titles to e-books is a relatively quick and cheap method of "testing the water" with digital publishing; to experiment with formats and monitor sales with limited expenses.

Tian (2008) highlights the opportunities afforded to publishers by Internet communication channels like websites and social media. The strategic use of these tools has the potential to reduce distribution costs, establish direct on-to-one relationships between content owners and consumers, and to have a major impact on content production and supply chain distribution.

Respondents were asked to what extent they make use of websites, RSS feeds and social media such as Twitter and Facebook. All 13 participants indicated that they make use of a website. The majority also make use of Twitter and Facebook, whereas only 23% of the 13publishers use RSS feeds. One participant also uses blogs and other web applications like Dropbox.

Fig. 4.7. Participants' use of Internet communication channels (n = 13)



4.2.1. Challenges, opportunities and barriers experienced by publishers

Section 2 of the publisher survey was formulated to address Research objective 2:

> 2. Determining the challenges, opportunities and barriers pertaining to digital publishing that South African trade publishers are experiencing.

The literature review formulated a framework of the advantages, disadvantages, opportunities and threats that publishers experience in the transition from traditional print publishing to digital publishing. Rights management emerged as one of the most important issues that publishers need to take into account when considering publishing a title digitally. There seems to be a consensus that fear of digital piracy and the resulting high level of DRM implemented by publishers makes it impossible for e-books to succeed in the market place (Burk, 2001).

Other considerations that emerged from the literature include inconsistent pricing models; lack of industry-wide standards in terms of delivery platforms and formats and the possibility that these formats might become outdated and unusable in future as technology improves; impact on supply chains and production lines; and market acceptance as it relates to publishing category and genre (Overdorf and Barragree, 2001; Carlson, 2005; Clark et. al., 2008; Gordon, Kung and Dyck, 2008; Humphreys, 2004; Hyatt, 2003; Rogers, 2006; Rothman, 2006).

On the basis of the literature, e-book publishers were asked to rate the importance of the following factors in deciding whether to publish a title digitally or not: DRM issues, genre, market, production issues such as printing costs and conversion costs, and shelf life.

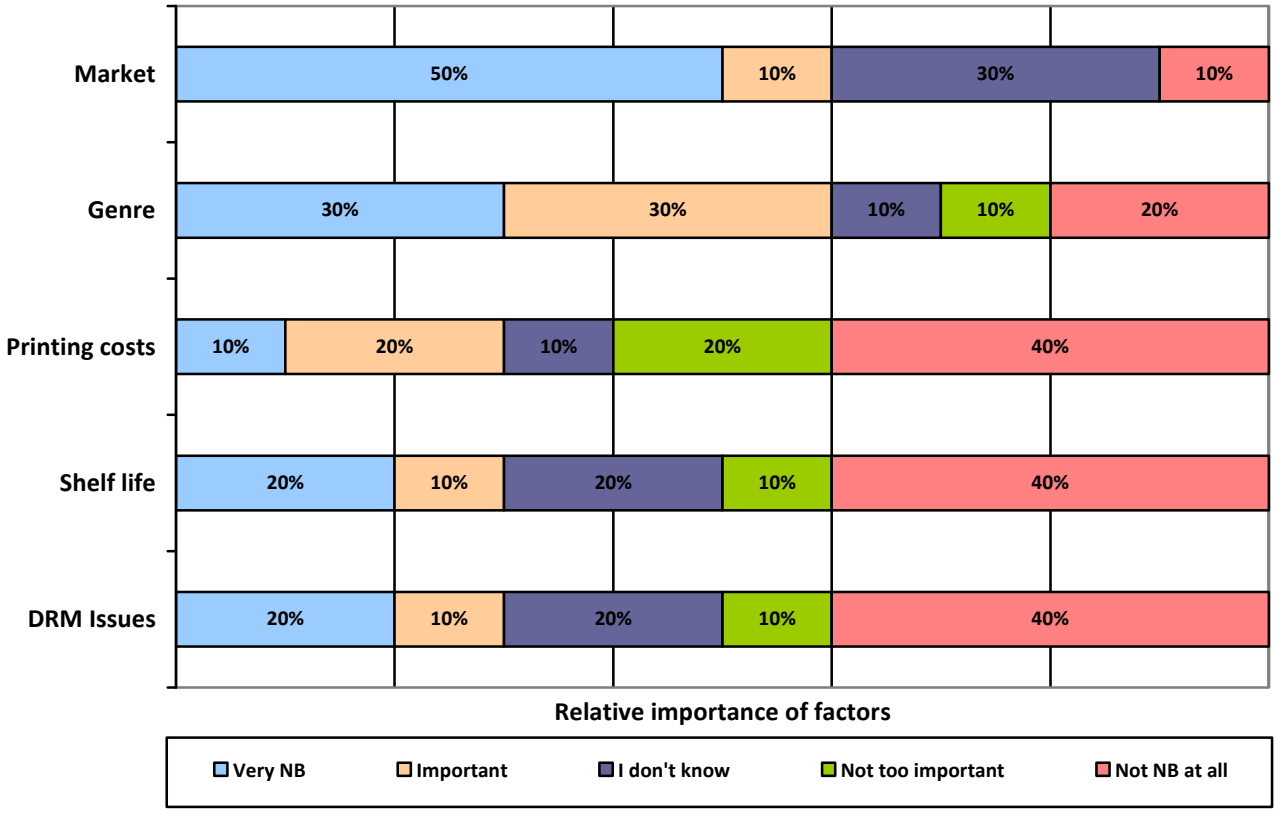
The respondents identified and rated the following as the most important factors impacting on their decision to publish specific titles digitally or not:

1. Market
2. Genre
3. DRM issues
4. Shelf life (i.e how long a book would be attractive to the market)
5. Printing costs.

The relative importance of each factor as identified by the ten participant e-book publishers, is represented in Figure 4.8.

A book's intended market emerged as the most important factor in deciding whether to publish digitally or not. This is especially important in terms of the demographic of the target market, especially in terms of age, as the literature has suggested that younger generations adapt more easily to digital books. Genre of the book is also an important factor as Overdorf and Barragree's (2001) tiers of market acceptance have shown that there are varying levels of market acceptance among different levels of distribution.

Fig. 4.8. Relative importance of factors in digital publishing decisions (n = 10)



The importance of printing costs was a surprisingly unimportant consideration to publishers. This might be because traditional publishing models are so inherently used to factoring in printing costs that it becomes an inherent cost. The possibilities of saving money on printing might take a while to sink in as publishers gradually move towards digital publishing.

DRM issues and shelf life of e-books emerged as factors that publishers seemed quite ignorant about. Only 30% of the 10 publishers deemed these factors as important. The

literature has shown the importance of e-book formats to consumers, and the importance for them to know that a product they buy will not be unusable on future devices.

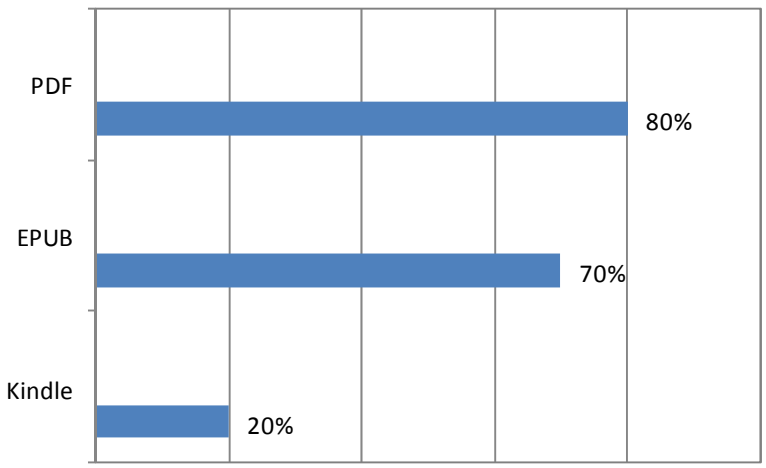
A. E-book formats

Publishers confirmed the literature review's findings that the variety of e-book formats available, and the lack of standards in implementing those formats presented a difficult challenge for them to overcome in deciding which formats to publish e-books in.

E-book formats emerged as a contentious topic among respondents. Publishers were asked to identify and elaborate on their choice of e-book formats and software. The literature identified PDF, EPUB and AZW for Kindle as the most popular e-books formats, in that order (Coker, 2010).

The results of the publishers' survey correlate with Coker's (2010) findings, with PDF and EPUB emerging as the most popular choices by far, and .AZW in third place with 20% of the 10 respondents using the Kindle format. The majority of publishers believe that the Kindle has not sufficiently permeated the South African market (see Figure 4.9) to make it a viable format.

Fig. 4.9. Preferred e-book formats among publishers (n = 10)



Most publishers indicated that they use EPUB and PDF because they believe that these are the most commonly used e-book formats. The following emerged as publishers' motivation to use EPUB format:

- Converting EPUB to Kindle(AZW) format is simple
- EPUB is emerging as standard e-book format
- "Reflowable" property of text makes books versatile
- Most retailers/aggregators use EPUB.

The following advantages of using PDF were identified by publishers:

- Low skill level required for conversion
- PDF remains one of the most-used formats
- Retains typographic elements
- Allows quality image reproduction.

Publishers indicated that their research convinced them that EPUB and PDF are the best formats for reading on multiple devices and platforms; the current uptake of other formats does not make using them worthwhile at this stage. Although the Kindle is a prevalent market leader, both EPUB and PDF can be converted to Kindle without too much trouble.

One publisher pointed out that recent developments, e.g. iPad apps, are changing the current format situation, eliminating colour restrictions and facilitating a truer reproduction of what is achieved in a physical publication.

Only two publishers mentioned XML, revealing that they would be converting their front list titles into XML, which will enable them to "create multiple formats and publish simultaneously with the release of the print book".

B. Pricing structures

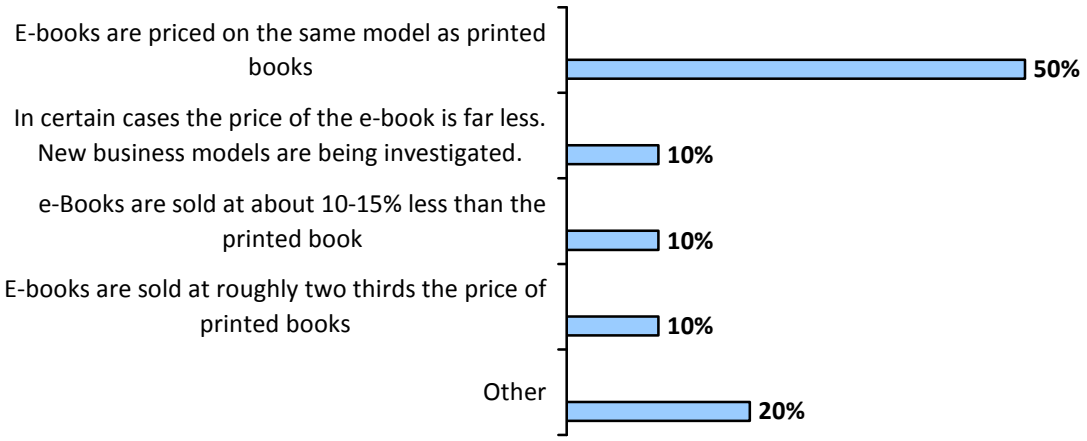
The literature revealed a significant level of anxiety and uncertainty in the publishing industry regarding e-book pricing (Hyatt, 2003; Herther, 2005; Purcell, 2012; Reid, 2010)

Hyatt (2003) feels that the lack of acceptable pricing and licensing mechanisms is hampering the acceptance and growth of the e-book industry.

A similar level of uncertainty pertained amongst survey respondents and approaches to e-book pricing differed significantly. Five publishers out of the 10 e-book publishers indicated that their digital books are priced on the exact same model as their print books. One participant indicated that they had not developed pricing strategies yet, and two others use a pricing strategy that renders e-books cheaper than their print counterparts.

The remaining two of the 10 e-book publishers indicated that they used other methods not specified in the survey, and did not elaborate. This further illustrates that publishers are not sure how to approach pricing e-books. This See Figure 4.10 below.

Fig. 4.10. Participants' e-book pricing strategies (n = 10)



4.2.2. Perceived barriers to digital publishing amongst publishers that do not publish e-books

Three out of the 13 participants indicated that they did not publish digital books at the time of the survey at all. In listing the reasons for this, publishers identified two main barriers to digital publishing in their companies: firstly, the South African e-book market is considered too small, and secondly, the lack of technical skills within companies presented a problem.

Interestingly enough, participants chose these two barriers over several other options that were presented to them. Digital rights management issues, or the variety of e-book formats and platforms were not identified as major problems. This might be indicative of a concerning lack of knowledge about the issues surrounding DRM. The literature review revealed that e-book formats and accessibility are very important factors for consumers. DRM issues and the lack of software standards mean that users are forced to choose very specific devices that dictate which titles they have access too. Users must then become comfortable with the limits imposed on them by their particular device and the related formats and platforms (Herther, 2005). Yet DRM is a necessary "hindrance", as it is vital for copyright and protection of intellectual property. Publishers need to be aware of these implications and the importance of DRM and software standards. Interestingly, the fact that publishers chose the market as the most important pivotal factor in e-book publishing decisions, shows that, as Forrester analyst James McQuivey points out, the real arena in which the e-book adoption battle will be fought is purely economic (Meadows, 2010).

Not one participant indicated that digital publishing did not fit into their company's long-term strategy. Two publishers revealed that they planned to venture into digital publishing over the course of 2011 and 2012, without specifying to what extent. Another publisher expressed that they "might" publish a few e-books by the end of 2011, purely to test the market. They were undecided if these titles would be trade books or higher education titles.

Respondents expanded on their companies' reasons for not publishing digitally. The following common trends emerged:

Market– All participants felt that the South African e-book market was too small in 2011 to justify digital publishing. As revealed by PASA's (PASA, 2011) industry report of 2010, the total net turnover of the general trade e-book industry in South Africa for 2011 was just R102,000. Publishers explained that all their decisions to publish are determined by market demand and return on investment, and they echo the sentiment deduced from the literature that the South African e-book market is in its embryonic stage. One publisher, whose primary markets are higher education and schools, said that "there has been no significant demand for e-pub from the schools market". This market being their primary market, determined their decision to not develop digital books at this time for any publishing category.

Marketing channels – One publisher mentioned that "e-marketing is necessary to support sales of e-books". Small publishers are not always interested in marketing, and furthermore e-marketing is an additional skill that publishers do not necessarily have sufficient resources for.

Cost – Some publishers indicated that they do not currently have the funds to upgrade their websites to include trade portals. The *conversion* costs were not seen as a problem in itself, but the distribution channels were proving to be a financial hurdle. Publishers indicated that they were hesitant and not financially ready to invest in the new distribution infrastructure that switching to digital publishing would require. whether they chose to sell directly from their websites, or to engage the services of third party distributors, both strategies would require investment and re-organisation of business processes. Publishers were not prepared to make an investment in these changes at this point in time.

Compatibility issues – Although none of the respondents initially chose DRM issues or the many different e-book formats and platforms as a major problem, this emerged as a vital barrier to those publishers who had not ventured into digital publishing yet. One publisher outlined their fears regarding e-book formats, especially with the Amazon Kindle's format limitations: "…they are not modular, i.e. the file format will only work on a Kindle reader, and a Kindle reader will not read other format". The same publisher pointed out that this was a major problem, especially seeing as the Kindle is "not yet a force in South Africa".

4.2.3. Summary of findings on opportunities, challenges and barriers to digital publishing

The survey revealed that publishers considered the market and genre of books as the most important decision-making factors in publishing decisions. Although publishers did express concern about the problems related to DRM issues, shelf life, e-book formats and pricing, these were not major decision-making drivers, but were rather seen as challenges that could be overcome.

Those publishers that had not ventured into digital publishing at the time of the survey identified the cost of reorganising business processes as a major inhibitor to changing to a digital publishing model. They reiterated the importance of the market, the same as the

survey respondents had. This echoes Meadow's (2010) opinion that e-book adoption amongst publishers will be completely dependent on economic factors in the market.

4.3. Resources, values and processes

A large section of the literature review served to gain insight into disruptive technology theory and its relevance and application to the publishing industry. Two issues that emerged repeatedly throughout the literature as vital factors in a company's ability to adapt to disruptive technology were the resource allocation process and the "RPV" framework – resources, values and processes (Christensen, 1997; Danneels, 2004).

Christensen (2000) posits that an organisation's capabilities reside in its processes and values. Because processes by definition rely on the same thing being done the same way every time, they work against an organisation implementing change. Organisational culture and values in turn determine a company's priorities and the resulting resource allocation and processes (Dan and Chieh, 2008). If the values of a company do not welcome change on a managerial, organisational and employee level, organisational culture will remain resistant to change and resources will not be allocated to sufficiently explore a new technology.

An understanding of respondents' RPV framework is necessary to address research objective 4:

4. Considering digital publishing within the framework of disruptive technology theory

In order not to bias respondents, the terms "disruptive technology", "RVP" and any other terms relating to disruptive technology were never used in the publishers' survey. Questions were formulated to gain insight into publishers' processes, resources and inherent values, without calling them by name as that could influence responses.

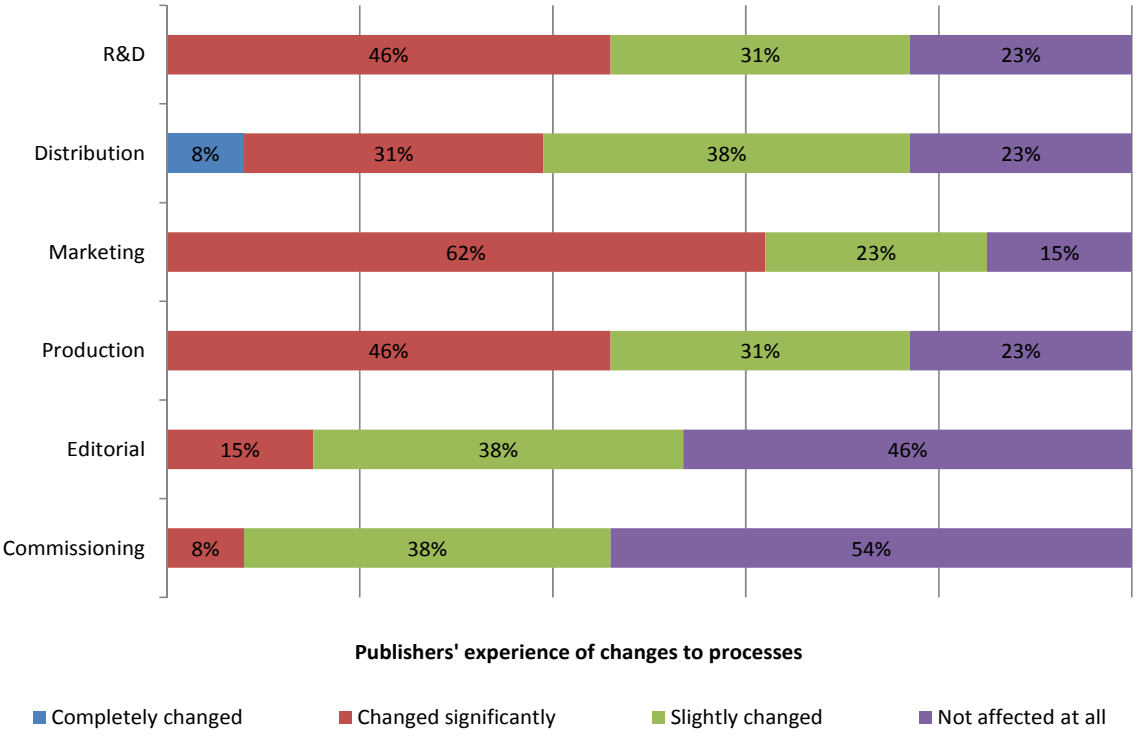
4.3.1. Changes in publishing processes

Tian (2008) states that with the emerging transition from traditional to digital-based processes, business processes will need to be revised to encompass new value-adding

processes as supply and value chains undergo change. This implies significant changes to processes and procedures throughout the publishing value chain.

Publishers were asked to identify which stages of the publishing process have been most affected by digital publishing technologies and Internet communication channels (see Figure4.11). All publishers agreed that marketing was the process that has changed the most, while the commissioning and editorial stages were considered the least changed. R&D, distribution and production were also identified as processes that have been significantly affected by new technology and communication channels.

Fig. 4.11. Changes in the publishing process due to new technology (n = 13)

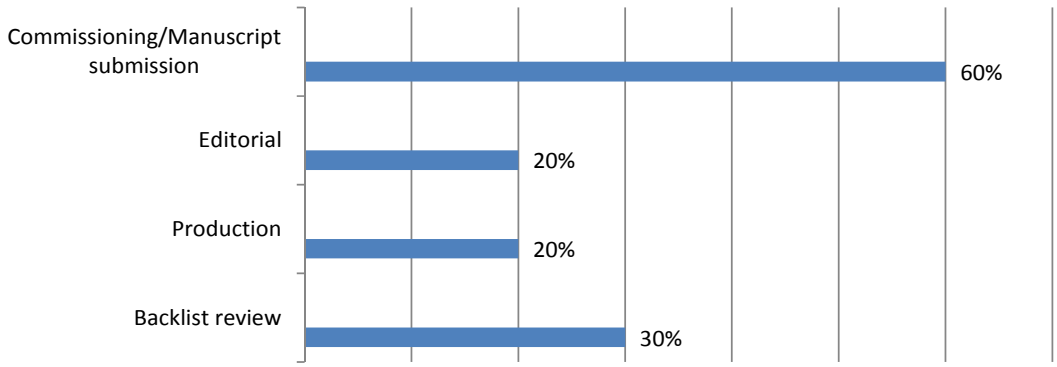


It emerged from the data that enhanced communication opportunities brought on by new technologies were spearheading changes to publishing processes. The three aspects of the publishing process that emerged as the most-changed links in the value chain were production, marketing, and R&D.

Publishers indicated that new communication channels have permeated all stages and aspects of the publishing value chain. Publishers use new Internet technologies to communicate amongst themselves and with clients; technologies such as email, chat and Skype allow for broadened communication and open up the possibility for communicating with clients over long-distance.

Publishers were asked at what stage of the publishing process titles are considered for digital publication. The data showed that most titles are considered for digital publication as soon as the book idea takes form, i.e. during the commissioning or manuscript submission stages of the publishing process. As seen before, backlist review was also identified as a quite common method and time in the publishing process for digital conversion. One publisher said that they would consider digital publishing once a book is ready to go for typesetting, and another indicated that the decision to create an e-book could be made at editorial or post-production stage. See Figure 4.12 below.

Fig. 4.12. Stage of publishing process when titles are considered for digital publication* (n = 10)



*Percentages may add up to more than 100%, as participants could select multiple choices.

4.3.2. Resources

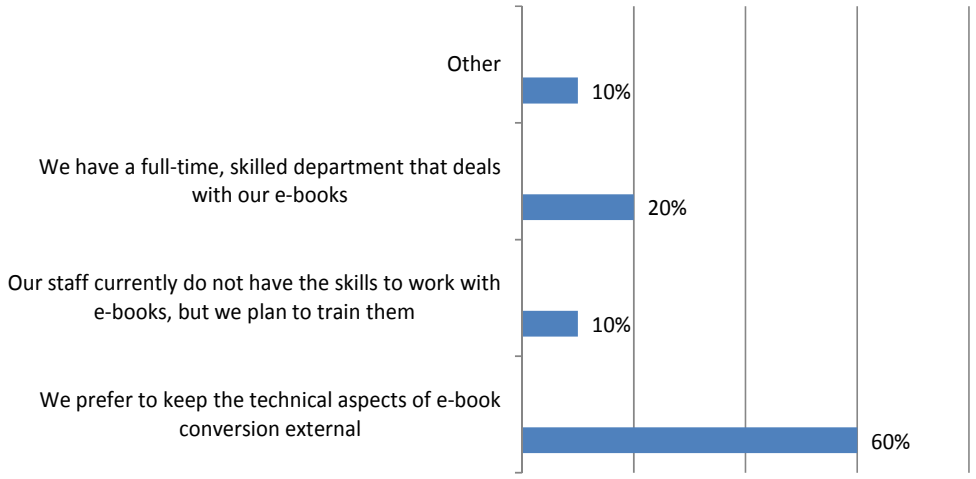
Organisations' hesitance to implement new organisational processes results in insufficient resource allocation to implement disruptive technology. To remedy this problem, Dan and Chieh (2008) suggest that companies should establish a core team at corporate level that is exclusively responsible for ideas to implement disruptive technology.

In order to understand how publishers were approaching allocating resources to digital publishing, questions were framed to discover:

- The skill level and capabilities of staff relating specifically to digital publishing and Internet technologies like social media
- Which publishing functions are fulfilled by in-house resources and which need to be outsourced.

Publishers were asked to specify whether their human resources were sufficiently skilled to handle technical aspects of digital publishing, or whether they had to outsource e-book conversion. Only two respondents indicated that they have dedicated, skilled technical departments that deal with e-book conversions and maintenance. Another participant stated that although their company does not currently have the technical skill to deal with digital publishing in-house, they were planning on training staff to do so. (See Figure 4.13.)

Fig. 4.13. Technical resources for digital publishing (n = 10)

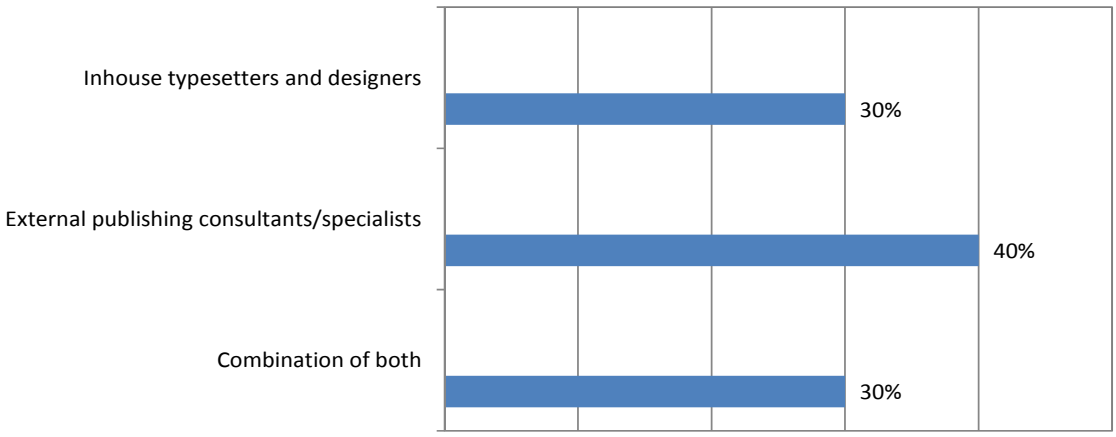


As further evidence of the lack of internal resources, the data (see Fig. 4.14) showed that the majority of publishers prefer to keep the technical aspects of e-book conversion external to their business. Thus, 40% of the ten e-book publishers indicated that their e-books are exclusively converted by external parties like digital publishing consultants or specialists.

Another 40% indicated that they rely on a combination of in-house staff and external parties to convert e-books: some e-books are created in-house by typesetters or other staff, and some are outsourced to external parties. Where the conversion takes place depends on the complexity and format of the title involved. In the case of simple PDFs, the process is simple and in-house staff are able to convert files, but when more complicated formats are used, external digital publishing consultants or specialist typesetters are used. The remaining 30% of respondents indicated that they convert all titles to a digital format in-house (see Figure 4.14).

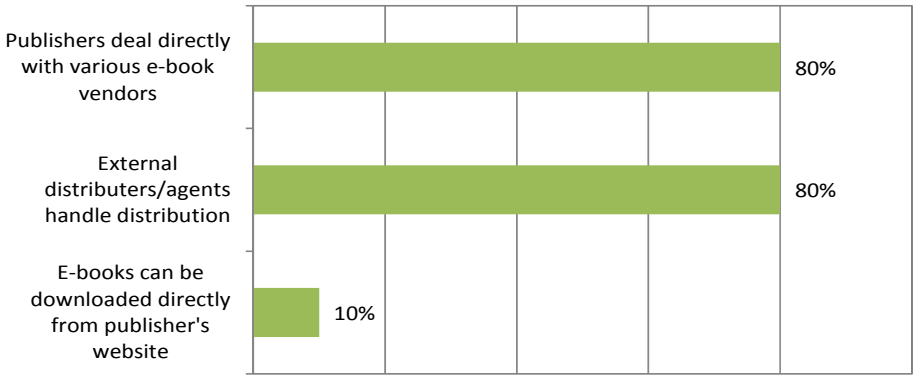
It is important to note that the 10 publishers comprising the 30% that convert e-books in-house are large international publishers with divisions overseas – where digital publishing is more advanced than in South Africa.

Fig. 4.14. Resources allocated to digital conversion (n = 10)



Publishers identified e-book distribution as another process in the digital publishing value chain that they choose to outsource. As can be seen in Figure 4.15, publishers use a combination of external distributors and internal methods to circulate their digital books. Only one publisher has their e-books available for sale on their website, although a few note that they have "plans" to make this possible.

Fig. 4.15. Resources allocated to e-book distribution* (n = 10)



*Percentages may add up to more than 100%, as participants could select multiple choices.

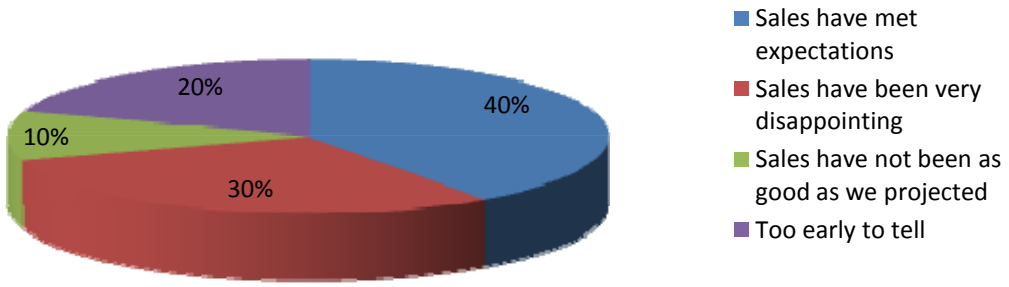
4.3.3. Values

The mind sets, actions and competencies of a company's senior managers play a definitive role in a company's strategic decisions. It is necessary for senior management to initiate a transformation of culture and values within the book publishing industry as there are many instances where traditional culture is firmly entrenched to the detriment of progress (Tian, 2008).

In order to gauge publishers' general attitudes towards digital publishing and their expectations for its implementation in their companies, respondents were asked to specify how the introduction of e-books and new technologies have impacted on their business, and what they expected e-book market share to look like in the next 30 years. The purpose of these questions was not to establish an accurate picture of sales figures and projections, but rather to gain insight into respondents' subjective views on the future of digital publishing and how positive or negative they are about steering their businesses in that direction. The opinions that surface here are ultimately the opinions that shape managers' values, will become inherent in their management styles, trickle down to the rest of the organisation and determine organisational culture.

Firstly, publishers were asked to indicate to what extent their companies' e-book sales have lived up to their expectations. 40% of the 10 participants indicated that sales have merely met expectations (see Figure 4.16), while another 40% reported that their e-book sales have been disappointing and not as good as they had projected. Two participants that only recently started publishing e-books felt that it was too early to venture a guess.

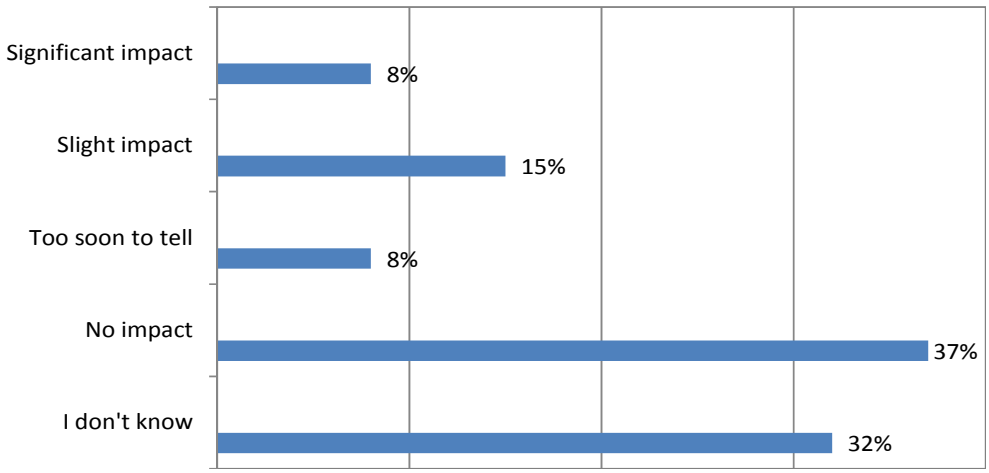
Fig. 4.16. E-book sales performance (n = 10)



Not one publisher reported that their e-book sales had exceeded expectations in any way. Nevertheless, all participant publishers currently publishing digital books indicated that they would continue to do so in future. As many as 50% of the 10 respondent publishers stated that they would publish dual editions of each title in future (an e-book and a printed book), while the other 50% plan to convert only selected books to digital platforms. One publisher said that they would publish digital-only editions of certain books in addition to dual publishing.

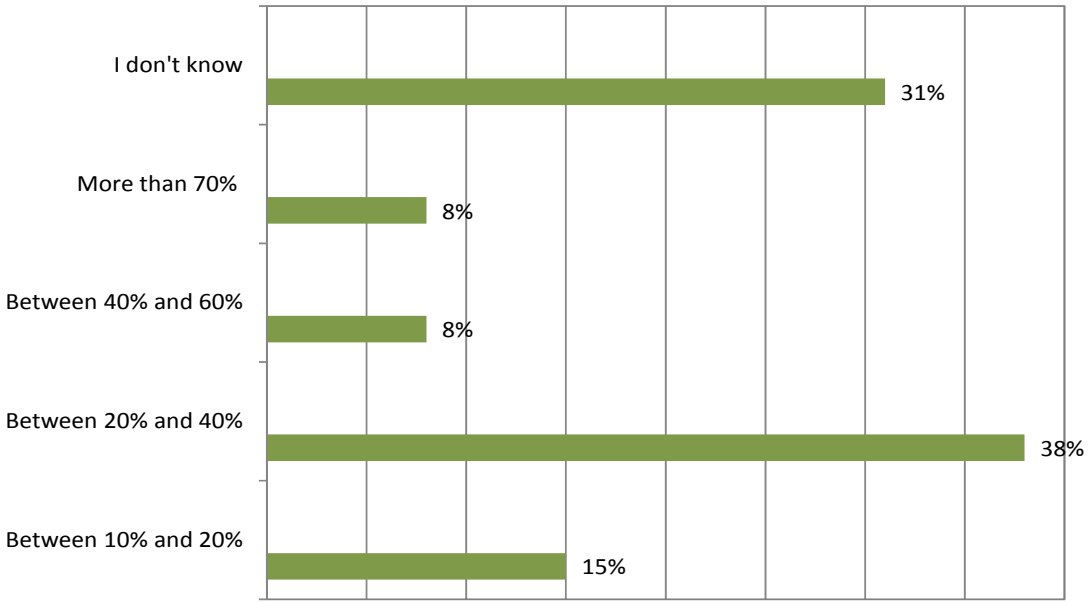
Participants were then similarly asked to indicate whether Internet communication channels such as websites and social media had had a noticeable impact on their performance. The majority of participants indicated that they have discerned no impact on their sales performance. One publisher felt the reason for this might be that overall book sales in South Africa have gone down in light of the recession since 2008, so it would be difficult to gauge the impact of different factors on sales performance. This view was reflected by 32% of all 13 participants, who stated that they did not know if new technologies had affected sales (see Figure 4.17). It is important to note that, although all the respondents representing their companies are managers, most of them lead editorial teams and are not directly involved with detailed sales figures. The value of their responses lies in their attitudes and perceptions, not in their accuracy.

Fig. 4.17. Impact of Internet communication channels on participants' sales (n = 13)



When asked to estimate what percentage of market share they thought the e-book industry would grow to in 30 years' time, 31% of the 13 respondents did not want to venture a guess (see Figure 4.18).

Fig. 4.18. Expected e-book market share in 30 years (n = 13)



38% of the 13 respondents estimated that e-book market share would rise to between 20% and 40% in South Africa. The minority of respondents believe that e-book market share would exceed 40%, whereas the remaining 15% opted for between 10% and 20% market share. Participants' uncertainty surrounding the future market-share of e-books becomes palpable considering the 31% that did not want to hazard a guess.

4.4. Follow-up interviews

Semi-structured follow-up interviews were undertaken to facilitate exploratory and explanatory research. The goal of the interviews was to gain further insight into the issues raised in the survey responses. Exploratory research deals with "what" questions, while explanatory research deals with "why" questions (Tian, 2008). Once the survey results were in, it was necessary to delve deeper to discover respondents' opinions and motivations for some of their more subjective responses. Qualitative research approaches are very conducive to this level of exploring and explaining of issues, as they are more open to using a broad range of evidence and discovering new issues (Tian, 2008).

Disruptive technology was used as the theory underlying the questions. The focus of the interviews was exploring the RVP framework. Again, no disruptive technology theory terminology was used in order to keep the sample unbiased.

4.4.1. Process: Changes to the publishing value chain

The survey responses indicated that, according to publishers, the publishing processes that are most affected by new technologies and digital publishing are production, marketing, R& D and distribution, whereas the commissioning and editorial phases had changed the least.

Interviewed publishers were asked to elaborate on how these changes have affected the various stages of the publishing process:

A. Commissioning and Editorial

Commissioning and editorial emerged as the stages of the publishing process that have been the least affected by the introduction of digital publishing. Interviewees expressed their opinions that content creation, competition and creative input remains the same during commissioning and editorial activities. This echoes the opinion of Attwell (2009) who states that publishing will remain a human enterprise regardless of the medium: "Content acquisition, editing, design and the continuous, creative improvement of systems will remain as important and competitive as ever" (Attwell, 2009a).

One publisher did mention that with new technologies, specifically social media, commissioning is a more exact science than it used to be. They now look specifically for authors with a strong Internet or media presence: "We discover authors via the internet".

B. Production

Interviewees explained that the production process has changed as far as new titles being converted into e-books were concerned. Instead of now sending print-ready PDFs to printers, respondents are sending the files to external suppliers to convert into their format of choice (see Figure 4.9).Two participants indicated that they are exploring the benefits of XML and are trying to bring the format into the process as early on as possible to enable multiple-channel publishing.

C. Marketing

All interviewees agreed that marketing practices were most affected by new technologies and communication channels. In the words of participants:

> "*The internet, and attendant websites, have allowed a wider marketing base and an increased connectivity and flow of information"*.

> "*It [technology] also enables a two-way symmetrical model for communicating with various stakeholders, mainly authors and general public, and even traders*".

Publishers are considering new innovative ways of marketing e-books. One publisher said that they are developing stronger new media marketing strategies, e.g. their new website will have social media links for authors who are active on social media sites. Another publisher pointed out that the future of e-books in South Africa depends largely on publishers educating readers on the benefits of e-books and e-readers, in order to increase the uptake of e-books. This is why publishers are working at creating hype around e-books.

D. Distribution

Interviewees agreed that new technologies have enabled them to liaise with many new, independent retailers that are based online. Publishers are looking at non-traditional or smaller sellers as well as new ways to drive customers to websites for sales. One publisher said:

> "*Of course, these technologies create new avenues for sales, and we are doing everything we can to keep ahead of the curve*."

Another publisher agreed that distribution has changed, but that these changes have been incremental rather than radically different. One publisher mentioned that the availability of South African e-books on Amazon has created a problem in the sense that Amazon is "*eating into*" their sales.

E. R&D

Publishers indicated that new technologies have introduced a new element of excitement and opportunism in the industry, which has the potential to translate into new products and initiatives. New technologies enable publishers to reach a wider audience, to monitor their habits and gather valuable feedback for research and development.

In discussing overall changes to the publishing process, one participant explained that they have digitised many of their processes, from royalty payments to capturing orders, but at this stage have invested very little in e-books. Most of the publishers mentioned that budget

restrictions are at this stage preventing revolutionary changes to their business processes: seeing as digital publishing in South Africa is still in its infancy, and is not yet creating significant revenue (if any) for publishers, they are hesitant to invest heavily at the moment.

4.4.2. Publishers' perceptions on the future of e-books in South Africa

Interviewees agreed that the e-book market would grow significantly, yet conservatively, over the next three years. Few ventured a specific estimate, but those that did believe that the e-book market would take up roughly 10% of the local trade publishing industry in three years' time. One publisher believes that the international e-book market would grow much more than in South Africa: up to 40%.

Responding to questions about the expected success of e-books within different publishing categories, publishers agreed that some categories and genres were more conducive to e-books than others. One publisher (of children's books) is very optimistic about publishing e-books for children and says that they are exploring opportunities for children's e-books and apps, as they expected this industry to grow significantly. Interviewees expressed the opinion that in terms of educational publishing and tertiary publishing, they do not see e-books infiltrating the schools market over the next three years, seeing as educational publishers will focus on incorporating the new curriculum changes into their material. However, they believe that the tertiary market holds many possibilities for digital publishing, although as one publisher said "*…it is impossible to gauge how widely used e-books will be*". One publisher suggested that licensing might be a good way forward for tertiary e-books.

Two interviewees made the point that the growth of the e-book market in South Africa is intertwined with the actions that book retailers like Exclusive Books will take over the next few years. If they make a concerted effort to sell e-readers and e-books into the market, consumer uptake would no doubt increase drastically, in their opinion. Interviewees agreed that more and more e-publishing role players would become active in South Africa over in the near future. In the words of one participant:

> "*Retail is scrambling to put in place strategies, and are having to make the biggest investments to offer seamless purchasing to customers, and DRM to publishers and authors*."

Another participant said:

> *"E-vendors are already seeing major changes as to the spend on e-books. The next three years will mainly be categorised by an over eager frenzy by some publishers and a reluctance by others. The novelty of the e-book in South Africa is drawing the attention of authors and this could lead to changes in their affiliates. It will be a time of test and trial where many risks will be taken"*[sic].

Publishers anticipated several changes in the industry that would be conducive to a bigger e-reader market. One prevalent factor that was mentioned by interviewees is the belief that e-book readers will become more commonplace and attainable. Participants had the following to say about e-readers:

> "*Devices for e-reading will start to enter the SA market and be available to more than an elite group.*"
> "*As devices become more available, sales will increase.*"
> "*The next three years will definitely be characterised by major changes in the technology of the e-readers and applications pertaining to e-books.*"
> "*Resistance to reading on devices is eroding. An economic turnaround will accelerate this.*"
> "*Devices will become cheaper and there will be more options available.*"
> *"I see the e-book market in SA growing as technology becomes more versatile and affordable*."

Another factor pertaining to e-readers that was discussed is the issue of DRM. Most believe that DRM would fall away, which would make the concept of territorial rights more difficult to maintain and might change the way that rights are handled internationally. Only one publisher mentioned the corresponding opportunity of marketing and selling e-books internationally with a measure of excitement:

> "*…selling e-books does mean we can get our books out there internationally, if we have the rights. We're excited about bringing a new "format" to the market*."

Interviewees agree that e-books will only become prevalent amongst privileged groups who are able to afford it. The majority feels that the digital market will be quite small – but one participant pointed out that the current trade book buying market *is* small and privileged already. Although interviewees agreed that the e-book market would grow over the next three years, they feel that developments in the industry will be very experimental and that e-books will not replace print books, but rather supplement them. Projections remained very vague.

4.5. Conclusion

The data analysis served to establish a profile of respondent publishers, to gain insight into their current digital publishing activities, and to understand what barriers they are faced with in the transition to digital publishing. The survey revealed what changes publishers are experiencing to their business processes, and what approaches and steps they are taking to implement digital publishing. The results are thoroughly discussed in Chapter 5.

CHAPTER 5

Discussion and Conclusion

5.1. Introduction

The research question, "How do trade publishers in South Africa (1) perceive and (2) utilise the opportunities and challenges presented by digital publishing?" was investigated through five objectives established in 1.2.2:

1. Analysing the current digital publishing environment in the South African trade publishing industry.
2. Determining the challenges, opportunities and barriers pertaining to digital publishing that South African trade publishers are experiencing.
3. Investigating the use of the Internet and new communication channels within South African trade publishing companies.
4. Considering digital publishing within the framework of disruptive technology theory.
5. Developing a model of requirements and objectives for publishers to successfully assimilate digital publishing in their business practices.

In this chapter, the assimilation of the data analysis will be discussed as pertains to the above research objectives.

5.2. The current state of digital publishing in the South African trade publishing industry

5.2.1. Size and scope of digital publishing initiatives in South Africa

Digital publishing in the South African trade publishing industry is in its infancy. Although 77% of the 13 surveyed publishers have launched digital publishing initiatives, 90% of these

were launched as recently as 2009 and 2010. Most publishers have converted a significant amount of backlist titles to digital form. Only 20% of the 10 publishers that publish e-books have not converted any backlist titles, while the rest aim to convert roughly half of their backlist over the course of 2011–2013.

The data assimilated from the publishers' survey established profiles of respondents in terms of size (number of staff employed and titles published annually), resource allocation and skill sets within the organisations. In terms of size, the data revealed that 62% of the 13 respondents were small to medium-sized publishers with between one and 20 full-time employees. The average number of e-books published annually by publishers is 39; however, this figure is influenced disproportionately by three large, established publishers that publish close to 100 electronic titles each annually. Disregarding these publishers' electronic lists leaves an average of 15 e-books annually per seven remaining publishers. This comes to 105 titles – a figure that correlates closely with PASA's findings in their 2010 Survey Report (PASA, 2011) which reported 111 local e-books available for download. The total net turnover of the general trade e-book industry in South Africa for 2011 was R102,000 and the average number of downloads per title was eight per e-book (PASA, 2010).

The fact that the majority of publishers that currently publish e-books are small to medium-sized companies, confirms the literature review's finding that the size of a company would be negatively related to disruptive innovation (Christensen, 2000; Dan and Chieh, 2008; DeTienne and Koberg, 2002).

This is only to be expected as the size of a publisher is inherently linked to the company's processes, resources and strategies. Larger companies are hampered by the expectations of their stakeholders and existing customers. Their resource-flow is in a sense controlled by current customers and the investors (Dhillon et al., 2001).To adopt a new technology or venture into a new market, they first have to navigate a complex corporate structure and hierarchy to even start the process of publishing for a new market. Small to medium-sized publishers are not faced with these problems, as they have the luxury of acting more intuitively in business decisions, unhampered by organisational inertia. The survey further revealed that the majority of publishers outsource e-book specific processes such as production (e-book conversion) and electronic distribution. This reiterates the fact that

although smaller publishers have started publishing digitally, they are still not investing to establish in-house resources to perform the new processes required.

In terms of publishing categories, 80% of the 10 e-book publishers publish e-books exclusively for the trade market, while the other 20% publish for the educational, tertiary and especially the professional market.This is interesting to note, considering Overdorf and Barragree's (2001) theory that professional and "extractive" digital texts are far more likely to penetrate the market than immersive texts for the trade market. The reason for this discrepancy may lie in the nature of the economy and educational publishing in South Africa. Firstly, we have very low Internet access rates among the majority of the population (Rasool, 2010), which shuts out the majority of the potential e-book market. While the e-book market in South Africa remains a niche category, it will be mostly the affluent who form the market, not school children or students. Until widespread broadband and e-books are available cheaply, it will not be wise of publishers to invest excessively in the educational and tertiary markets. Interviewees were also of the opinion that e-books would not infiltrate the schools and tertiary markets in the near feature, as educational publishers are focused on implementing curriculum changes into their material.

Despite the tentative nature of current digital publishing initiatives, 50% of the 10 publishers that have ventured into the digital realm are planning on publishing dual editions for all front list titles in future. The remaining 50% revealed that, on average, 66% of new titles would be considered for digital publication. This will have a significant impact on digital publishing growth. Considering that e-book publications in the trade industry have already grown by 673% from 2009 to 2010, ambitious projections about near-future growth are not far-fetched.

5.2.2. Local digital publishing activity since the conclusion of the survey

Since the conclusion of the empirical research done for this thesis, there have been some significant developments in the local publishing industry which have impacted growth of the local e-book market.

The book retailer Exclusive Books, and shortly thereafter, the retail website Kalahari.net, launched e-book stores on their sites, providing publishers with platforms to sell their e-books

from. Arthur Attwell says that Exclusive Books' e-book store has helped create local competition, giving South African publishers a much better reason to publish and develop e-book systems (Engelbrecht, 2011). In light of these developments Attwell is of the opinion that it is now becoming more standard to produce an e-book alongside a regular book (Engelbrecht, 2011).

Out of the 13 publishers that participated in the survey three had not published e-books at the time of the survey (before 2011). They considered the e-book market as too small and felt that they did not have the required skills and resources in their companies to experiment with digital publishing. To date, two of those publishers have still not published any e-books. The remaining publisher launched an iTunes application in July 2012 that allows users to download their glossy art books onto their iPads.

Three of the participant publishers that had already been publishing digitally at the time of the survey have an impressive presence on the sites of e-book retailers LWB, MyBooks.co.za, Exclusive Books and Kalahari.net. Of these three publishers, two are large international publishers with South African divisions. The other publisher has recently launched a new digital imprint that publishes only South African e-books, and also develops applications for the iPad or iPhone. Four of the other publishers also have a number of e-books available on the above-mentioned retail sites, but there does not seem to have been a dramatic increase in their rate of publishing or the number of e-books published since completion of the survey.

The new entrant has grown significantly and is settled into a niche market that publishes print and digital editions of all their titles. The remaining publisher has very few e-books available, and they are mostly higher education and professional titles, not books for the trade market.

In terms of backlist conversions, those publishers that indicated in the survey that they were aiming to convert up to half of their backlists have made great strides so far in achieving this target, judging from the large number of backlist titles from these publishers that can be found on LWB, MyBooks.co.za, Kalahari.net and Exclusive Books.

The changes in the publishing industry since the completion of the survey, especially the introduction of several new online new e-book retailers, is sure to have a significant impact

on the digital publishing industry. Further research in a couple of years' time will be very revealing of exactly how publishers have changed their distribution processes to adjust to and profit from the new opportunities afforded by local online retailers.

5.2.3. Implementation of digital publishing and Internet communication channels in business processes

Tian (2008) states that with the transition from traditional to digital-based processes, publishing business models need to be revised to encompass new value-adding processes as supply chains and value chains undergo change. However, with the limited amount of information currently available on trends and digital implementation strategies in the publishing industry, there are no clear guidelines for publishers to follow in adapting their businesses to digital publishing. In South Africa we have a significant lack of useful and reliable statistical data on the local book publishing industry (Galloway & Venter, 2010), and no hard data guiding publishers in decision making. Adapting their business strategies and processes for digital publishing is uncharted territory. The challenge of the next few years for publishers will be to invest wisely in technology and process improvement while simultaneously being aggressive about pursuing new business models (Guenette et al., 2010).

The publishers' survey and interviews helped to gain insight into how publishers are changing their business models to take advantage of digital opportunities that emerged from the literature.

The literature review discussed the potential effects that digitisation and digital publishing can have on traditional publishing processes (Carreiro, 2010; Du Sautoy, 2010; Hyatt, 2003; Tian, 2008). The processes that emerged as the most-affected by new technologies and digital publishing are:

Production and Distribution:

- Shortened supply chain: Digital publishing eliminates warehousing and shipping and reduced the related costs.
- Management of more products, formats and fragmented content.
- Digital assets will need to be accessible for re-use.
- Production processes and workflows will change.

Marketing, R&D and Commissioning:

- Opportunities for new sales channels, intermediaries and requests from customers.
- Many new options and vendors to choose from, risk increases.
- Blurring of boundaries in the division of labour.
- The potential for new, creative content, flexibility, and interactivity of e-books is vast.

The publishers' survey tested to what extent respondents are experiencing these effects and how their processes are changing throughout the publishing process. It became apparent that publishers have not made significant adjustments to their business models to accommodate the changes necessitated by digital process. Although publishers have digitised many of their processes (booking freelancers, royalty payments, capturing orders, budget control, etc.) they have invested very little in e-books and have not taken advantages of opportunities to make changes to each step in the publishing value chain:

A. R&D

Publishers identified R&D as one of the publishing processes that is undergoing the most change with digital publishing and the opportunities afforded by Internet communication channels. Social media has enabled publishers to reach a wider audience and allows them to access and investigate niche markets directly. Through websites and applications like Twitter and Facebook, publishers now have the ability to access, monitor and predict markets much more accurately than before. This opens up opportunities for new sales channels, intermediaries and requests from customers (Tian, 2008).

R&D is naturally also pivotal in the creation and technical development of e-books. The potential for creative content, flexibility, and interactivity of e-books is vast (Du Sautoy, 2010). The majority of publishers surveyed simply convert text to e-books using PDF or EPUB – basically a print book in digital wrapping that takes no advantage of animation, sound or interaction. Publishers should engage R&D to find out what level of "enhanced e-books" the market is ready for – for example interactive books that let children colour in story characters and swipe words that are then repeated aloud (Brieger, 2010).

Only two of the publishers surveyed have since the conclusion of the survey released e-books for the iPad with enhancements and interactive features.

B. Commissioning

The empirical research found that publishers experienced the least changes to process during the commissioning phase of the publishing process. Survey respondents and interviewees felt that content creation and creative input remain unaltered by digital technology. Commissioning is, however, undeniably tied in with R&D activities, which according to the same respondents have changed significantly.

Commissioning authors that have an established presence on the Internet guarantees several channels of communication (Twitter and Facebook followers for example) and publicity that will enhance the marketing process. The Internet has become "a platform not just for the marketing and distribution of content, but also for readers to communicate and interact with publishers, other trade stakeholders and each other, and critically, to wield an ever-increasing influence" (Tian and Martin, 2009). Only one South African trade publisher recognises this potential and explained that the Internet plays a great role in discovering and selecting authors. Authors now have the power to cultivate a fan base online even before publishing anything. Publishers can gain much by head-hunting such authors, before they decide to self-publish.

A positive attitude towards e-books emerged from the empirical research in the sense that the majority of publishers consider publishing titles in digital form during the very first stages of the publishing process: commissioning or manuscript acquisition. This is important to note as it illustrates a healthy attitude on publishers' part towards books: as content first, form second. Publishers should strive to create unique, quality content for the electronic format – once the readers are open to content, the format and all the barriers associated with e-reading will take a backseat. Purcell (2010) believes that focusing relentlessly on e-book formats will cripple strategic thinking in the publishing industry and publishers might lose sight of the essence of the book: content. The research showed that only 20% of the 10 South African e-book publishers surveyed, develop print books first and then consider converting the printed product to digital format too.

C. Editorial

Close to half of respondents felt that the editorial process was one of the processes that has undergone the least change in the move to digital publishing and digitisation. Editors have gradually started working more and more on-screen as technology has improved over the years. This has been an ongoing process as computer software improves drastically annually. Publishers are now digitising content as early as possibly in the process, and changes have been incremental rather than disruptive.

Managerial aspects of the commissioning and editorial processes have been digitised for many years, for example booking and communicating with freelancers and suppliers, payments and invoicing, budget control, etc. In terms of communication between authors, editors and other role players involved in the editorial process, Internet communication channels provide a whole new range of methods for communication, uninhibited by physical location.

D. Marketing

The marketing process of publishing is where publishers are making the most changes to move towards a digital publishing business model. Although new systems are not in full swing yet, publishers are experimenting with innovative new ways to market books through Internet communication channels and web tools. More than half of publishers use their websites as well as social networking sites Facebook and Twitter in their marketing strategies. However, the reported lack of impact these activities have had on their sales suggests that publishers are not making the most of them. This might be due to a lack of technical skill sets or e-marketing skills. Publishers might also be uninterested in e-marketing. They view it simply as a supplement to traditional print marketing and the work done by distributors and reps, instead of embracing it as an entire new method requiring new approaches and skills.

The literature review emphasised the potential of changing marketing activities and techniques with Internet communication channels. Publishers can become their own booksellers via the web, while authors can aid publishers in marketing their titles online: e.g.

blogging, tweeting or advertising on Facebook (Hyatt, 2003). If used strategically, this blurring of boundaries can help identify and access new markets directly.

E. Production

The production process is the stage of the publishing process that would naturally undergo the most obvious changes in a switch to digital publishing. Instead of sending print-ready files to printers, book content is now only (or also – in the case of dual publishing) converted to an e-book format of the publisher's choice. Production is one of the publishing stages where publishers can save the most money, as digital publishing eliminates printing, which is the most expensive part of the publishing process (Engelbrecht, 2011).

The survey revealed that most publishers still prefer to keep the digital conversion process external to the company, preferring to leave the technical aspects of e-book production to digital publishing specialists. The research showed that most publishers use a combination of external and internal resources to convert files to e-books: In cases of simple conversions, e.g. PDF e-books, publishers are comfortable converting files in-house, but when it comes to more complicated formats like EPUB, the technical conversion work is outsourced. It emerged that the decision to outsource these functions is mainly due to a lack of in-house resources and the associated digital investment that would come with acquiring such resources. This means that in most cases (excluding simple PDF conversions) publishers will be completely dependent on external players to convert content into an e-book format like EPUB. At the moment very few South African publishers understand the value of developing e-books in XML as a base format. Having XML e-book archives would allow multi-channel publishing and would afford the publisher with more platform options as e-reading devices and software change over time. Instead of just sending off files for electronic conversion, exactly as one would send a book to print, publishers should introduce XML into the process as early as possible to allow themselves more production flexibility.

Naturally, the skill level and technical know-how of staff plays a pivotal role in a publisher's decision to outsource production processes. This, again, is inextricably linked to the size of the publisher. A small publisher is less likely to have a dedicated technical design and production department than a large, resource-rich publisher. Only 20% of e-book publishers

have such a dedicated department responsible for converting digital books, and only a further 10% are considering training current staff to take on technical roles in future.

F. Distribution

Tian (2010) is of the opinion that publishers have accepted that digital publishing distribution channels are changing drastically and are making use of these new channels to reduce distribution costs. Carreiro (2010) says that Internet communication channels have freed the publishing distribution model from the "shackles" of print and paper. The publishing industry's traditional supply chain can now be faster and shorter, resulting in decreased costs and greater returns for publishers and authors (Carreiro, 2010). However, the publisher survey revealed that very few publishers have made full use of the distribution opportunities inherent in digital publishing and the Internet.

In terms of resources, the survey revealed that South African publishers use a combination of external distributors and internal methods to circulate their digital books. At the time of the survey, very few publishers had their e-books available for sale on their websites, and this is still the case to date. One of the greatest advantages of Internet communication channels is the opportunity to access clients directly, cutting out the middle man and the associated discounts that physical retailers demand (Carreiro, 2010).

Attwell (2009) sees the fragmented e-book distribution platform in South Africa as a barrier to market growth. At the time of the survey, very few South African e-book distribution channels existed. Since then the situation has improved greatly as local sites such as LWB and Kalahari's local digital lists have increased vastly, and Exclusive Books have launched an e-book store (Engelbrecht, 2011). Even though these are great steps in the right direction, there is still no one-stop shop that would serve as the South African equivalent of Amazon.com.

Mussinelli (2011) points out the value that lies in national distribution platforms where publishers can combine their strengths to distribute e-books. In some countries with small e-book markets similar to South Africa, such as Spain and Italy, the e-book market is being driven by a few small and medium publishers who have taken this approach and are pooling

their digital distribution efforts on a national platform that attracts readers to one centralised location to buy books.

5. 2. 4. Use of the Internet and new communication channels within South African trade publishing companies

South African publishers are not yet taking full advantage of the vast potential offered by Internet technology. While all publishers make use of websites, these websites are for the most part nothing more than static, online profile pages. Very few publishers make use of interactive features or multimedia. Almost none double as an online store. Social networking sites like Facebook and Twitter are used by over half of South African trade publishers, but very few make use of RSS news feeds.

A publisher's website has the potential to be not only a beautiful, functional advertising space, but also a direct communication channel to readers. Introducing e-commerce and transforming the website into an online store allows the publisher to make an infinite amount of direct sales, eliminating massive distributor and bookshop discounts. Direct marketing through social networking sites and active community participation on Twitter allows publishers to interact with and monitor potential customers in a way that is not intrusive. RSS feeds enable publishers to deliver news snippets, tailored for specific niches, to interested readers. If used strategically, these applications combined can access thousands of new potential customers, unhindered by physical boundaries.

Publishers need to realise that customers now have much more control than ever before:

> They [consumers] take your products out of your carefully constructed contexts of channel, branding, pricing and packaging and consume them on their terms on their connected devices in contexts of their own creation. And they can exercise that power in more places and at more times than before (Mulligan, 2010).

This means that publishers need to be much more clever, strategic and aggressive in their marketing strategies. A simple website and newsletters are not enough.

The vast majority of South African trade publishers feel that their efforts to market online through Internet communication channels and applications have had no discernible impact on their sales performance. Others don't know: A third of publishers feel that it was difficult to gauge the impact of different factors on sales performance, as sales in general have gone down in South Africa in 2010. This implies that publishers are not fully utilising the web tools at their disposal: most web applications e.g. Twitter allow moderators to monitor and track – very specifically and accurately – trends, click-throughs and subsequent sales. If used to its full potential, publishers can use these tools to monitor sales for future strategies. One large South African publisher that has a skilled, dedicated e-book department and digital marketing processes in place, indicated that sales have definitely improved with the use of social networking and web applications; proving that if utilised efficiently, web tools can provide a major sales boost.

5.3. Strengths, opportunities, weaknesses and threats experienced in the South African digital publishing industry

The various advantages and disadvantages involved in adopting a digital publishing process that emerged from the literature (Overdorf and Barrargree, 2001; Burk, 2001; Carlson, 2005; Clark et al., 2008; Danneels, 2004; Gordon, Kung and Dyck, 2008; Hyatt, 2003; Marsh and Prodhan, 2008; Mahlong, 2009; Rogers, 2006; Mierzejewska, 2008; Neilan, 2009) are summarised in the SWOT analysis on the next page. Strengths and opportunities relate mostly to the shortening and simplification of the publishing process, and prolific marketing opportunities as discussed in detail under 5.2.3 above.

But publishers need to consider more than just organisational opportunities and advantages in their digital publishing strategies. Weaknesses and threats present in the digital publishing industry are mostly directly related to consumers' needs and market acceptance. The literature revealed that publishers' and consumers' issues and reservations with digital publishing are inherently intertwined: market share and profitability of e-books is dependent on market acceptance. Publishers need to understand the barriers preventing market acceptance if they wish to introduce e-books that will appeal to consumers.

Table 5.1: SWOT analysis of publishing industry in the digital environment

STRENGTHS	WEAKNESSES
Process: Shortens and simplifies publishing value chain: • Digitisation of content streamlines the publishing process in that content can be digitised from editorial phase right through to publication • Eliminates printing • Eliminates warehousing and physical distribution	Process: Necessitates a change in strategies and business models: • E-book conversion process, which replaces printing, is uncharted territory for most publishers • New systems for archiving and distribution need to be developed • New resources and skills need to be required to develop and implement these new systems
Costs : • Eliminates printing costs • Reduces supply chain costs: No physical distribution or costly warehousing • Damage/depreciation no longer an issue • Lower costs from returns / pulping?	Costs : • New resources need to be acquired to enable development and implementation of new systems and business models • Training required to train traditional print publishing staff to work within new systems • Limited e-book market makes investing in digital publishing an uncertain venture with unpredictable returns
OPPORTUNITIES	**THREATS**
Market: Digital publishing opens up marketing and distribution opportunities within new markets: • Direct, online vein to (new and existing) target markets • Long-tail markets • Online users are easier to monitor and predict Content: • E-books allow for greater flexibility and interactivity of content. This allows for new levels of creativity and interesting new products and features Environment: • Elimination of printing results in less carbon emissions and paper waste. Environmental consciousness is important to investors.	Market: The market for e-books remains a niche segment due to several shortcomings: • Digital Rights Management (DRM) restrictions and expenses • Plethora of different e-book formats and reading devices • Problematic alignment of digital and traditional intellectual property rights • E-book pricing: Lack of standards in pricing and the complication of users expecting e-books to be “cheap” • Readers’ sentimental hesitance to move away from the printed book Control: • Publishers run the danger of losing control over what is traditionally an elitist industry. Self-publishing might render publishers redundant. • New players, not traditional publishers, e.g. app developers, multimedia companies, Apple, Amazon, Google,

5.3.1. Digital publishing challenges and considerations

The literature review identified several disadvantages of publishing e-books that create a barrier for publishers to venture into digital publishing. The most significant problems that emerged lie in Digital Rights Management (DRM), pricing, lack of software standardisation and the lack of an elegant, user-friendly enough reader to penetrate the mainstream market (Overdorf and Barragree, 2001; Clark et al, 2008; Gordon, Kung and Dyck, 2008; Humphreys, 2004; Carlson, 2005; Rogers, 2006; Rothman, 2006). A significant issue that emerged from the publisher survey is the lack of technical and human resources within companies to take forward, or even consider the possibilities of, digital publishing.

The publisher survey tested to what extent publishers felt threatened by the various barriers and threats identified in the literature review as condensed in the SWOT analysis above. The important issues that emerged are discussed below.

A. Market

"Markets that don't exist can't be analysed" (Lafferty and Edwards, 2004). Publishers unanimously feel that the e-book market in South Africa is too small (or relatively non-existent) to justify publishing e-books. Even internationally, the literature found that e-books are not yet enticing enough for users of immersive (trade) texts (Overdorf and Barragree, 2001; Humphreys, 2004) for them to replace their print reading habits with e-reading. Gordon, Kung and Dyck (2008) speculate that the international e-book market will not likely make up more than 10% to 30% before 2018.

In South Africa, no empirical research has been done to date to establish the growth of the local e-book market. PASA's annual industry survey of 2010 (PASA, 2011) is the first report to present empirical information on the South African e-book market. The report found that the total net turnover of the general trade e-book industry in South Africa for 2010 was R102,000. This does not compare well to the R402,266,000 turnover of the print trade industry in the same year. However, PASA's annual industry survey of 2011 (PASA,2012) revealed that the net turnover of the trade e-book industry had grown to R1,036,000, which is a significant increase. It is important to note that some publishers are not in a position yet to

report adequately on the sales of e-books because they don't differentiate between formats in their sales records.

Publishers make decisions based on market demand and return on investment. The publisher survey revealed that publishers considered the market for digital publishing to be the most important consideration for publishers before publishing digitally. According to Meadows (2010) the economics of publishing will eventually change as people experiment more and more with e-books. The publisher-consumer relationship creates a symbiotic feedback loop. When local publishers start e-books in earnest, and engage in a motivated effort to promote e-books to users, more readers will gradually become interested in e-books as more books become available.

B. Software and compatibility issues

The literature review repeatedly identified the confusing variety of e-book formats and devices in the market as a major problem to publishers (Rothman, 2006). The lack of software standardisation and its related compatibility (or incompatibility) with hardware in the e-book market add layers of complexity to digital publishing decisions. The confusing variety of e-book formats and platforms available are sometimes referred to as the Tower of eBabel (Rothman, 2006). Add to that the variety of e-readers available, each compatible only with certain software, and both publishers and consumers are faced with a confusing array of options and potential compatibility problems.

The publisher survey confirmed that publishers find the variety of e-book formats and platforms in the marketplace concerning. The literature review revealed that the three most popular e-book formats are PDF (Portable Document Format), EPUB (which works on most e-book readers and e-book reading software applications) and AZW (for Kindle), in that order (Coker, 2010). The primary research affirmed that the vast majority of local publishers use only PDF and EPUB, as they believe these are the most versatile and simple formats, most likely to become the e-book standard. Only two of the surveyed publishers currently produce e-books for the Kindle, as the general feeling is that Kindle has not yet permeated the market significantly enough to justify using it.

Only two publishers mentioned the value of using XML as a base format, enabling them to create multiple formats for different e-book platforms. XML is a markup language that enables the sharing of documents in different formats across information systems and the Internet (Carey, 2004). It is ideal for e-books in the sense that it can be used to break a document into elements for future usage in a variety of different formats – doing away with incompatibility fears and giving publishers a safe format for archiving. The fact that only two trade publishers surveyed use it is indicative of a general lack of up-to-date technical ability within publishing companies.

It emerged from the literature that hardware issues with e-reader devices (Miller, 2006) and the fact that no "iPod for books" exists yet (Neilan, 2009) have prevented e-books from permeating the mainstream market. Despite the vast improvements to each new generation of the Amazon Kindle, which is now the international e-reader device leader, South African publishers feel that its format limitations and restrictions make it a dubious choice. One publisher pointed out that the Kindle is not "yet" a major force in South Africa.

C. Digital Rights Management (DRM)

Carreiro (2010) identifies DRM issues as an important aspect of publishing that needs to appropriately address before publisher can move forward with a digital publishing strategy. There is a concern amongst publishers that improving the quality of e-book devices and standardising formats will render piracy easier and more appealing to consumers (Italie, 2009). In an attempt to prevent this, publishers have taken to implementing strict DRM systems in their digital products, which places strict limitations on how consumers can use e-books. This in turn is not conducive to a high growth rate in the e-book market. Uncertainty around DRM measures has left the majority of publishers wary of digital publishing and uncertain of how to implement DRM in e-books.

Despite publishers' reservations about DRM, 40% of the 10 respondents indicated that DRM considerations were not important at all in their digital publishing decisions. Only 30% of respondents indicated that DRM was an important consideration. This result reveals a worrying underestimation or even ignorance of the importance of DRM amongst publishers. The literature showed that current DRM controls are not standardised, not accessible enough

and too expensive for most publishers (Attwell, 2009b). Ironically, the accessibility and flexibility issues that result from this lack of standardisation might encourage piracy instead of preventing it. If users struggle to find legitimate copies of e-books that they want, that are compatible with their e-reading devices, they might easily resort to piracy to obtain an unprotected version of the e-book.

Herther (2005) states that the DRM challenge for publishers is to simultaneously protect content while still giving users flexibility and ease of access. Such a system needs to find a balance between users' need for accessibility and publishers' need to protect their content, leaving little incentive to cheat. Gordon, Kung and Dyck (2008) state that widespread market acceptance of e-books will never be attained until these issues are addressed. And until there is such widespread user acceptance to speak of, there will be no financial incentive for publishers to publish for the digital market.

D. Pricing

E-book pricing remains a contested topic in the international publishing industry. In April of 2012, the American Department of Justice filed an antitrust lawsuit against Apple and five large publishers, accusing the companies of colluding to raise prices of e-books, in retaliation for competitor Amazon.com pricing most e-books at US$9.99 beginning in late 2007 (Haslam, 2012). This model – termed the agency model – has caused much controversy, as it allows publishers to set fixed retail prices on their e-books, not allowing agents like Amazon to lower the price. Although this "price fixing" has levelled the playing field for publishers, it has also left consumers with a sometimes bewildering patchwork of inconsistent pricing (Reid, 2010). The case is ongoing and is scheduled for trial in June 2013(Haslam, 2012).

South African publishers face the same challenges, and as yet there is no standard pricing strategy to guide publishers or pacify consumers. Half of publishers are pricing e-books on the exact same model as print books, running the risk of alienating consumers who expect virtual books to be much cheaper than physical books, seeing as printing, distribution and warehousing costs are left out of the equation. The remainder of publishers are themselves uncertain about their pricing strategies, but are setting e-book prices at a half to two thirds of

the price of printed books. Others, who have only started publishing digitally very recently, do not yet have a system in place for pricing e-books.

Purcell (2010) feels that the skirmishes over e-book pricing demonstrate the lack of reasoned, long-term manoeuvring by publishers. "Ultimately the sales price of one form of content monetisation (e-books) is not the critical concern – publishers should be more focused on developing the expertise to sell content in many different forms, at many different prices to different audiences" (Purcell, 2010).

E. Resources

Publishers identified "cost" as a major barrier to digital publishing. When referring to "cost" as a problem they do not refer to the cost of producing an e-book, but rather to the cost of making the necessary changes to implement a streamlined, in-house digital publishing process. Taking full advantages of the possibilities of digital publishing would mean turning the publishing business model on its head:

- New resources with fresh skill sets need to be acquired: Technical staff to work on e-book production and developers to implement and maintain digital distribution.
- Current staff needs to be trained to work within the new business model.
- The entire publishing process would need to be remodelled to allow digitisation of the entire process at a much earlier stage.
- The technical and practical changes necessitated by moving production and distribution processes in-house would be significant.

One area of the industry that was specifically identified as lacking in resources to tackle digital publishing activities is marketing. Publishers feel that recent developments in Internet applications have brought a new level of competition to the publishing industry. Applications such as Twitter, Facebook and RSS feeds allow publishers to monitor and target customers as never before. Although this makes the business of marketing easier in theory, the reality is that marketing now requires technical skill and computer savvy – a resource that publishers have traditionally done without. Some publishers do not have the resources to implement

these changes yet, and old-fashioned publishers can even be simply uninterested in e-marketing.

5.3.2 Publishers' perceptions and attitudes to the e-book industry in South Africa

The general expectations of the future of the e-book industry in South Africa vary greatly, as estimations are based on conjecture and international trends that are not necessarily applicable to our local context. Projections about future e-book market share in South Africa differ. Most publishers believe that the e-book market will grow up to 10% of the local trade market within the next three years, but many are too unsure to venture a guess. Nevertheless, all the trade publishers that are currently not publishing digitally in South Africa plan to experiment with e-books in the near future, although they are not certain when.

Publishers should be careful to make the mistake of dismissing digital publishing because they feel it will not be applicable to their specific niche: e-books lend themselves to niche markets particularly well. Using social networking and other Internet applications allow a publisher to identify, monitor and target niche markets to an extent that was never possible before.

One area of significant expected growth is e-books and applications for children. The iPad's capabilities enable publishers to develop colourful, interactive books for children that are proving very popular internationally and is currently an area of innovative experimentation.

The future growth of the e-book market in South Africa will depend to a large extent on the actions taken by retailers like Exclusive Books and other established vendors in the coming months and years. Consumer uptake will increase drastically if traditional bookshops make an effort to introduce traditional readers to a new format that might seem daunting to them at the moment. As soon as bookshops make e-books and dedicated e-readers more readily available, market uptake will inevitably improve. Publishers believe that a combination of changes in the industry would determine the extent and rate of digital publishing growth in South Africa:

Publishers believe that the extent and growth rate of digital publishing worldwide will be greatly accelerated if DRM falls away. Readers are justifiably hesitant to buy e-books with hazy copyright and restrictive DRM issues. They want peace of mind that their e-books will work on any device (now and in coming years); as often as they want, for as long as reasonably possible. Once publishers manage to coalesce around a protection standard that respects both copyright and readers' requirements, readers would not have to worry about expiration dates or incompatibility issues between their e-books and devices, and would more readily buy both.

The cost of dedicated e-readers is another important factor inhibiting the growth of e-readership. Publishers feel that e-books will only become popular within small, privileged groups that can afford to buy dedicated e-readers. This means that the e-book market will remain a niche market for the affluent and/or the technically savvy.

Publishers believe that developments in the South African digital publishing industry over the next three to 30 years will be highly experimental. E-books will not usurp print books, but rather supplement them.

5.4. Digital publishing as disruptive technology

Research objectives 1 , 2 and 3, as addressed by the literature review and the publisher survey, served to establish the current state of the South African digital publishing industry and the challenges and opportunities it is faced with. This information was then considered from the perspective of disruptive technology in order to address research objective 4:

4. Considering digital publishing within the framework of disruptive technology theory

Qualitative analysis of the information and issues that emerged from the literature review and the survey was undertaken to compare and integrate the state of the South African publishing industry with the symptoms of disruptive technology in an industry.

5.4.1. Is the South African trade publishing industry facing disruption?

The literature review provided various definitions and descriptions of disruptive technology. The term disruptive technology was coined by Clayton Christensen (1997, 2000). He described disruptive technology as a new technology that is introduced into an industry and initially serves only a niche market, but eventually misplaces current technology in the mainstream market. This happens because large, incumbent companies in any industry mainly aim to monitor and meet the demands of their existing customer bases. They carefully monitor this market, investing in areas where returns are high and markets are large (Lafferty and Edwards, 2004). Over time, as the disruptive technology is gradually assimilated into the mainstream market, to eventually displace it, the incumbent companies are not equipped to meet the demands of the market anymore, and suffer the danger of being replaced themselves by companies that did invest in the disruptive technology.

The definition and effects of disruptive technologies are discussed widely in the literature (Christensen, 1997; Christensen et. al., 2001; Danneels, 2004; Moore, 1991; Kostoff et al., 2004, Lafferty and Edwards, 2004). Kostoff et al. (2004) expand on Christensen's definition of disruptive technology, and state that disruptive technologies can be considered "scientific discoveries that break through the usual product/technology capabilities and provide a basis for a new competitive paradigm". Danneels (2004) echoes this sentiment and feels that a disruptive technology, more than anything, changes the bases of competition in an industry by changing the "performance metrics along which firms compete". Kostoff et al. (2004) say further that disruptive technology creates new commercialisation challenges and causes major "product paradigm shifts". Disruptive technologies disrupt the market, change the industry paradigm and create a whole new market for a product (Lafferty and Edwards, 2004).

These definitions surrounding the nature of disruptive technology become significant when comparing the nature of disruptive technology to the current state of digital publishing in South Africa. The literature review and publisher survey revealed that digital technology, both in terms of digital publishing (of e-books) and the implementation of new Internet technologies (such as websites and social media), does significantly change the "performance metric along which firms compete" – a major symptom of disruptive technology (Danneels, 2004).According to Hyatt's (2003) new business rules, new publishing expectations and new

audience expectations generated by a digital world are transforming the book publishing world steadily and surely.

The literature review discussed these changes to performance metrics, publishing expectations and paradigms at length; revealing the major effects that digitisation and digital publishing can have on traditional publishing processes (Carreiro, 2010; Du Sautoy, 2010; Hyatt, 2003; Tian, 2008):

- Production and distribution processes are potentially much cheaper, as digital publishing eliminates warehousing and shipping, resulting in a shortened supply chain. These changes will necessitate major changes to production and distribution processes and workflows.
- Marketing, R&D and commissioning processes are liable to undergo significant changes as new opportunities for sales channels, intermediaries and direct contact with customers abound.

Implementing the necessary changes to business processes to profit from the opportunities mentioned above is undeniably extremely disruptive to existing publishers and their business models. Burk (2001) states that digital publishing in the Web environment could become so successful that traditional publishing houses could easily lose their market dominance and even disappear, complying with the textbook example of disruptive technology.

Overdorf and Barragree (2001) discuss the potential encroachment of electronic publishing across five tiers of distribution. The markets that they found to be the most susceptible to digital publishing are news, entertainment and research, technical and work-related reading. Trade publishing in terms of this study, what they call “pleasure reading” and “display and collecting” are the two tiers that will be the slowest to adopt digital publishing and distribution. Guenette et al. (2010) agree with this view and found that the scientific, medical and technical segments of book publishing have already tipped towards digital publishing. They report in their Group Survey of 2010 that the other segments of the industry will start to tip soon too (Gunette et al., 2010).

In 2008, Gordon, Kung and Dyck (2008) posited that e-books would grow to 10% to 30% of the total publishing market over the next decade. In 2011, 1.33 million e-readers were sold over Christmas in the UK, and Bloomsbury announced a 38% rise in e-book sales (Anscombe, 2012).

In South Africa, the situation is different. The South African economy and infrastructure is not on par with first-world countries such as The US and UK. The publisher survey revealed that most publishers believe that e-books will not usurp print books, but will only supplement them. Having said that, 10 out of the 13participants have in some manner or form started experimenting with digital publishing strategies. This shows that they recognise the opportunities (and threats) of digital publishing, and are taking note of how the performance metric in the industry is changing overall. South African publishers are relatively late entrants to the digital publishing realm. American and European publishers experimented with e-books on a large scale in the early 2000s, although the majority of those early ventures failed (Herther, 2005). Tian (2010) feels that despite their reservations, publishers have largely accepted the inevitability of implementing digital technology.

The publisher survey revealed that most South African publishers believe that digital publishing will only ever be popular amongst affluent readers.But, as pointed out by one of the participant publishers, the majority of the current trade print book market in South Africa is already a privileged, affluent group.

Dan and Chieh (2008) compare disruptive technology in the publishing industry to what happened with cell phone technology. The cellular phone was initially accepted only by corporate executives who appreciated its convenience and portability, despite the high price tag (Dan and Chieh, 2008). The mainstream market still preferred land lines due to their reliability, cheaper price and coverage. This gradually changed as developments in cellular technology resulted in a cheaper cell phone with reliable coverage that satisfied the needs of the mainstream market.

This example reiterates that a disruptive technology does not usurp a current technology overnight. E-books, as we know them today, currently only appeal to a small market: Relatively young, affluent techno-savvy readers. But disruptive technology theory shows that

as R&D investments increase over time, the disruptive technology will gradually improve until it meets the requirements of the mainstream market.

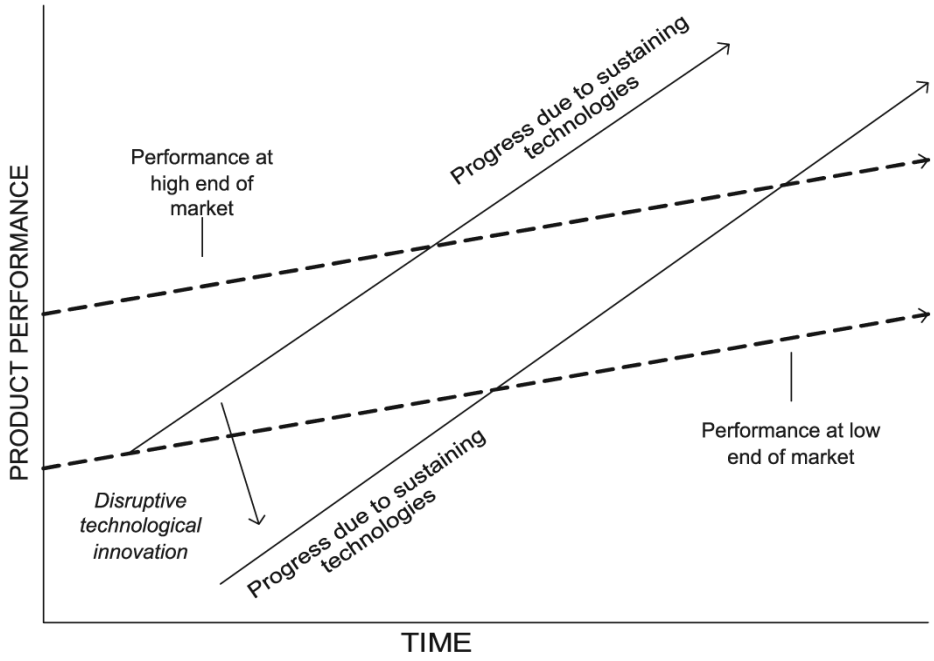
The South African book publishing industry is facing technology disruption in the form of e-books and general digitisation of processes. It is hard to predict when and to what extent exactly e-books will permeate the mainstream market, but it will definitely have a significant impact on the operations and sales of South African publishers. E-books and Internet technologies such as social media have changed the "performance metric" amongst which firms compete. Regardless of the eventual level of usurpation of traditional books by e-books, the playing field has changed significantly and publishers need to recognise the opportunities and threats afforded by these changes.

5.4.2. Factors that contribute to technology disruption in the publishing industry

The vital lesson for publishers to learn from disruptive technology is that, despite the uncertainty in the publishing industry whether digital publishing will usurp traditional publishing, it is not sensible to wait until disruption in the full sense of the word has occurred before taking action. Christensen (2006) holds that the definition of disruptiveness exists independent of the outcomes, meaning that the effects of disruptive technology are felt acutely in an industry irrespective of whether the technology becomes the mainstream norm. The complete replacement of existing firms and technologies is a common but not necessary effect of disruptive technology (Dan and Chieh, 2008).Regardless of the eventual market share between traditional publishing and digital publishing, publishers cannot afford to ignore the opportunities offered by new technologies, as discussed above in 5.4.1.

Christensen (1997) provides a powerful analytical diagram that portrays trajectories over time of (1) performance demanded by different market segments, and (2) performance provided by alternative technologies.

Figure 5.2: Product performance in disruptive technology landscape



Source: Christensen, 1997: 12

Disruption occurs when the trajectory of performance offered by the disruptive technology intersects with the trajectory of performance demanded in the mainstream market (Danneels, 2004). This happens when the new technology, driven by investment, research and development, becomes acceptable and enticing to the mainstream market. In the publishing industry, this translates into the widespread market acceptance of e-books and e-reading. In order to achieve this, the industry will have to overcome certain barriers as identified by the literature review (Overdorf and Barragree, 2001; Burk, 2001; Clark et al., 2008; Danneels, 2004; Gordon, Kung and Dyck, 2008; Hyatt, 2003; Mierzejewska, 2008; Neilan, 2009):

- Lack of an elegant, sophisticated but user-friendly, “iPod for books”, with smooth navigation and a screen that won’t hurt readers’ eyes.
- Cost of dedicated e-readers and e-books themselves are too expensive.
- The influx of different e-book formats and the associated DRM causes access and compatibility problems.
- The emotional ritual and connotations that readers have with reading printed books causes hostility to e-books.

If digital publishing is set to follow the route of disruptive technology, e-books and the current e-reader technology would have to improve until it meets the requirements of the mainstream market and overcomes the problems listed above. With extensive R&D (as we are currently seeing in the international publishing industry) these changes are not too far off at all. At such a time, consumers will have access to e-book technology that is cheap, instantly available, portable, and interactive. This has become apparent since the first e-readers started coming out: compare the Kindle 1 to the latest generation Kindle, not to mention the iPad and the array of full-colour tablets that are now in the market. Dedicated e-readers are becoming cheaper, smarter and more prevalent every day. The challenge for publishers is to develop DRM systems that protect content and the rights of the content owner, while still giving users flexibility and ease of access; creating a system that is so acceptable to users that there is little incentive to cheat (Herther, 2005).

Once these technological barriers are out of the way, the only remaining barrier will be the emotional connotation of/associated with print reading – which is to a large extent a product of a reader's age. Some people feel that younger and coming generations will have no problem with – or will in fact prefer– to read on-screen. These generations will have grown up with computers and will have a significant impact on growing global mass markets, leading in market growth for cell phones and other devices (Herther, 2005).

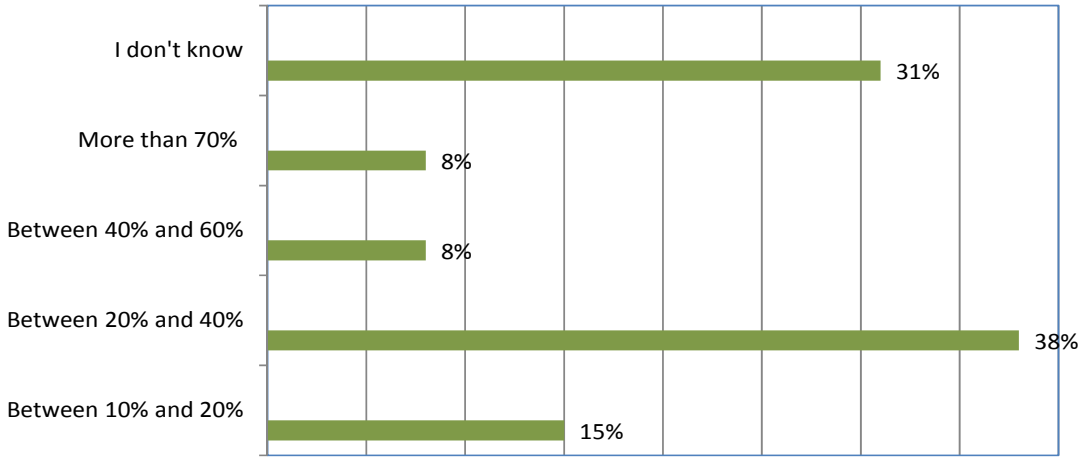
Meadows (2010) states that the real arena in which the e-book adoption battle will be fought is economic. Publishers make decisions based on cost vs. revenue. The primary research confirmed this viewpoint. The number one concern or barrier to digital publishing that emerged from the publisher survey was the lack of a lucrative market. As soon as the barriers above are bridged, digital publishing's performance trajectory will intersect with the trajectory of performance demanded in the mainstream market. When this happens, e-books as disruptive technology will gradually displace an ever-larger slice of print book market share. This could very likely translate into displacement of "traditional" print publishers that continue to focus on printed books, and have failed to invest in digital publishing.

5.5. Predictive value of disruptive technology theory for the publishing industry

The literature revealed the predictive value of studying disruptive technology theory to learn from companies that mismanaged or did not identify new opportunities offered by disruptive technologies (Overdorf and Barragree, 2001; Burk, 2001; Christensen et al., 2001; Danneels, 2004; Dhillon, 2001; Mierzejewska, 2008). The conclusion drawn from the literature and the empirical research is that with the implementation of digital technologies in publishing, the international and South African publishing industries are subject to the effects of disruptive technology as discussed in 5.4.1. As such, research into disruptive technology theory can provide valuable tools to evaluate the potential danger of new technologies in the publishing industry (Mierzejewska, 2008).

The empirical research revealed that most South African publishers, despite their skepticism believe that the digital publishing industry will grow significantly between 2011 and 2013, to take up as much as 10% of total market share. In terms of long-term growth, publishers are hesitant to guess specific figures. However, their predictions summarised in Figure 5.3. below, reveal an optimistic attitude amongst publishers about the future of digital publishing in South Africa.

Fig. 5.3: Expected e-book market share in 30 years (n = 13)



Despite this optimism, the publisher survey revealed that South African publishers have not gone to great lengths to implement digital technologies into their business practices. Despite

the numerous advantages of digitisation, as discussed in 5.3., publishers have not invested heavily to adopt digital practices.

The literature suggests many explanations for companies' reluctance to implement a disruptive technology in their business practices (Overdorf and Barragree, 2001; Christensen, 2000; Dan and Chieh, 2008; Danneels, 2004; Gordon, Kung and Dyck, 2008; Dhillon et al., 2001; Lafferty and Edwards, 2004) as set out in 2.5 of the Literature Review. Table 5.4 on compares those explanations found in the literature pertaining to hesitance to implement disruptive technology, to the findings of the empirical research amongst respondents that had not implemented digital publishing yet.

The findings of the empirical research confirmed that those publishers that had chosen not to publish digitally did so because of the same motivations predicted by the literature review.

One area where the empirical research was limited was in accurately determining the capabilities and limitations of management. The research was not geared to sufficiently undergo an investigation of the experience, age, skill levels, attitudes and leadership styles of management. Further specialised research would be required to gain insight into the effects of management on companies' digital publishing strategies.

Table 5.4. Comparison of findings of the literature review and empirical research

Findings of literature review	Findings of empirical research
Entering an emerging market is not financially viable for large organisations, as the returns are too small. Focus too much on existing customers and high-margin opportunities. With disruptive technologies, it is impossible to predict future growth or returns, as markets that don't exist yet can't be analysed.	Publishers explained that all their decisions to publish are determined by market demand and return on investment. All participants felt that the South African e-book market is too small at the moment to justify digital publishing.
Resource allocation: Companies depend on current customers and investors for resources, and are unable to allocate resources to disruptive technologies.	Some publishers indicated that they do not currently have the funds to upgrade their marketing and distribution channels. Publishers do not have sufficient resources to nurture the new skill sets required by employees to implement digital technologies.

Findings of literature review	Findings of empirical research
A company's values (the criteria used when making prioritisation decisions) determine its processes, which rely on the same thing being done the same way every time. This works against an organisation implementing change.	Publishers are not prioritising upgrading their business processes, resources and employee skill sets to implement organisational change.
Organisational structure: The size of the firm and business units will be negatively related to disruptive innovation.	Those publishers that have implemented digital publishing most successfully are small to medium-sized companies.
Limitations of management: Senior managers are limited by their current experiences and were trained to manage well-defined product lines. Middle managers have the most to lose in disruptive change. The cumulative organisational culture becomes cultural inertia.	Not one participant indicated that digital publishing did not fit into their company's long-term strategy, yet very few had concrete plans to implement digital publishing.
Lack of knowledge and creativity in assimilating potential disruptive innovations. Failure to link the development of technological advances to changes in the market.	DRM issues and confusion over e-book formats and platforms is a major problem. There is no clear understanding of the different systems and their opportunities and challenges.
Implementing disruptive technology requires huge reorganisation, restructuring and investment.	Lack of technical skills within companies presented a problem. Some publishers indicated that they do not currently have the funds to upgrade their marketing and distribution channels. Publishers are not prioritising upgrading their business processes, resources and employee skill sets to implement organisational change.

5.6. Managing disruptive technology in the publishing industry

The literature review and empirical research revealed that digitisation and digital publishing can be considered as disruptive technology in the context of the publishing industry. It also discussed the strategic value in studying and analysing disruptive technology theory for its predictive value in planning business strategies in industries faced with disruptive technology.

The recommendations and lessons learned from disruptive technology theory were used to develop a set of objectives to serve as guidance for publishers venturing into digital publishing, in order to address research objective 5:

> 5. Developing a model of requirements and objectives for publishers to successfully assimilate digital publishing in their business practices.

The literature provided recommendations and guidance for companies to successfully implement disruptive technology in their businesses. Christensen (1997; 2001) identifies two factors that play vital roles in a company's ability to implement and survive technology disruption: The resource allocation process, and the "RPV" framework – organisational resources, processes, and values. He further highlights the importance of "customer competence" – knowing the market intimately and being proactive enough to sense when the needs of the market are changing when faced with a new technology.

Other authors unanimously agree with these factors, and all recommendations and suggestions found in the literature are connected to resource allocation, business processes and values, and market competence. Dan and Chieh (2008) explore the related critical success factors of implementing disruptive technology from a company's internal perspective: the business model and organisational challenges. They identified the following aspects and organisational challenges that are particularly relevant within the context of the publishing industry: leadership, organisational structure and culture, new product development process, employees, and spin-off or ambidextrous organisation.

These aspects that emerged from the literature review can be assimilated to form a model of recommendations and suggestions for South African publishers in going forward with digital publishing.

5.6.1. Resource allocation, processes, customer competence and values in the South African digital publishing industry

The literature review revealed that the opportunities and advantages inherent in a move to a digital publishing process relate mainly to the shortened supply chain that would result from digitisation. The literature identified the following as the areas of business that would be most affected by the move to a digital publishing chain (Carreiro, 2010; Du Sautoy, 2010; Hyatt, 2003; Tian, 2008):

- Production and distribution processes are potentially much cheaper, as digital publishing eliminates warehousing and shipping, resulting in a shortened supply chain. These changes will necessitate major changes to production and distribution processes and workflows, and will require investment and resources.
- Marketing, R&D and commissioning processes are liable to undergo significant changes as new opportunities for sales channels, intermediaries and direct contact with customers abound. Investment and resources are essential to develop new systems in these areas.

It emerged from the survey that publishers have not invested in restructuring production and distribution processes. They have not made significant adjustments to their business models to accommodate the changes necessitated by digital process. Although publishers have digitised many of their processes (booking freelancers, royalty payments, capturing orders, budget control, etc.) they have invested very little in e-books and have not taken advantages of opportunities to make changes to each step in the publishing value chain: they have started experimenting with digitisation in the marketing, R&D and commissioning phases, but have not made significant changes to restructuring their business processes in the two stages that need to undergo the most structural change in the move to digital publishing: production and distribution. In terms of human resources, they have not upskilled current staff or appointed specialist staff to deal with digital aspects in-house. Dhillon et al (2001) state that success in

the face of disruptive technology will be defined by the ability of a company to allocate and manage resources successfully. In order to successfully implement digital publishing processes, publishers have to understand what resources they need (and lack) and how to allocate them efficiently.
In addition to RPV, Christensen (1997) also highlights "customer competence". This refers to the company's ability to successfully address the market for which the new technology is intended, and its importance is echoed throughout the literature. In the publishing industry, this entails innovative e-marketing strategies, which once again ties in with human resources. Traditional marketing experts in incumbent publishing houses are probably not schooled in e-marketing to the high level necessary to remain competitive in the digital marketplace. In the case of e-books the scenario is yet more complicated, as market uptake is still small. Christensen advises companies to engage in "agnostic marketing" – "market under the explicit assumption that no one can know whether, how or in what quantities a disruptive product can or will be used before they have experienced using it" (Christensen, 2000). Publishers should actively promote the use of e-books in addition to promoting specific titles, in order to foster a digital reading culture.

The fact that publishers have not invested in allocating resources where these are needed and have not restructured business processes reflects the values and organisational culture. Survey respondents were tested on their attitudes and perceptions about current digital publishing activities and the future of the industry, under the assumption that respondents' attitudes and values would invariable trickle down to the rest of their organisations and finally determine organisational culture. The results revealed great uncertainty on matters of e-book sales performance and future market share.

5.6.2. Recommendations for publishers faced with digital publishing

The literature offered a number of recommendations and suggestions for companies to successfully manage disruptive technology in their businesses (Overdorf and Barragree, 2001; Christensen, 1997, 2001; Dan and Chieh, 2008; Danneels, 2004; Helfat and Lieberman, 2002; Lafferty and Edwards, 2004; Gordon, Kung and Dyck, 2008; O'Reilly & Tushman, 2004; Christensen and Raynor, 2003; Dan and Chieh, 2008). These recommendations relate to managing resources, values and processes, and sustaining customer competence. Those

that can be applied to the South African publishing industry are discussed below, under the headings of the most important factors identified by the literature.

A. Place responsibility for implementing disruptive technologies in separate, autonomous spin-offs or divisions

The literature suggests that organisations should create new organisational structures within corporate boundaries in which new processes can be developed (Christensen and Raynor, 2003). Creating a separate, autonomous division responsible for digital activities in traditional publishing companies is an excellent approach to manage digital publishing. Such a division should be small enough that smaller revenues and profits are acceptable, while being unhindered by the demands of existing customers and investors. It is important for publishers to consider their internal structure whilst moving towards a digital publishing environment. Increasingly this has led to the creation of digital divisions within companies, frequently under the control of digital directors (Tian, 2008).

This approach has already been taken by one of the participant publishers that launched an experimental digital imprint in 2012. An autonomous imprint that specialises in digital publications is a relatively safe way to experiment with digital markets while not interfering with the larger goals and financial expectations of a publisher's mainstream print publications.

B. Create a core team to collect disruptive ideas and mould them into propositions

Many established employees and middle-management are usually resistant to change, as it potentially endangers their positions and undermines their skill sets (Dan and Chieh, 2008). They are trained to serve established markets and might not understand the value of new technology. This is why it is imperative to appoint a fresh team to collect digital publishing ideas and to draw up proposals and implementation plans. Team members should be innovative risk-takers with digital publishing expertise and optimistic attitudes to the e-book industry.

One option is to appoint new staff members with specific skill sets suitable for the job at hand. Alternatively, innovative team members already in the company could be trained to take on new responsibilities. Both approaches have their advantages. Using existing employees would be advantageous in that they would already be familiar with the company's processes, vision and culture, and would only require technical training on digital aspects. However, this familiarity with organisational culture could turn out to be a double-edged sword, as these employees might be resistant to change regardless of new skill sets attained through training. Unless these employees can confidently be trusted to be flexible free thinkers willing to change their mindsets and approaches free from the traditional organisational culture, this approach should be avoided. It is more advantageous to recruit new employees with no ties to the incumbent organisation, free to work prolifically at implementing digital publishing.

C. Employ an informal management style in managing digital teams

Publishers should allow managers in charge of digital publishing teams to proceed intuitively rather than having to be backed up by careful research and analysis. Digital publishing is in its infancy, and especially in South Africa there is no definitive market research to rely on in making decisions at this stage.

Digital publishing teams need the freedom to make decisions based on instinct and conjecture in an experimental fashion. Christensen (2000) calls this "discovery-driven planning", and says it is a vital prerequisite to creative, successful implementation of a disruptive technology. Publishing is, as most industries are, traditionally an economy-driven industry. Organisational strategies are based on careful forecasts and hard, factual data on return on investment. This naturally results in rigid organisational processes and management styles. If digital publishing team are expected to flourish prolifically, they need to be free of strict micro-management and should be allowed to explore their creativity.

D. Design long-term-oriented plans instead of short-term-oriented, formula-based plans

The research has shown that a disruptive technology does not disrupt a market overnight. The rate of change we can expect in the publishing industry over the next few years depends

mainly on the changes discussed in 5.2.2. This might take a very long time. For example, video cassette recorders took 21 years to achieve a high level of market penetration (Tian, 2008). Publishers should be patient and expect the e-book market to only produce return on investment after a significant amount of time.

Publishers should develop long-term digital strategies that are not dependent on immediate or short-term return on investment. Strategies should not be formulaic, but rather experimental and daring. Publishers should strive to reach new markets, and to investigate several different avenues of digital publishing to find what works best for the company.

Publishers will also need to ensure that the company and its employees understand that digital publishing is a real part of their business in the long term and not just a sideline project. This will incentivise employees to change their attitudes, to learn new skills to keep up with technology, and to make a success of digital publishing activities.

E. Allow enough resources in reserve to have a second or third attempt at the market

Inherent in the assumption that publishers will develop long-term strategies, they will also need to make sure that they have enough resources in reserve to facilitate their strategies over the long term. Publishers need to invest enough time, money and resources in digital publishing to sustain their digital publishing activities until the market "breaks even", when e-books meet the requirements of the mainstream market and become a lucrative source of revenue.

F. Prepare for and institute organisational change

The organisational structure of a company determines if and how disruptive technology is implemented. The number and size of business units which could facilitate development of disruptive technology is an important strategic consideration (Dan and Chieh, 2008).

Organisational inertia is usually problematic when a disruptive technology is introduced in a company. Deeply entrenched values and habits need to be unlearned, out with the old, in with

the new. Of course some integral parts of culture should be preserved and valued such as entrepreneurship, risk taking, flexibility and creativity.

It is incumbent on senior management to initiate a transformation of culture within the book publishing industry as there are many instances where traditional culture is firmly entrenched to the detriment of progress (Tian, 2008). Organisational culture is critical to the process of change.

G. Cater for the needs of existing customers and new customers equally

Paap and Katz (2004) advise that business should not ignore customers, current or potential, and to identify the drivers of the future that emerge when customers' environment changes. This sensitivity to the needs of customers is what Christensen (2000) called "customer competence", and needs to underpin everything that a publisher does.

Mainstream and emerging customer orientation can co-exist. Do not neglect an emerging customer orientation, but develop techniques to understand new customers' needs. "New" customers in this sense refers to any reader who buys an e-book. They will have different expectations and needs of the e-reading experience than a reader would require of a traditional print reading experience. These will usually relate to technical issues such as hardware and software used, but could also relate to the content that readers prefer to read in digital format.

Dan and Chieh (2008) state that gathering information on only mainstream customers' needs and responding only to such needs is detrimental to implementing disruptive technology, whereas an orientation toward small but emerging customer segments might aid in the development of such technologies. With Internet communication channels, publishers have the opportunity to access new niche markets (especially non-fiction markets) that they were unable to monitor before. Publishers need to engage in extensive R&D, making full use of social media and other communication channels that now enable them to monitor and understand the needs of customers, both existing and emerging.

H. Analyse trends in how customers use products to avoid performance oversupply

Publishers need to take heed of all the challenges and issues discussed in 5.2.2 that will be instrumental in market acceptance of e-books and will ultimately determine when they are accepted in the mainstream market. Publishers should keep a close eye on the progress of e-reading devices, formats, DRM issues and pricing issues to judge accurately when the outstanding requirements have been met.

Once functional requirements have been met with dedicated e-reading devices, it will be time to look progressively to reliability, convenience and price. Start simply and with a low price point – then look for a migration path to the mainstream market (Overdorf and Barragree, 2001).

I. Exploit the technology's unique attributes in new applications

The temptation exists for publishers to take the quickest route to digitisation. Most publishers create digital versions of print books that are exactly the same as the print book, usually in PDF format. In so doing they are not exploiting the interactive, innovative possibilities that the digital medium offers, but are simply stretching e-books to meet the product and service requirements of the mainstream print market. E-books have the potential to have in-use features such search and cross reference functions, hypertext links, bookmarks, annotations, highlights, multimedia objects and interactive tools (Vasileiou and Rowley, 2008). Publishers should strive to come up with creative new ways to use the capabilities of e-books to enhance content.

One publisher that took part in the survey has started publishing glossy art e-books for the iPad since the conclusion of the survey. Others should follow this example and experiment with the different formats in the marketplace. Good practice would be to develop and archive e-books in XML format to allow themselves more production flexibility, as XML enables the sharing of documents in different formats across information systems and the Internet (Carey, 2004).

J. Engage in open innovation

Publishers should explore stake ventures, joint ventures and acquisitions to gain resources that would be well-placed and suited to enrich them in the face of digital publishing.

Christensen and Raynor (2003) identify acquiring a new organisation whose processes and values match the "required" task as one of the most efficient ways to implement a disruptive technology in existing businesses. In the case of digital publishing, a traditional publisher would benefit from acquiring a partner with a strong foothold in the digital market. For example, a joint venture with a company that has experience of distributing products through various digital distribution channels would bring valuable knowledge, contacts and experience to the digital publishing process. Equally, a company that specialises in online content delivery has much to gain –in terms of new customers and sources of revenue – from partnering with a traditional publishing company.

K. Assume an international perspective

Creating disruptive innovations nearly always requires an international perspective (Dan and Chieh, 2008). One of the most significant advantages of digital publishing and e-books is the portability, ease of access and boundless distribution possibilities that naturally follow when a product exists in cyberspace.

Publishers no longer need to be dependent on their distribution agents for retail, as the Internet offers an international ocean of e-book vendors that have no restrictions on shelf space. The Internet also allows access to an endless pool of consumers in the international sphere that can be directly accessed through e-marketing and distribution strategies.
All recommendations and actions discussed above should take place against the backdrop of the publishers' resources, values and processes. Figure 5.5 on page159 illustrates these concepts.

5.6.3. Recommendations for further research

The research concluded that the publishing industry is subject to disruption with the advent and increased prevalence of digital publishing. Future research can explore in depth the applications of disruptive technology theory in other industries. Research into specific cases where technology disruption took place would be greatly beneficial to the publishing industry in developing detailed strategies for implementing digital publishing.

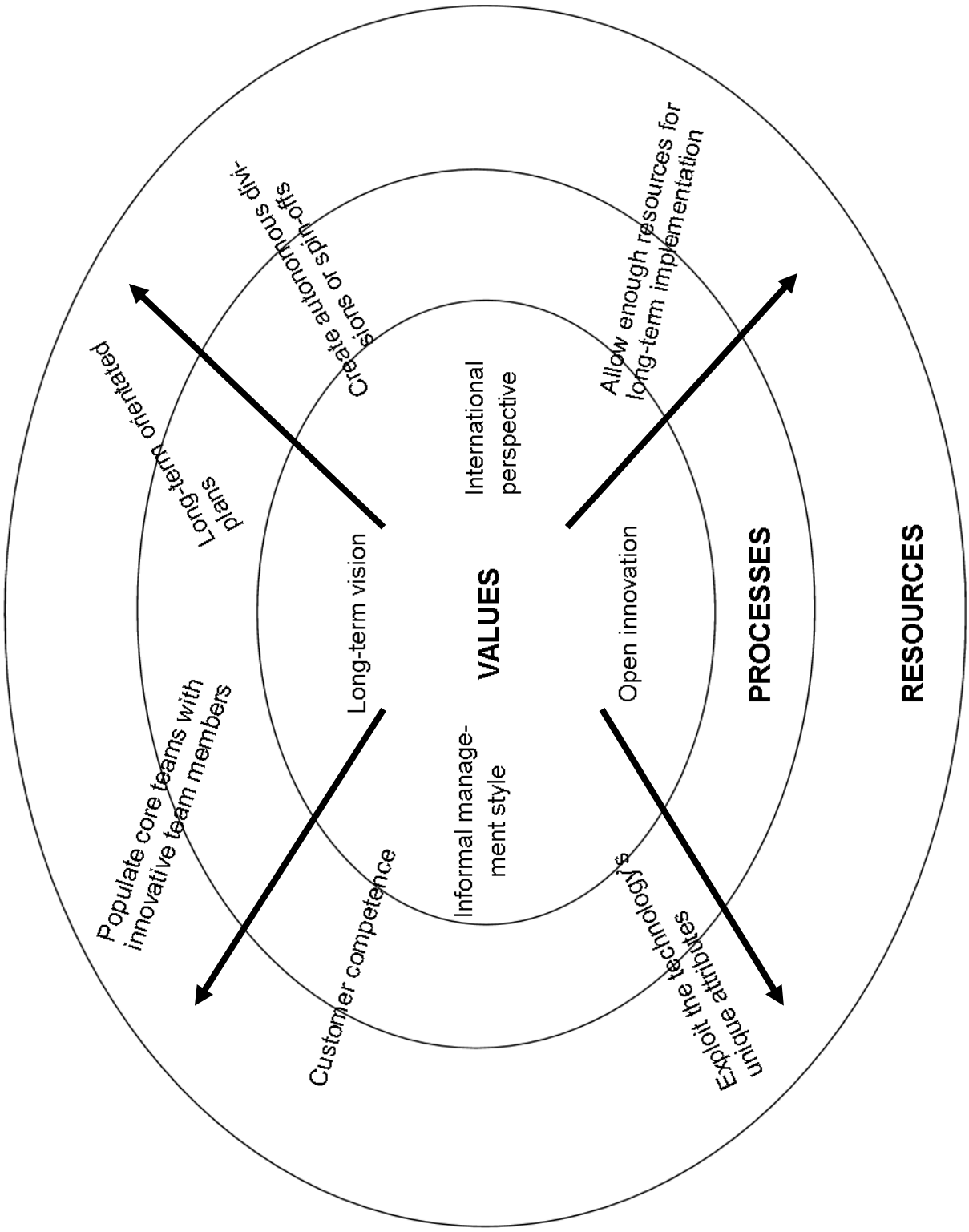
Extensive research into user preferences is needed to understand the size, needs, and preferences of the South African e-reader market. Research into the different devices and platforms for e-books (for example tablets, mobile phones, personal computers and the different dedicated e-readers) will help discover what the market is looking for, and will help publishers make sound decisions as to which platforms to use. Research to clarify technical issues such as DRM, digital copyright, and software and hardware issues would also be greatly beneficial to the industry.

Further research could investigate the impact of new trends such as cloud computing, for example how this is affecting the publishing value chain in terms of archiving and distribution. Research comparing the South African publishing industry to the international situation will be useful in discovering trends that might have already emerged in the international market, and are expected to be repeated in the local context.

The focus of this study was on trade publishing. Further research into digital publishing across other sectors of the publishing industry, such as educational, professional and academic, will contribute greatly to an understanding of digital publishing across the publishing industry.

A study of e-book consumer preferences would be highly beneficial in establishing profiles and demographics of the principal e-book market segment. This would serve to support the theoretical claims and assumptions that emerged from this study regarding the age, habits and preferences of e-book readers.

Figure 5.5: Recommendations for publishers' resources, values and processes



5.7. Conclusion

Implementing digital publishing and digitising processes would result in a shorter publishing value chain. This would afford publishers tighter control over projects (and budgets). Adjusting their business models to keep these processes in-house would be very advantageous to publishers if the e-book market grows significantly, as most publishers believe it will. Not only would they save on production, distribution and technical costs, but being involved in the entire digital publishing process would enable publishers to know their products and the market on a much more intimate level than at present – leading to Christensen's (1997) "customer competence".

The research revealed that the most South African e-book publishers are not reaping the benefits of a shorter publishing value chain yet. The initial cost of acquiring new resources to shorten the supply chain would be very high as it would entail much training, new staff and implementing a new business model. Understandably, most publishers are hesitant to do this until the future market share of e-books becomes less of a gamble: the survey and interviews revealed that the majority of South African e-book publishers continue to, and prefer to, outsource most production and distribution processes, and are not profiting from the marketing opportunities as they could be.

Half of the 10 surveyed e-book publishers intend to dual publish all titles in future, i.e. publishing new titles in both print and electronic format. The remaining publishers that only publish a selection of their front lists digitally, take a number of factors into consideration when deciding which titles to publish in digital form. The genre and market of the book emerged as the most important of these considerations, while shelf life, printing costs and DRM issues are considered unimportant in comparison. This reinforces the fact that digital publishing decisions are economy-driven. Publishers make decisions based on costs vs. revenues (Meadows, 2010). Whether there is a significant market – which goes hand in hand with genre – is the most important factor in a publisher's decision to publish an e-book. DRM issues, printing costs and shelf life are secondary considerations to the main question: will the book sell?

With the current lack of a defined market, not to mention budget restrictions as book sales in general are down, publishers are clearly hesitant to invest heavily in digital publishing. As

Arthur Attwell (2009) points out, the technical costs of setting up a digital publishing system might currently outweigh the potential sales of e-books. Gordon, Kung and Dyck (2008) state that for a traditional publishing company to change into an electronic publisher demands a huge reorganisation and investment. While digital publishing remains a niche market, the costs involved do not justify overturning publishers' business models. Publishers are only likely to invest enthusiastically in e-books with enthusiasm once the market becomes grows to a significant, tangible size and scope.

However, disruptive technology theory provides us with many cautionary tales of industries where new technology was not invested in for these very reasons. When the tipping point is reached and the digital publishing market becomes profitable, traditional publishers that did not invest in digital technologies will be left behind. Recommendations formulated from disruptive technology theory can provide a useful how-to guide for publishers in implementing and managing digital publishing in their business processes.

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Appendix A

Publisher survey

DIGITAL PUBLISHING IN SOUTH AFRICA: PERCEPTIONS AND STRATEGIES

Thank you for agreeing to take part in this survey. The questionnaire will only take 10 minutes of your time. Please answer as accurately as possible and elaborate where relevant. All information will be handled confidentially. PLEASE NOTE: In this questionnaire, the term 'E-book' refers to any book published on a digital platform for a device such as a computer, an e-reader, a tablet or smart phone.

SECTION A: COMPANY PROFILE

1. How many full-time employees does the company employ?

- ○ 1 - 5
- ○ 5 - 10
- ○ 10 - 20
- ○ 20 - 50
- ○ 50 +

2. How many titles does the company publish per year?

- ○ 1 - 20
- ○ 20 - 30
- ○ 30 - 40
- ○ 40 - 60
- ○ 60+

3. Please indicate which genres the company publishes in:

- ○ Fiction
- ○ General non-fiction
- ○ Educational
- ○ Academic/Tertiary
- ○ Professional
- ○ Other:

4. Roughly what percentage of the company's publications are trade titles? (Please note, 'trade' titles refer to all books intended for the general market - Fiction, general non-fiction, etc.)

- ○ 100%
- ○ 60% - 90%
- ○ 30% - 60%
- ○ 10% - 30%
- ○ 0%

5. Roughly how many TRADE titles will the company publish in 2010? (This includes titles already published this year as well as pending publications).

6. Does the company publish e-books?

_____

SECTION B: E-BOOKS PROFILE

ONLY answer this section of the company publishes e-books. If NOT, please proceed to SECTION C.

1. In what year did the company start publishing e-books?

_____

2. How many e-books has the company published to date? Please indicate how many were published EACH year since the company started publishing digitally.

_____

_____

_____

_____

3. Roughly what percentage of the company's published e-books are TRADE titles?

_____

4. Roughly what percentage of new books is considered for digital publishing?

_____

5. At what stage of the publishing process is a new title considered for digital publishing?

- ○ Commissioning/First manuscript submission
- ○ Editorial
- ○ Typesetting/Design
- ○ Post-production

- ○ Backlist review
- ○ Other: _____

6. Roughly what percentage of the company's backlist has been converted to e-books? If none have been converted, are any being considered for digital publication?

_____

_____

_____

_____

	1	2	3	4	5
Genre	( )	( )	( )	( )	( )
Market	( )	( )	( )	( )	( )
Printing costs	( )	( )	( )	( )	( )
Shelf life	( )	( )	( )	( )	( )
DRM issues	( )	( )	( )	( )	( )

8. Which formats are your e-books published in?

- ○ PDF
- ○ EPUB
- ○ Mobipocket
- ○ Kindle (AZW)
- ○ DNL
- ○ Other _____

9. Why has the company elected to use this particular e-book format? Have you experimented with different formats?

_____

_____

_____

_____

10. Who converts your files to e-books?

- ○ In-house staff
- ○ External consultants/digital publishers
- ○ Other:_____

11. Please choose one of the following regarding your technical staff:

- ○ We have a full-time, skilled department that deals with our e-books
- ○ We plan to hire technically skilled, full-time staff to deal with e-books soon
- ○ Our staff currently do not have the skills to work with e-books, but we plan to train them
- ○ We prefer to keep the technical aspects of e-book conversion external
- ○ Other:_____

12. Please choose one of the follwing regarding the company's e-book sales:

- ○ Our e-books have sold much better than we anticipated
- ○ Our e-books sales have met expectations
- ○ Our e-book sales have not been as good as we projected
- ○ Our e-book sales have been very disappointing so far
- ○ Other:_____

13. In terms of digital publishing growth, how does the company intend to proceed over the next few years?

- ○ Books will be published digitally only
- ○ Selected books will be converted to e-editions
- ○ Dual publishing: Each new title will have a printed and a digital edition
- ○ Not many e-books will be published
- ○ Digital publishing will not continue for the foreseeable future
- ○ Other:_____

14. Please indicate which methods of distribution the company uses for e-books:

- ○ External distributers/agents
- ○ E-books can be downloaded directly from our website
- ○ We deal directly with various e-book vendors
- ○ Other:_____

15. What strategy does the company use for e-book pricing?

- ○ E-books are priced on the same model as printed books
- ○ E-books are sold at roughly two thirds the price of printed books
- ○ E-books are sold at roughly half the price of printed books
- ○ E-books are sold at less than half the price of printed books
- ○ Other:_____

SECTION C - PERCEIVED BARRIERS TO DIGITAL PUBLISHING

ONLY answer the questions in this section if your company does NOT publish e-books. Otherwise please proceed to SECTION D.

1. Please indicate which factors have played the biggest part in the company's decision not to publish e-books. You can select more than one.

- ○ The SA e-book market is too small
- ○ DRM issues
- ○ Our company does not have the technical skills at this time
- ○ E-publishing does not fit into our long-term strategy
- ○ The many platforms and formats are too confusing
- ○ Other:_____

2. If no e-books have been published to date, when will the company venture into e-publishing?

- ○ In 2011
- ○ Over the next two years
- ○ Over the next five years
- ○ We have no plans to publish digitally yet
- ○ We will never publish digitally
- ○ Other:_____

3. Please take a moment to expand on the company's reasons for not publishing digitally, and indicate which factors would determine future decisions about venturing into e-books.

_____

_____

_____

_____

_____

_____

_____

_____

SECTION D - TECHNOLOGY AND THE FUTURE OF THE E-BOOK

All participants please answer all questions as accurately as possible and elaborate where applicable.

1. Please indicate which of the following the company makes use of:

- ○ Company website
- ○ Facebook
- ○ Twitter
- ○ Linkedn
- ○ RSS Feeds
- ○ Other:_____

	Not affected at all	Slightly changed	Has no impact	Changed significantly	Completely changed
Commissioning	( )	( )	( )	( )	( )
Editorial process	( )	( )	( )	( )	( )
Production process	( )	( )	( )	( )	( )
Distribution model	( )	( )	( )	( )	( )
Marketing activity	( )	( )	( )	( )	( )
R&D	( )	( )	( )	( )	( )

3. With regard to your answer to the previous question, please elaborate, in broad strokes, on how the company's processes/activities have changed with the implementation of the internet, new technologies and applications.

_____

_____

_____

_____

_____

_____

_____

_____

4. Please choose one of the following regarding new technology (websites, social media etc.) in relation to the company's sales performance:

- ○ It has had no discernible impact on our sales
- ○ Sales have slightly improved
- ○ Sales figures have remained the same
- ○ Sales have definitely improved
- ○ I don't know
- ○ Other:_____

5. Please choose which one of the following best describes your company's view on the future of e-books in SA over the next thirty years:

- ○ The e-book market will make up over 70% of the publishing industry
- ○ The e-book market will make up roughly half of the publishing industry
- ○ The e-book market will make up between 20% and 40% of the publishing industry
- ○ The e-book market will never make up more than 10% to 20% of the publishing industry
- ○ I don't know
- ○ Other:_____

6. Please take a moment to elaborate on your company's view on how the e-book market will change over the next THREE years in terms of market share, availability etc.

_____

_____

_____

_____

_____

_____

_____

_____

END

Thank you very much for participating. Simply click on 'submit' to submit your answers.

Appendix B

Survey cover letter

To Whom It May Concern:

I am currently conduct research for my Masters degree in the Department of Information Science at the University of Pretoria.

My research topic concerns digital publishing in the South African publishing industry. The research will attempt to understand how publishers view the future of digital publishing in South Africa, how it is impacting on their business processes, and how they plan to move forward.

As part of my research I will be asking publishers to complete a questionnaire, which will be followed up with an interview if necessary. I believe the results will be of great value to the South African publishing industry, as there is a significant lack of information and statistics available about local publishing activity.

The research will be conducted in compliance with The University of Pretoria' s code of ethics, and all information will be handled confidentially, with anonymity assured.

I would greatly value your input, and look forward to hearing from you.

Thank you.