Navigating the Minefield of Self-Publishing E-Textbooks

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Abstract
This paper examines the issues useful for faculty members that are considering electronically self-publishing their course textbook. A brief history of the use of electronic textbooks is presented as well as the advantages and disadvantages associated with self-publishing and electronic textbooks. A brief overview is provided on the process of electronic publishing and the resources available. Ultimately, faculty members undertaking the task of self-publishing an e-textbook need to ensure that the product is of high quality and useful to their students.

Keywords: self-publishing, electronic textbooks, e-textbooks, Kindle, textbook pricing

1. INTRODUCTION
Technology has been disruptive to many media industries over the past decades. The music industry saw the decline of physical sales and struggled to adjust business models that no longer met the needs of consumers. Newspaper circulation declined, DVD sales declined and cable television lost subscribers to streaming services.

Meanwhile, the book industry rolled with the changes. Electronic books or e-books, and portable e-book readers became common and the self-publishing industry exploded, changing the way the big five publishing houses conducted business. Despite the changes, the technology has been somewhat less disruptive in the publishing industry. Even though revenues of e-books have grown since the introduction of devices such as Amazon’s Kindle, the e-book has held steady at 20% of the market share over the past few years, with an even smaller portion in academia (Inyoue, 2016). These overall statistics about publishing in general are sensitive to trends and sales of e-books may have stagnated over the past year due to trends such as adult coloring books and areas of publishing such as children’s books that have seen little encroachment from the e-book (Milliot, 2016a). Results of a Codex survey of readers indicate that even though e-book readers are prevalent and available in many platforms, they are not necessary devices like their digital music counterparts. Readers in the same survey indicated that the development of e-reader usability has also slowed the disruption of technology in publishing (Milliot, 2016b).

These problems as well as others that may be specific to the textbook industry have also slowed the development of the e-textbook. However, recent discussions of various aspects of higher education from soaring costs to changes in teaching strategies may be reasons for faculty to consider adopting e-textbooks or authoring their own. This paper will discuss the brief history of the e-textbook, list the pros and cons of self-publishing an e-textbook, and finally give an overview of the process in self-publishing a textbook.

Short History of the Electronic Textbook
The electronic textbook or e-textbook has a relatively short history tied mostly to the technology that supports them. An e-book has been defined as “any piece of electronic text regardless of size or composition (a digital object), but excluding journal publications, made available electronically (or optically) for any
device (handheld or desk-bound) that includes a screen” (Armstrong, Edwards, & Lonsdale, 2002). There are examples of textbooks distributed or supplemented with content on CD’s starting in the early 1990s but the transformation in the industry began with the introduction of e-reader software from major distributors such as Amazon’s Kindle and Apple’s e-reader (Chess, 2011). These early applications were aimed at page replication, showing reproductions of printed pages, but have quickly evolved to include full-color images and multimedia content. With the potential for growth in the e-textbook market, many traditional textbook publishing companies have reimagined themselves into media-rich learning distributors through acquisitions of technology companies such as Pearson’s purchase of e-College (Bossaller & Kammer, 2014). Many of the major textbook companies not only offer digital versions of their products but also have moved to development of highly interactive, immersive textbooks and supplemental resources. With skyrocketing prices of traditionally published textbooks, some faculty are looking at alternatives in self-publishing that can produce textbooks that are high-quality, inexpensive, and royalty producing (Fox & Patterson, 2015).

Cost of Textbooks and Higher Education
Development of these interactive, digital textbooks can also mean higher prices to cover the costs associated with the new content. Over the past three decades, the cost of higher education and textbooks in particular has consistently outpaced inflation at a rate of 300% (Economist, 2014). There has been public outcry and even legislative attempts to regulate pricing in publishing to help lower the costs associated with higher education attendance. Various studies and surveys have uncovered startling facts in textbook usage. Overall, less than 60% of students buy the current edition of assigned textbooks. Around 25% of first year students and more than 30% of senior level students do not buy the textbook at all (Cannon & Brickman, 2015). As a result of price increases, other options have appeared that many students now utilize to control their textbook costs. The tried and true used book market has been expanded through the use of the World Wide Web. Students can not only find competitive pricing but also cheaper international or older editions of textbooks when available. This may cause problems as case studies, examples, homework problems and other content in the books may be different than the edition selected by the faculty member teaching the course. A more recent option for students is the rental system where students pay a smaller fee to use the book for one semester. Students who rent books are not allowed to mark or notate their books. Since rented textbooks are returned at the end of the semester, students are unable to use them in subsequent semesters as a reference for higher level classes. Sometimes, depending on the rental contract and the academic calendar at an institution, students may even have to return their textbook before the semester is complete.

Unfortunately, many students struggling with the financial burden of higher education may also choose not to purchase their textbook at all. While these options can lessen the cost of attendance for students, the fact remains that they are still likely to continue to rise significantly. Used book prices are tied to the price of new textbooks and the rental prices on textbooks are set according to the list price of the book. If textbook prices continue to increase, so will these less expensive options.

Of course, one of the additional ways students save money is to purchase the electronic version of their textbook. Currently, the average price of an electronic textbook is half of its print counterpart (Young, 2009). While the e-textbooks are still considered too expensive for some students, many will take advantage of this option because a discount is provided by the publisher since production costs are lower. Many times this discount may not be as significant because the majority of cost in textbook publishing is related to intellectual property and production costs such as editing and page layout.

2. WHY CONSIDER SELF-PUBLISHING AN E-TEXTBOOK?

There are many reasons to consider self-publishing an e-textbook that range from cost savings for students to increasing supplemental income. The textbook writing process is not an easy one but there are many benefits to be gained from the process. First, in response to the previous discussion about cost of textbooks, self-published authors have the ability to set their own price point on their textbook and can even give discounted copies or free copies to students. This allows the author to provide significant cost savings to their own students but still retain royalties from other people purchasing their product. Since the price point can be set significantly lower than a traditional print textbook, some authors may consider writing their content to reach a wider audience that normally would not consider purchasing a very expensive college textbook.
Introductory programming textbooks or HTML/web programming textbooks might have a broader appeal than highly specialized or technical topics. Faculty can set their prices similar to that of other technical e-books and may find customers beyond the classroom.

Depending on the platform used to publish the text, authors can keep up to 70% of their sales. With additional marketing of the text to other faculty members or a general audience, authors can create a side income stream while reaping the additional benefits of self-publishing their instructional material.

Control over content and the ability to quickly update the textbook to keep pace with changes in information systems fields may be a benefit for some faculty members to consider. A traditional print textbook takes a significant amount of time to complete the publication process, with updates and new material having to wait until a new edition is released. With e-publishing, faculty members have the ability to update content frequently. With some platforms, these updates can be pushed out to everyone who has purchased the book. For example, a web design faculty member may decide to update a section on Cascading Stylesheets as new standards are implemented and anyone who has previously purchased the item can elect to receive these updates for free. In addition to the ability to keep content up to date, faculty members can also organize and include information that mimics the way they choose to teach their course. Self-published authors have complete control over topic inclusion and organization.

Because today’s students tend to be technologically savvy, familiarity and acceptance of an e-Textbook is not the hurdle it once was. There are some concerns with usability that will be addressed in a later section, but the prevalence of various free e-book readers and distribution platforms make the publication process easy and ubiquitous. E-readers are available for Macintosh, Windows, Android, and MacOS. Textbooks can be readily available to students on their phones, their tablets, and their laptops. The mobility of the textbook potentially could increase student use of textbook as they have the ability to use the electronic version while waiting for classes to begin, taking breaks at work, or traveling home on breaks or weekends. Include the ability to create immersive, linked resources and the platform may appeal to millennial students more than a traditional textbook.

Finally, as many universities looks for ways to be better members of their communities, some are investigating ways to become more sustainable and eco-friendly. The electronic version of the textbook eliminates the printing and ultimate disposal of textbooks once they become out of date. Particularly in information systems where content quickly changes, older editions are not only discarded frequently but older editions, unlike other fields such as literature or history, have little value once they become obsolete. They quickly find their way to landfills or in best case scenarios, the recycle bins where possible.

3. THE PITFALLS OF SELF-PUBLISHING AN E-TEXTBOOK

First and foremost, the one major obstacle in self-publishing an e-textbook is the amount of work involved. Writing a college level textbook is time consuming and is a major undertaking that can be difficult to balance with teaching, research, and service requirements of a faculty member. Creating content, editing, page layout, cover design, and marketing are all services that are provided to the author by a traditional publisher. Once the writing is complete, there is the question of quality control which is many times handled by various editors at a publishing house. The acquisitions editor will determine the need or market for an item. The copy editor will pour over every word and comma to ensure a professional and well organized manuscript. Reviewers and potentially developmental editors will discuss appropriate topic coverage, quality of content, and fact checking. Finally, the production editor will prepare the completed manuscript for the publication process (Hewitt & Regoli, 2010). As a self-published author, all of these tasks will either need to be completed by the author or outsourced, sometimes at great expense, to others who have expertise in these fields. This potentially is one of the more daunting aspects of self-publishing. Faculty members are considered experts in their field of information systems but may have little to no experience in cover design, page layout, or copyediting. Ignoring these tasks could result in a manuscript with quality issues that ultimately will not serve the student well.

Another consideration in the decision to self-publish a textbook is the lack of supporting material for teaching. Many of the textbooks distributed by major publishers today include a plethora of supplemental material ranging from test banks to online course shells. In addition to the supplemental resources provided to instructors, publishers also provide many supplemental learning resources to students.
when they purchase their textbook. When making the decision to self-publish, faculty must consider their use of these supplemental resources. If they feel they are important, more time can be dedicated to including these resources in the electronic textbook but must realize that this will require even more time and could potentially require more expertise in different platforms and e-readers. In addition to time, multimedia resources can be very expensive to produce and many faculty members will not have the resources or expertise to create additional materials.

Accessibility and the use of e-readers has garnered research over the past few years as e-books have become more prevalent. In academia, many studies have looked at how students use electronic textbooks, their preferences, and performance compared with reading traditional print textbooks. Studies have found that retention and performance on quizzes and exams is similar using both formats but found that reading the electronic version many times took less time to complete or that students spent less time using the textbook (Shepperd, Grace, & Koch, 2008; Woody, Daniel & Baker, 2010 ). Student preference has mixed results with some studies indicating that students do not prefer an electronic version of a textbook because they find the digital version harder to use (Thayer, Lee, Hwang, Sales, Sen, & Dalal, 2011; Falc, 2013) This in turn may result in students buying or renting the print version even if the price is higher. Other studies indicate that students prefer some of the functionality of an e-textbook over the print counterpart and would purchase the lower priced e-textbook (Lyman, 2008). Ultimately, the acceptance of an e-textbook can depend on many factors ranging from intention, perceived ease of use, usefulness in the class, and attitude (Hsiao, Tang, & Lin, 2015; Chulkov & VanAlstine, 2013). Accessibility for students of varying abilities also must be taken into consideration. In 2010, universities settled with vision impaired students who were unable to effectively use Kindle e-books circulated by the library (Blumenstein, 2010). On the other hand, e-readers can be customized to select font characteristics such as size that is obviously unavailable in print textbooks. Many options and improvements have been made to devices and software such as speech to text translators, but faculty must always remain aware of special needs of students and their access to textbooks.

Intellectual property rights and institutional policies regarding textbook selection should also be examined before deciding to self-publish an e-textbook. Depending on the platform selected, many times the content of an e-textbook will be protected by the software being used to create the e-textbook. Publishing in more open formats such as PDF or Word document format potentially cause problems of unlawful reproduction and distribution of the e-textbook. Depending on the author’s goals in publishing, this could potentially require time and effort in order to protect intellectual property. In addition to protecting one’s own intellectual property, authors should be well versed in the use of copyrighted work in their own e-textbook. Since the publication of an e-textbook could potentially generate profit and would not be considered spontaneous use, many of the protections of fair use that faculty rely on in the classroom would not apply to the production of an e-textbook.

Additional concerns about institutional policy may also affect the decision to self-publish an e-textbook. Some universities share in royalties off intellectual property which can become a little more complicated in an electronic environment depending on the agreement between the administration and the faculty member. In addition to royalties, some institutions have strict guidelines on faculty requiring students to buy their own textbook in order to avoid a conflict of interest.

4. HOW TO PUBLISH AN E-TEXTBOOK

There are many things to consider and plan when electronically publishing your own textbook. Beyond creation of the content, authors must choose a distribution platform and perform tasks to ensure the quality of the e-textbook. Planning for these tasks before writing begins can make the self-publishing process much more efficient. Choosing a Platform

Factors to consider when choosing a platform for your e-textbook include availability, formatting options, pricing, royalty structures, and ease of use.

When it comes to availability, the major players in the self-publishing world are Amazon’s Kindle and Apple’s iBooks. Both reach wide audiences but Kindle reaches a larger audience with its reader app that is available for Apple, PC, and Android platforms. Successful self-publishing e-textbook authors Fox and Patterson (2015) found that when publishing their first edition of their Engineering Software textbook, 99% of the sales went through Amazon.
Publishing only on the iBooks website can limit access to many students who might not have iPhones or iPads. Other e-readers and distribution sites such as Kobo have apps for all platforms but have not achieved the popularity and market share of the Kindle e-book reader. Another option is to utilize the services of an e-book distributor that formats and sells books to all of the major e-book retailers. Companies such as Smashwords allow authors to provide their books in multiple electronic formats that hit most of the e-readers including smaller markets such as the Nook.

Once a platform has been chosen a platform to distribute the e-textbook, authors should become very familiar with the formatting requirements and any helper software that is provided by the distributor. All of the distributors will have help sites and many will have separate e-books to help navigate the publishing process. Kindle Direct Publishing has tools that easily convert PDF documents into the Kindle format but there are strict formatting requirements that need to be followed for successful conversion. Knowing these formatting requirements before starting to write can save significant time when moving content to the publishing platform.

Amazon also has a tool available to faculty specifically for publication of e-textbooks. The Kindle Textbook Creator creates the Kindle file and assists authors in adding interactive content in the form of audio, video, and images. If the e-textbook will consist mostly of text, the regular Kindle publishing process will suffice. However, if authors want to add multimedia content to their e-textbooks, the Textbook Creator would be a better option. Authors should be aware that content created using the Textbook Creator is unlikely to work on text only readers, found mainly on Kindle’s dedicated e-reading devices such as the Kindle Paperwhite. Tablets, phones, and computers that have the Kindle app installed will be able to view content created with the Textbook Creator.

One additional benefit to consider in the Amazon suite of publishing tools is the ability to distribute print copies to students who wish to purchase a traditional textbook over an e-book. Amazon Create Space allows authors to list both versions on the Amazon website. Amazon provides free tools to help design the print version of your book, sets different royalty levels, and allows for international distribution. The ability to create print versions can also allay some of the accessibility fears that might exist surrounding readers, although that could just as easily be resolved by providing the PDF or Word version of the manuscript directly to students with special needs. The ability to distribute a book in print is not available on most other platforms for digital self-publishing.

Other general things to explore when choosing a platform would be pricing requirements, royalty amounts and distribution processes, editing and updating restrictions, and exclusivity requirements. All of the publishing platforms should explicitly address all of the economic and intellectual property control when submitting manuscripts and presentation of user agreements. As mentioned before, larger platforms such as Kindle Direct Publishing have user manuals and extensive help sections to assist authors in publishing their work.

Quality of the Electronic Textbook
Assuming a platform has been chosen and the textbook has been written, the next step in the publishing process is to prepare the manuscript for publication and ensure the quality of the product. The two main areas of concern for quality are the presentation of the information and appropriate scope of information. One of the most frequent complaints about self-publishing e-textbooks is the lack of critical review (Hewitt & Regoli, 2010). As discussed earlier in traditional publishing, a team of editors perform many tasks to increase the quality and value of textbooks. With self-publishing, authors need to undertake some of these tasks on their own or acquire these services through outsourcing or collaborative work with colleagues. Before publishing, authors should consider having colleagues review the textbook to make sure that the textbook accomplishes its pedagogical goals. Reviewers can make recommendations about including or excluding coverage of certain topics or areas that are relevant to the subject matter. They can ascertain that the information presented is factual and correct. Reviewers can help identify errors with examples or programming code that might have been overlooked by the author. Finally, reviewers with expertise in the subject area can give feedback on organization and presentation of information.

In addition to the services of experts in the field covered by the e-textbook, authors may also wish to enlist or outsource technical publishing tasks such as copyediting, page layout, and graphic design. Ultimately, this decision will come down to the author’s skills in these areas, the amount of time and effort, and any available funds to put toward these tasks. Many of the platforms such as Kindle Direct Publishing provide tools that help
with basic layout and some graphic design for book covers and may suffice for very straightforward, text laden manuscripts. Amazon also has a marketplace to allow authors to purchase the services of some of these publishing experts. Freelance editors and graphic designers can also be located through various freelancing websites such as Elance.com or Upwork.com.

Although not directly related to e-textbooks, faculty should also understand how and why students actually use their textbooks and try to accommodate these concepts into their self-published e-textbooks. In a comprehensive study on textbook use and performance, Landrum, Gurung, & Spann (2012) found that students like textbooks that are practical to their lives, that it is accessible and readable, and includes graphs and tables. The same students indicate that they are more likely to use the textbook when it contains study aids and reviews and when the book is easy to use.

**5. CONCLUSIONS**

When investigating the possibility of self-publishing, faculty must decide if the immense amount of effort and time needed to produce an e-textbook is worth it. Faculty members interested in creating e-textbooks may not have the time or the resources available to write a textbook from scratch. Instead, they may want to work with librarians to compile journals articles or existing electronic resources available to students to create a custom text for a class. Universities interested in reducing costs and improving sustainability have created programs that incentivize faculty into exploring these options and assign a librarian to each faculty member participating in the program to assist in creating custom material (Free, 2016). Other options include using open textbooks that are growing in popularity.

For the faculty member that wants to control and shape the content presented and the order it is presented, self-publishing an e-textbook may be the ideal solution. The platforms available for publishing are easy to use and in many cases free. Faculty can choose to provide low cost textbooks or can market their textbook beyond their classroom and collect royalties to supplement their income.

However, faculty members should realize that these royalties are limited and may be consumed by outsourcing production services such as copyediting and design. Depending on the topic, large audiences might not be available for very specialized topics and more general topics may get lost in the vast amount of self-published material. For example, an e-textbook on HTML published on Amazon must compete with 21,196 other HTML books that are available through traditional publishing houses and self-published e-books on the subject. Unless the faculty member wants to spend additional time marketing their e-textbook, royalties will play a smaller role in the self-publishing decision process.

Ultimately, the faculty member should keep the success of their students in mind. The pros and cons of an e-textbook when it comes to student preference should be taken into consideration. While the cost of textbooks is an obvious concern, a poorly designed or poorly written textbook will not be used regardless of cost. Faculty members who choose to self-publish e-textbooks should ensure that the product they are requiring their students to purchase is well-written, easily accessible and widely available. Faculty should enlist the help of colleagues or editing professionals to review the scope of the material and provide sufficient coverage of the subject material to increase student’s understanding and skills. Finally, faculty members should continually strive to improve their textbook to meet the needs of their students by monitoring student use and gathering insight into how the e-textbook is being used. Questioning students about their satisfaction with the text overall and its ease of use can provide insight for the faculty member on ways to improve their textbook even more.

**6. REFERENCES**


