

Attitudes and Behaviors of College Students Usage of Electronic books

Lauren Kodani

University of Hawai'i, Mānoa

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### **Introduction**

The perception of electronic books has changed since the 1970's. In the first several years of operation, Project Gutenberg offered only a few books available for download. Currently, the organization offers more than 40,000 titles for free ("Project Gutenberg," 2010). More than 2,000,000 titles are available from various electronic distributors and the number continues to grow ("Survey of Kindle," 2011). The Internet was made public in the 1990's and is a convenient means for obtaining electronic files. The recent boom of electronic readers, increased availability in library databases, and the Adobe portable document format (PDF) provide greater accessibility for students to obtain electronic resources. The implementation of digitized textbooks, articles, and various course content in higher education has had mixed assessments about the effects of student performance in acquiring learning skills.

An earlier study revealed student usage included general browsing of electronic books online and eventually printing out portions of interest (Summerfield, Mandel, & Kantor, 2000). A more recent study indicates a growing number of students are choosing electronic books due to lower prices, improved formats, convenience, and portability (Butler, 2009). This literature review examines the attitudes and behaviors of college students' usage of electronic books. The discussion is divided into four sections. The first section examines present advantages and disadvantages of electronic books for college students. The second section analyzes early and recent research results to comparatively measure the attitudes and behaviors of college students'

usage of electronic books. The third section seeks to determine whether electronic books are a useful form for the instructional process. The fourth section reviews the future potential of college students and electronic book usage.

### **Advantages and Disadvantages of Electronic Books for College Students**

Electronic books have advantages and disadvantages. Convenience for accessing books from home or school and conducting specific searches are perceptions stated by students after experiencing electronic books (Appleton, 2004). Some students felt electronic books were more convenient and less time consuming when used for studying (Gutierrez & Wang, 2001). Due to easier access and time constraints, students accessed online reference works more often than the print counterpart (Summerfield, Mandel, & Kantor, 2000). Several recurring themes in the literature include accessibility, search functions, convenience, and less time constraints as an advantage.

Students also expressed disadvantages of electronic books. Appleton (2004) revealed a contrast response to time, stating electronic books required more time. Students expressed frustration because they lacked the necessary skills to perform searches which yielded the desired results (Gutierrez & Wang, 2001). Furthermore, students who did not own a computer felt disadvantaged and often did not read electronic books as thoroughly in comparison to printed books (Shepperd, Grace, & Koch, 2008). The questions resulting from stated disadvantages acknowledge areas where improvement can be made with focused efforts going forward.

### **Early and Recent Research Results for College Students and E-Book Usage**

Most colleges and universities have electronic resource databases for students. Over the years, databases have grown, technology to deliver and view electronic books have improved, and the diversity for which electronic books can be accessed across multiple electronic platforms

have also improved. An earlier study which spanned a six-year period indicated the growing usage of electronic books and estimate significant growth to continue (Summerfield, Mandel, & Kantor, 2000). Another earlier study cited students' negative responses toward having to pay for access to electronic resources in the school library system (Appleton, 2004). In another earlier study, data from a library circulation comparison of books in both electronic and print form was almost identical (Littman & Connaway, 2004). The data from earlier studies show a slower adaptation from print to electronic resources. In addition, since then, educational institutions now allow free access to electronic resources to students via the library system.

Recent research results show a higher number of college students' awareness and usage of electronic books. Students are more aware of electronic books but only half had previous experience using electronic books (Gregory, 2008). Data collected in another study distinguished results on a weekly basis to compare pre and post reactions which supported the hypothesis that students became more comfortable with actual usage of electronic books (Vernon, 2006).

Research by Ongoz and Baki (2010) provided data showing electronic books as the third most used resource, following electronic articles and electronic databases. Recent studies indicate students' feel instruction is important to learn the necessary skills for searching electronic books and resources, adaptation from print to electronic books is improving, and experience increases students' usage.

### **Are Electronic Books a Useful Form for the Instructional Process?**

Information Technology has become a revolutionary instructional tool when integrated into the learning process. Electronic resources continue to evolve as more evidence is gathered from research studies. The evidence assists with the designing and developing of instruction to improve learner knowledge and skills. When comparing the data from assessments of electronic

and print based books, studies indicated no significant difference regarding acquisition of learning skills and test performances (Gutierrez & Wang, 2001; Shepperd, Grace, & Koch, 2008). These two studies were conducted seven years apart with similar assessment results. By way of contrast, an article by Bell, McCoy, and Peters (2002) reports improvement in student performance due to a high satisfaction level. These results represent a current gap in which additional study is needed.

Findings from several research studies signify lower cost, environmentally friendly, accessibility, convenience, lower time consumption, improved delivery of electronic resources, and printing options as useful forms for the instructional and learning process (Butler, 2009; Gregory, 2008; Gutierrez and Wang, 2001; Summerfield, Mandel, and Kantor, 2000; Vernon, 2006). A comparison of the literature reflects continued growth and improvement of these attributes.

### **The Future Potential of College Students and E-Book Usage**

Investigating the future potential of college students utilizing e-books would contribute valuable data for planning, designing, and developing instruction geared to improve student acquisition of knowledge and skills. Hardware and application options continue to improve (Butler, 2009; Summerfield, Mandel, & Kantor, 2000). Greater awareness, interest, preference, and availability of electronic books are on the rise (Gregory, 2008; Gutierrez & Wang, 2001; Littman & Connaway, 2004; Ongoz & Baki, 2010). A critical analysis of the data suggests lack of awareness, experience, and skills for electronic books as an implication for less than favorable perceptions and behaviors of college students using electronic books. As indicated by Shepperd, Grace, and Koch (2008), students with more years of college purchased electronic books as compared to students with less years of college. This supports the hypothesis that experience

increases usage of electronic books as stated by Gregory (2008). Both studies also present favorable reviews from students with prior experience as compared to students without prior experience. However, usage of electronic books is just one element of linking success between performance and actual usage of electronic books.

The reading and study habits of college students contribute toward linking successful usage of electronic books. Conducting further research in these areas can provide useful data. Many studies acknowledged the future potential benefits and recommended further research for modifying strategies to improve instruction with the integration of electronic books (Appleton, 2004; Gregory, 2008; Littman & Connaway, 2004; Ongoz & Baki, 2010; Shepperd, Grace, & Koch, 2008; Summerfield, Mandel, & Kantor; 2000; Vernon, 2006). The general consensus and new questions support additional studies.

### **Summary**

The studies conducted regarding college students usage of electronic books revealed that more research is needed to identify key points for improving instruction. Some of the common themes recognized include advantages and disadvantages, early and recent research results, electronic books as a useful form in the instructional process, and future potential. The advantages of electronic books encompass opportunity. Likewise, the disadvantages of electronic books introduce opportunity. Discovering and defining advantages and disadvantages requires systematic research studies in which valuable data is obtained. Data collected over a period of time is compared and contrasted to identify major themes. In the case of electronic books usage by college students, critical analysis of the data produces knowledge and that knowledge is used to formulate a more useful instructional process. Educating students about and how to utilize electronic books is a starting point (Ongoz & Baki, 2010).

Several recommendations were made to further study how the usage of electronic books by college students can improve knowledge and skill acquisition. New questions evolved and gaps were identified as a result of the studies which justify further research. For example, little information was derived out of the studies to specifically pinpoint reasons for testing results and final course grades having no significant difference when comparing students who used electronic books versus students who used print books (Gutierrez & Wang, 2001; Shepperd, Grace, and Koch, 2008). Another example to consider includes college students who lack the necessary skills to access and utilize electronic books (Gregory, 2008; Littman & Connaway, 2004; Ongoz & Baki, 2010; Vernon, 2006). These gaps invoke additional and focused investigations.

Due to changing technology, greater awareness, improved accessibility, and varying levels of computer literacy, further research is necessary (Summerfield, Mandel, & Kantor, 2000). The growing number of electronic books and resources indicate that a successful instructional strategy considers these options to improve the learning experience and improve the acquisition of skills and knowledge.

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