The Role of Electronic Books in the Study of Literature:

A Review of the Literature

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With recent advances in technology, notably the availability of the internet on portable devices such as laptops and handheld devices, the availability of information has reached new heights. One area in particular that shows a great deal of promise is the realm of electronic books. Fundamental shifts in publishing and information sharing have occurred due to the ease and pricing structure of distributing texts in electronic format, which has led researches to study the impact of this new technology in many different ways. One area in particular where researches are especially interested is the field of education. While many new studies concern the impact of electronic books in educational settings, studies are scattered across disciplines and heavily concentrated at the university level; however, as research aims continue to evolve, promising conclusions have been reached. With prominent studies as a guide, this paper will focus on three questions related to literacy at the secondary education level:

- 1. Do electronic texts result in expanded literacy?
- 2. Does the availability of books in electronic format result in academic improvement?
- 3. Do students utilize and benefit from the electronic tools designed to enhance reading?

The focus of this literature review is to discuss the research found on these three questions.

Do electronic texts result in expanded literacy?

In today's schools, reading instruction, along with the wider notion of literacy education, is undergoing vast transformations as new technologies require new literacy skills (Leu, Kinzer, Coiro, & Cammack, 2004). Traditionally, text was seen as "a passage of print or a slice of speech, or an image" (Lankshear, 1997, p. 45). Hence, texts were known as written or typed statements in books, magazines, and newspapers. With the explosion of new communication technology, texts have become more than written words. Bearne has stated that most adolescents are immersed and engaged in multimodal experiences, hence, developing in them a keen familiarity with mixed media in communications (2005). In a study by Glasgow (1996), reading motivation increased in children who were given interactive multimodal texts, especially those with reading difficulties.

The subject of reading difficulties is an important one. While high achieving students are likely to read whatever is assigned and comprehend it well no matter the format, classrooms are filled with students of varying reading ability, motivation, means to read. With the portability and enhanced features of electronic books (E-books), it is important for educators to realize this new literacy tool at their disposal. Another factor of E-books is the ease of purchase and availability of texts, with many, classics especially, offered as freeware online. As founded by Arzubiaga, Rueda, and Monzo (2002), the reading materials parents keep in their home and material required by teachers plays a key role in children's literary development. This makes the ease of acquiring additional E-books vital. Furthermore, Jewell, Phelps, & Kuhnen (1998) (as cited in Jones & Brown, 2011) studied the independent reading habits of first graders in three diverse communities and found that children are more likely to become engaged in reading if they have greater access to books through home, school, or public libraries. In a study by Jones and Brown (2011) 22 third-grade students were put into groups to read texts both electronically

and in print format. The data showed that students' comprehension was equal for both formats, and they expressed the desire to have both formats available. However, research found that the participants were very intrigued by the interactive features preset in the electronic versions as well as the vast availability of texts on their reading devices. This last point is vital because a great deal of leading research shows "that the availability of materials will play a determining factor in how engaged children are in reading" (p.7). In summation, it appears clear that electronic books and their corresponding E-readers can play a key role in developing and enhancing literacy in and outside of the K-12 classroom.

## Does the availability of books in electronic format result in academic improvement?

While a strong link exists between increased reading and electronic books, this enhanced "leisure reading" is an accepted aspect of E-readers. Only very recent research has begun to consider the effect, if any, of using required classroom texts in electronic format. Teachers and administrators within the Bartholomew Consolidated School Corporation (BCSC) in Columbus, Ind. Spent a year radically reworking their social studies curriculum. They did things such as removing the required text and replacing it with a database of peer reviewed articles chosen by teachers and accessible by students anytime. This database also showed updated homework assignments and even the learning goals and outcome of the course(s). At the end of the school year, students were surprised, with the majority finding "their courses to be more relevant, and they felt they were applying 21st century skills, such as problem solving and working collaboratively with others" (Nelson, Arthur, Jenses, & Van Horn, 2011, p. 50). However, the time and cost of such an initiative led the BCSC to speculate on whether it would ever be more than a pilot program. In a study that took a classroom of preschool children at risk for learning

disabilities and had 60 sessions of reading either by an instructor or with an electronic book, results were mixed (Shamir, Korat, & Fella, 2012). The effects of the E-book on phonology and concepts about print showed no significant results from students' pre-interview results. However, there was a notable increase in vocabulary attributed to the dictionary search feature on E-readers and laptops. The English as a second language (ESL) field is an area with great potential for Ebooks and their corresponding tools. In an ESL high school in Northern Taiwan, Three intact 9th-grade classes (109 students) were recruited for a 10 week extensive reading program (ERP) based on E-books. 140 E-books were made available with the requirement that four be read each week per student. What is important to note is that for the majority of these students, reading in English for pleasure was seldom done. After the conclusion of the study, significance was found in all four areas of reading attitude: utility, development, enjoyment, and escape. More significantly, in-class discussion (in English) changed rapidly in frequency and naturalness during the study, making classroom time more productive and conductive to learning. While this study did not span time enough to give student classroom grades, the evidence that expanding reading positively enhanced student learning and engagement is clear.

Do students utilize and benefit from the electronic tools designed to enhance reading?

According to researchers, one of the greatest strengths of electronic books, especially for academic purposes, is the available tools. Reading enhancement tools such as a tap screen dictionary/thesaurus, instant web searches, and multimedia content formatted into the text all enhance a student's understanding of a text. According to Anderson-Inman and Horney, "The growing trend in electronic books is to incorporate a range of multimedia text enhancements. It is more and more common for electronic books to be heavily illustrated with graphics and

animations, some of which are highly interactive. It is also increasingly common for electronic books to have embedded speech; either pronunciations of individual words or spoken versions of all or some of the text" (1997, p. 486). In addition, diverse resources including translational, illustrative, summarizing, notational, instructional, and collaborative are often available (1997). However, the researchers also warn that, "You may not need such a sophisticated program to accomplish your instructional goals...it is very easy to be impressed by the glitz and glamour of a program's multimedia without clearly identifying how the various media can be used to promote studying and learning (p. 486). Furthermore, these are sweeping examples of available features; an educator must research his or her needs and select text accordingly. Larson (2010) states that "In today's world of increased accountability and strong focus on individualized student support systems, digital reading devices may provide much needed support to both students and teachers" (p. 21). In an E-book study performed with 2<sup>nd</sup> graders, use of the Amazon Kindle E-reader found notable changes in the study participant's reading attitudes, specifically excitement to read on an electronic device and increases in self-confidence from now enjoying reading (p. 20).

It is clear that electronic books have the ability to play a key role in literacy development both in and out of the classroom. Factors such as school budgets and increased training will obviously conflict with adoption of E-books in the classroom. With that said, the role of E-books in educational settings, especially K-12 public education, is a subject that demands further research.

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