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Teachers' Perceptions and Use of eReaders

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Abstract

The purpose of this pilot study was to explore teacher and teacher candidate assessment of eReader use compared to traditional print books and online formats. A group of 25 pre-service and in-service teachers read children's literature selections in all three formats then rated attributes of each. Results indicated that the majority of the teachers surveyed agreed that their satisfaction was higher with reading print books and eReaders compared with online (computer-based) library. When participants were asked to rate their satisfaction regarding the overall ease of reading with eReaders, print books, and the online library format, the results show that the highest level of satisfaction was with eReaders.

An eReader is a portable device used to read digital books and periodicals, both fiction and nonfiction (Zhang, 2012). These devices can be classified as either "dedicated," or multi-use, depending upon whether they serve exclusively as eReaders or have the capacity for other functions such as web-browsing. Brand names, such as "Nook" and "Kindle", are examples of dedicated eReaders while iPads and tablets are considered multi-use devices. This pilot study of the perceptions and use of eReaders by college students enrolled in teacher education courses included survey questions about both types of eReaders. The study's general purpose was to explore the participants' current personal use and projected professional use as teachers of eReaders, both dedicated and multi-use ones. The specific research questions were:

1. What are teachers perceptions of eReaders attributes compared to those of print and online formats?

2. What do teachers perceive as advantages of eReaders use?

3. What do teachers perceive as disadvantages of eReaders use?

The focus of this study was to compare teachers' perception of eReader attributes with those of print books and online formats. The teachers were asked to indicate the frequency with which they were satisfied using eReaders, compared to print books and online library (ICDL). The primary objective of the study was to determine which of the three formats offered ease of accessibility, ease of reading, portability, and physical comfort of use. The survey also asked teachers to comment on the advantages and disadvantages of eReaders use.

Related Literature

In recent years, eReaders have gained popularity among all age groups. According to Pew (2012), about one-third (33%) of the United States population ages 16 and older

own eReaders and almost one-quarter (23%) reported having read a digital book within the past year. Results from the Nielson (2010) survey of “connected device” owners show that eReader users are mostly male (57%), under age 35 (55%), and have a bachelor’s degree or higher (54%). While these studies focused primarily on adult eReader owners, Scholastic, Inc. (2010) surveyed school age (6-17) children as well as adult family members. Scholastic (2010) reported that age 6-17 year olds spent more time online or on cell phones than time spent reading for pleasure. The majority of the age 9-14 year olds surveyed (57%) expressed an interest in reading an eBook; 33% stated that they would read more if they had access to eReaders. Fowler and Bada (2012) reported that 40% of the eReader owners they surveyed reported that they now read more eBooks currently than they had read traditional print books in the past years.

In general, the recent published research on eReader demographics and usage has been surveys of adults (age 18 and older). Zhang (2012) and Cuaogtu et al. (2013) conducted surveys of both college faculty and undergraduate student use of eReaders and eBooks. Their results indicated that computers (PCs) were the least referred platform for eBook reading. Among dedicated devices, Kindles were preferred and iPads led as the preferred multi-use platform (Zhang, 2012). Hutchinson and Reinking (2011) reported in their survey of classroom teachers that computers (PCs) were the most available platform for eReading in P-12 settings. Gross (2013) also investigated P-12 teachers use of multi-use devices as eReaders (iPads). Participants in her study reported obstacles to ease of use of iPads as eReaders. Scale (2012) and Mitchell (2013) conducted case studies of P-12 students’ use of eReaders outside school to improve reading performance. Parents surveyed indicated increased student interest

and time spent reading (Scale, 2012). In her summer program, Mitchell (2013) reported improved proficiency for struggling readers who used Nook eReaders.

Overall, the research reviewed appears to indicate that eReader use is increasing among young and middle-aged adults, especially with dedicated devices (Fowler & Bada, 2012; Nelson, 2012; Pew, 2012). Research related to eReader use by children ages 6-17 seems to be focused on reading outside the school setting (Mitchell, 2013; Scale, 2012) with classroom teacher research reporting obstacles to using classroom computers as eReaders (Gross, 2013; Hutchinson & Reinking, 2011). The Pew Internet Survey (2012) investigated the features of eReaders that owners reported made them preferred over print or computer-based platforms. Features reported most often were incorporated into the survey administered in the pilot study conducted. Participants in the study were asked to rate and compare their satisfaction with reading print books, eBooks on dedicated eReaders, and eBooks on computers.

Methods

Measure

An eReader survey was developed by the researchers, which included questions from existing research studies about the topic (Neilson, 2010; Pew, 2012). It consists of 15 items that addressed the following topics: (1) Teachers perceptions of eReaders’ attributes compared to those perceptions of print and online formats, (2) advantages of eReaders use, and (3) disadvantages of eReaders use.

Data Collection and Data Analysis

Participants of this study were 25 pre-service and in-service teachers who were enrolled in the web-enhanced and face-to-face courses. This study was conducted using a mixed methods approach.

TEACHERS' PERCEPTIONS

Quantitative data were collected using a questionnaire. In addition, qualitative data were collected from written comments regarding advantages and disadvantages of eReaders use compared to print materials and online library (ICDL).

Table 1

Mean Scores of Teachers' Perceptions on Overall Ease of Reading When Using the Device or Format

Attribute of Device or Format	eReaders	Online Library (ICDL)	Print
Overall ease of reading when using the device/format	4.48	3.16	4.52
The screen/page size	4.32	3.36	4.12
Movement / navigation from page to page	4.8	3.04	4.4
Bookmarking (saving your place to return to that point later)	4.84	2.88	4.12
Font size and ability to adjust it if desired	4.72	3.72	0.8
Contrast of background color and print	4.64	3.6	4.4

Note: n = 25

Participants were asked to rate six items in relation to overall ease of reading eReaders, print books and online library (ICDL) format, the screen/page size, movement/navigation from page to page, bookmarking, font size and ability to adjust it if desired, contrast of background color, and print. Results are reported in Table 1. In

regard to overall ease of reading when using eReaders, print books and online library (ICDL) format, the pre- and in-service teachers surveyed revealed that they had the highest level of satisfaction with eReader and print books compared to online library (ICDL) format. Further analysis revealed that the majority of respondents agreed that ease of movement/navigation from page to page of eReaders and print books had the highest rating compared with online library (ICDL) format. In terms of bookmarking (saving your place to return to the point later) majority of the teachers agreed that ease of bookmarking was higher with eReaders compared with print books and online library (ICDL) format. Another item regarding the attributes of these devices and format was the font size. Overwhelmingly the teachers were satisfied with the ability to adjust the font size/color contrast with eReaders compared to online library (ICDL) and print books.

Participants in the study were asked to rank three items in relation to the overall portability, size and weight and durability of device and format; results are reported in Table 2. The first attribute that was rated was the overall portability of the device/format. The respondents ranked eReaders higher over print materials and this attribute was not applicable to online library (ICDL). The second attribute was size/weight of device/format. The respondents ranked eReaders higher than print book. The final attribute was durability and level of care needed for the device/format. Overwhelmingly, teachers ranking revealed a higher satisfaction of eReaders over print books.

Participants were asked to rank two general attributes regarding the device/format. The first attribute was overall ease of accessibility of the device /format; results are reported in Table 3. The highest level of satisfaction was with eReaders while

online library (ICDL) had the next highest ranking and print books had the lowest ranking. The second general attribute was overall physical comfort of use. These data revealed that teachers agreed that print books had the highest ranking, next highest was eReaders and the computer-based online library (ICDL) had the lowest.

Table 2

Mean Scores of Teachers' Perceptions on Overall Portability of the Device/Format

Attribute of Device or Format	eReaders	Online Library (ICDL)	Print
Overall portability of the device/format	4.84	0	4.08
Size/weight of device/format	4.84	0	4.10
Durability/level of care needed	4.88	0	4.4

Note: $n = 25$

Table 3

Mean Scores of Perceptions on Teachers Overall Ease of Accessibility and Physical Comfort of Use

Attribute of Device or Format	eReaders	Online Library (ICDL)	Print
Overall ease of accessibility	4.72	4.4	4.24
Overall physical comfort of use (Eye strain/fatigue)	4.52	3.08	4.64

Note: $n = 25$

Qualitative data and Analysis

The teachers were asked to comment on the advantages of eReaders use. What do teachers perceive as advantages of eReaders use?

1. In general, teachers reported that they the contrast of color on eReaders was more advantageous compared to print.

2. Responses from teachers regarding easy access of eReaders as advantageous over print books and online library. They went further to say that “they do not have to go leave the homes to pick up the books from the library.”

3. Comments about the ability to bookmark the last page read without using an external device were more positive with eReaders compared to print books and online library (ICDL).

4. The responses from teachers indicated that eReaders looks like real print books, whereby prevents issues such as glare.

5. Some of the teachers believed that eReaders are ecosystem friendly; for example, “killing of trees” will be reduced compared to print books.

6. The teachers reported that the ability to magnify eReaders' text fonts without using magnifying glass to read the materials is the greatest advantage of using eReaders.

7. Overwhelmingly, the teachers concluded that portability and light weight advantage of eReaders as its primary benefit when compared with print books. They explained that a user of eReaders can carry a collection of hundreds of books around compared to print books.

What do teachers perceive as disadvantages of eReaders use?

1. Several teachers expressed that the greatest disadvantage of eReader over print books is the battery life the device.

2. Another disadvantage perceived by the teachers is that eReaders can have a slow refresh rate. They explained that sometimes the screen can freeze up.

3. There were some teachers who still prefer print books over eReaders. They explained that nothing can ever truly replace a book- the smell of a book, and the feel of a book.

Summary and Conclusion

The intent of this survey was to evaluate teachers' perceptions and satisfaction with reading print books, using eReaders and reading from an online library (ICDL). According to research findings, the majority of the teachers surveyed agreed that their satisfaction was higher with reading print books and eReaders compared with online (computer-based) library (ICDL). When participants were asked to rate their satisfaction regarding the overall ease of reading with eReaders, print books, and the online library (ICDL) format, the results show that the highest level of satisfaction was with eReaders, then print books, and lowest satisfaction for the online library (ICDL) format. In regard to ease of movement/navigation from page to page, the findings show that the participants' level of satisfaction was higher with print books, followed by eReaders and lowest satisfaction for the online library (ICDL) format.

Another salient finding shows that the teachers were very satisfied with the ability to adjust the font size/color contrast when reading with eReaders, somewhat satisfied with the online library (ICDL), and somewhat dissatisfied with print books. The teachers reported that the ability to magnify eReaders' text fonts without using a magnifying glass to read the materials is the greatest advantage of using eReaders. When considering the overall portability of the eReaders, print books, and online library (ICDL), overwhelmingly, the participants were very satisfied with eReaders compared with print books. From this rating, the participants explained that a user of eReaders can carry a collection of hundreds of books around compared to print books.

According to the research findings regarding overall ease of accessibility, the participants were very satisfied with reading eReaders compared with print books. They went further to explain that that "they do not have to leave their homes to pick up the books from the library." Another finding was the overall physical comfort of use (eye strain/fatigue). These data revealed that participants were very satisfied with reading print books and eReaders compared to the online library (ICDL). Even though they rated print books higher than eReaders, most believed that eReaders have an advantage over print book when reading outdoor since it prevents issues, such as glare.

Overall, the findings in this pilot study seem to indicate that pre-service and in-service teachers have had positive experiences with eReaders. As members of the 18-35 year old age group, they appear to fit the profile outlined in recent research regarding e-Reader owners. What remains for future research is to see if their satisfaction level with the eReader devices translates into classroom usage with those in the 6-17 year old age bracket. Trends appear to indicate that this younger generation of readers is indeed the fastest growing group of eReader users outside the classroom. As educators begin to explore innovative uses of technology in the classroom, eReaders should be considered as tools to promote proficiency in both literacy and technology.

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