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Title of Project: *The Impact of eReaders on Students' Reading Development and Habits*

Year: 2013-2014

School/Grade: H.C. Crittenden Middle Schoool / Grades 6-8

SUMMARY OF *INVESTIGATORS OF PRACTICE* ACTION RESEARCH PROJECT

Context:
I am a middle school Library Media Specialist serving approximately 650 students across three grade levels. In addition to managing the library, I collaborate with teachers to either co-teach entire classes in the context of special research or technology projects, or I work with small groups of students sent to me by teachers for enrichment and other special projects. To accommodate teaching different grades and different projects, I have a flexible teaching schedule, with no set classes of my own.

In 2011, after extensive research on the trend of school libraries purchasing and circulating eReaders (such as the Kindle or Nook) to students, I purchased six Kindle eReaders and launched a Kindle Lending Program (KLP) for students at HCC. I implemented this plan based on best practices and lessons learned from other schools with similar programs.

To start, I have students and their guardians sign a [Kindle Permissions and Acceptable Use Form](#) prior to borrowing a Kindle. Students also [list the books they want to read on the Kindle](#) so I can purchase and download the requested books. An important requirement of the KLP is that all participants must meet with me for a brief (15-20 minute) lesson on how to use all of the Kindle's features, from basic page-turning to more advanced features (such as the embedded dictionary, read-aloud, highlighting, and note-taking). Students may borrow an eReader for three weeks, or longer if requested, based on student needs and availability of the devices. At the end of the lending period, students fill out [a survey](#) on their experience.

After two years, nearly 50 students had borrowed a Kindle through HCC library, and more devices (different models of Kindle eReaders) were purchased--bringing the number of library-owned Kindles up to 25 by the start of the 2013-14 school year. By the start of this school year I had gathered quite a few surveys, but I felt I lacked enough information about whether the Kindles actually had a positive impact on the students' development as readers.

Action Plan:

My focus for this action research was to gather student perception data to answer the questions:

1. How does the KLP impact participants' development as readers?
2. How does reading on an eReader change how students read as compared to reading printed books?

Using a newly revised survey (see Appendix A), I gathered students' self-reported feelings on how the Kindle Lending Program had an impact on their reading development and their reading habits. Since people may have different values and opinions about what is meant by students' "development as readers" (from question 1), I listed specific qualities that I adapted from the NYS CCSS document on Launching Independent Reading in Grades 6-8. Sub-questions for question 1 are:

In what ways does the KLP impact these qualities in a reader's:

1a. vocabulary development?

1b. comprehension of material read?

1c. motivation/enthusiasm for reading?

1d. use of active reading strategies (such as marking up text)?

In sharing my Action Research plan with colleagues in the Investigators of Practice (IOP) course, I learned there was existing baseline data available about how HCC students viewed themselves as readers (students' Reading Attitude Interest Survey journal entries), and my colleagues made this data available to me. I read through a randomly selected class set of these journal entries and took notes on emerging themes, such as how students feel about the rate at which they read and what is challenging for them about reading.

My colleagues also helped me realize that my previously gathered survey data might be slanted toward the school's strongest readers, and that I should really branch out to include some more struggling readers into my research. Since struggling readers stand to benefit the most from the features embedded into the eReaders, I shifted the focus of my research to struggling readers. I worked with this group of students in the context of an assigned whole-class reading of a challenging novel, yet I continued to survey all students who participated in the KLP. For my focus group, I devised a new survey targeting the questions of my action research (see Appendix A.) The survey results are based on 23 student respondents.

Results:

The revised survey of 23 struggling readers shows that 96% of students felt the Kindle helped them "understand what [they] read better," yet they all cited different reasons as to why. The most common theme among their explanations (13 out of 23) is the embedded dictionary that makes it so

easy to look up the definition of unfamiliar words. Again and again, students shared some version of this comment: "The dictionary helped me with understanding words," or "if I don't get anything I can click on it and see what it means." One student with less enthusiasm, who felt the Kindle had little impact on his comprehension as compared to reading a printed book, admitted that on the Kindle, "I can look up words in the dictionary much, much quicker."

In the baseline data of both confident and struggling readers, culled from Reading Attitude Interest Survey journal entries, students frequently cited unfamiliar vocabulary words in their responses to the question 'What is hard about reading?' One student, who reported that she reads only when required, answered the question this way: "The words that I don't understand because I have to look it up, then staple that into my head, then I have to read the sentence all over again." Another student, who reported she loves to read, answered the question similarly: "Understanding the words. Also sometimes I just can't take the words in so then I have to repeat the sentence 5 or more times until I can continue."

In the revised Kindle surveys of struggling readers, many students cited the ability to change the font size (11 of 23 students) or the read-aloud functionality (11 of 23) as a reason for why they felt the Kindle helped them better understand what they read. Interestingly, the way students reported they used these features to help them read differed greatly. Some students said making the font size bigger helped them: "By having few words on a page but more pages I can understand it better;" while others said making the font size smaller helped them: "I can read more words on a page & I made my reading go by faster." Another student, who prominently cited the ability to change font size as important to her comprehension, added that while reading on the Kindle "I pay more attention and it's less confusing."

Students even used the read-aloud function differently: at least one student used it in a targeted way to hear the pronunciation of a word as needed, while others used it as a more traditional "audiobook" type of feature. (Note: Not all Kindle eReader devices, and not all Kindle eBooks, have the read-aloud [text-to-speech] feature--but the book we read allows for it. Also, this feature is a computerized voice with imperfect pronunciation, NOT a professional narration.) Of the 11 students surveyed who used the read-aloud to help them read, 4 said this feature helped them read faster, 6 said it neither slowed nor sped up their reading rate (one student explained this by reiterating an aspect of my lesson: "I chose which speed it should read to me"). One student said the read-aloud slowed him down, but this feature was the primary feature mentioned in his survey on how the device helped his comprehension.

One student noted the disadvantage of the read-aloud funtion of the Kindle eReader: when Text-to-Speech is activated, the other advanced features (dictionary, highlighting, note-taking) are disabled until read-aloud is turned off. She said: "The read-aloud was annoying and I can't take notes while I'm on read-aloud so I have to go back;" and her survey indicates she did not use read-aloud for this reason, though she may have initially wanted to. Another student noted the sometimes poor pronunciation of Kindle's read-aloud function, noting the device "said some words wrong." Overall, many students seemed to benefit from the read-aloud function, and it is disappointing that Kindle seems to have "phased out" this feature in its newer eReaders, including the Paperwhite. Several students who borrowed library-owned Paperwhites would have preferred to have the read-aloud function if we had enough devices with this functionality. The feature does not seem to be available on students' personally owned Kindle Fire tablets either, as evidenced by one student's comment that she didn't know how to use read-aloud on her Kindle Fire, but she wished she could use this feature. (According to Amazon's [message to users](), Kindle Fire does have this feature, but the message does not specify which model of Kindle Fire, and I could not find mention of this feature in the Kindle Fire manual on their site.) Of the 25 library-owned Kindle eReaders, only 16 have read-aloud functionality, and at this time new eReader models do not offer this feature.

On the topic of highlighting text, 7 of 23 students circled highlighting as applicable to their Kindle experience. One student said the Kindle was helpful because he's not allowed to highlight in the school's printed copy of the book, but on the Kindle he can. Another student said that highlighting helped him "because I can highlight things I don't understand." Similarly, 9 of 23 circled the note-taking feature as important to their experience. (Please note: Annotating the text was a requirement of all students reading this novel for class, whether on post-it notes in the printed book or using the Kindle's note-taking feature. Since only 9 students circled this on the survey, I assume these 9 students felt this feature was important and useful to them.)

As to the more general experience of using a Kindle, 74% (17 of 23) of students found it fun to be using a piece of technology for their reading, and one student's comment shows how his motivation to read was affected by the device: "It's cooler to learn with a Kindle so it's more fun to read and I understand it better." Not all students shared the same experience. One student dropped out of the program and reverted to reading the printed book because the device was too much of a learning curve. Three students commented on their feeling that there was not much difference between reading the book on a Kindle vs. reading the printed book. Three students, on their surveys, circled the hashtag "glitchy" as relevant to their Kindle experience, but the same 3 students had overall

positive experiences, and commented enthusiastically with remarks such as "I love the Kindle!!!" Eleven of 23 students circled the hashtag "convenient" as pertinent to their experience, and 7 of 23 agreed that they loved having lots of books available to them on the device simultaneously. An equal number (7 of 23) noted they felt nervous about taking care not to damage or lose the Kindle.

An issue noted by two students is the lack of page numbers in the Kindle, which makes it especially difficult in a classroom setting where a close-reading discussion of a book may have readers look at a specific page, or if a reading assignment specifies students read a range of pages for homework. (Note: While Kindle eReaders sometimes give the reader a page number that matches up with a printed book's page numbers, this feature is enabled on a title-by-title basis, and the book we were reading did not provide page numbers.) One student said: "I like being able to customize the font but I want to know the page numbers." Interestingly, the same student said that the lack of page numbers allowed him to focus more on his reading: "I get distracted while looking at the page number but the Kindle doesn't have any." While teaching a class of all-Kindle users, I found it very difficult to direct students to the same portion of the book without page numbers. In lieu of page numbers, Kindle provides "location" numbers, and these were difficult to navigate to.

Implications:

I had the opportunity to attend a panel discussion called "[Successful Learning Accommodation in Schools and Libraries](#)" at a recent conference of the Westchester Library Association. The resounding take-away was that people with special needs are diverse individuals whose needs are unique. After the formal discussion I approached one of the panelists, Dr. Sasha Stock of the Westchester Institute for Human Development, and shared with her my experience of using Kindles with struggling readers and the wide array of responses on how students used the devices to help them. She agreed that students may find different features to be helpful, and the important thing is to educate students on the availability of these features so they can use what works for them. I share this conversation here because I feel it really summarizes what I found in my research, that the devices really did help the students in ways that were all different, as unique as the individual students themselves. At first glance one might think there's no rhyme or reason to the survey results, that they're all over the place in what students said worked for them. On closer evaluation of the students' comments, however, I believe the most useful aspect of the eReader is simply that it empowers students to modify their reading experience in whatever ways they need in order to help themselves learn and grow as readers.

As I worked with students on this project, interest and buzz about the library's Kindles began to grow, and many more students of all reading levels participated. The program can be labor-intensive--in terms of loading books onto devices, record-keeping of purchases, keeping the devices charged, scheduling the mini-lessons with students, etc. The KLP's immediate availability of books, based on student demand, is unlike the typical library experience of offering only what is already available on library shelves. Its very student-centered nature changes the dynamic of my role as a librarian, and provides an avenue for making personal connections with students. Though school library media specialists have always had the capacity to make an impact on students' reading through book recommendations, etc., we don't usually provide much instruction on how to use the printed book as we check it out to students. The Kindle Lending Program has provided me a way to help many individual students make their unique reading experiences better, easier, more fun, etc., and I am thankful for this opportunity.

I am left questioning how to expand the program and continue to provide all the features students have found helpful now that Kindle has eliminated read-aloud on its newer eReaders. Additionally, now that wireless connectivity will soon be ubiquitous within the school building, there may be tablet-style devices that would provide the same features and access to the vast offerings of the Kindle eBook store through the Kindle app, with the benefit of providing access to other platforms. For example, through the Follett Enlight app, tablets would provide access to the eBooks on our school's FollettShelf eBook platform, from which students can directly download eBooks themselves with their own usernames and passwords. I will continue to follow updates to the Kindle eReader design and specs while also investigating the different features of the Kindle app on tablet devices.

<u>Implementing a School Library eReader Lending Program: Concluding Thoughts</u>
- School library media specialists should consider seeking out collaborating teachers to find an applicable reading assignment. Working closely with a small group of students using eReading devices affords the LMS the opportunity to assess the program and directly engage with students in their reading.
- Be sure to reach out to and include struggling readers in the program.
- Teach students how to use all the reading features of the device as a part of the condition of borrowing one (even if they've used a similar device before). Students will use the features in unique ways to modify their reading experience and meet their own needs.
- Purchase devices that have the full range of literacy-supporting features, including embedded dictionary, annotation tools (highlighting and note-taking), and read-aloud (text-to-speech).

Appendix A

Revised Kindle Survey Questions:

Which aspects of reading on a Kindle apply to you so far? Circle/highlight all that apply:

#Technology (using a tech-y device was fun)
#Confusing
#Glitchy (Didn't work as expected)
#Vocabulary (I used Kindle dictionary to understand word meanings)
#Convenient
#Note-Taking (I used Kindle to annotate as I read.)
#BookLove (I loved having many books on the Kindle)
#Highlight (I used highlighting tool on Kindle to mark important passages.)
#CustomizedReading (I liked being able to adjust the font size, etc.)
#ReadAloud (I used the Kindle read-aloud to listen and read along to better understand)
#Responsibility (I was nervous about Taking Care not to damage or lose the Kindle)
#Comprehension (the Kindle helped me better understand what I read)

COMMENTS:_____

How does reading on a Kindle affect the speed of your reading? Check one & explain.

_____Reading on a Kindle slowed me down compared to my usual reading speed.
I think this is because of_____.

_____Reading on a Kindle sped up the rate at which I usually read.
I think this is because of_____.

_____Reading on a Kindle neither sped me up nor slowed me down.
I think this is because _____.

Overall, was this change to your reading rate mostly….. (Check 1 if changed & explain)

_____ a :) positive effect, because _____

_____

_____ a :(negative effect because _____

_____

Does reading on a Kindle help you understand what you read better? Explain why.

_____YES. Here's how: _____

_____

_____NO, because: _____

_____

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