

E-books: Motivating Students To Read Independently

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Background

I teach sixth grade social studies, reading, language arts, and exploratory at Glen Lake Middle School, in Maple City, Michigan. In December of 2002, I was selected by my Superintendent to participate in Traverse Bay Intermediate School District's (TBAISD) Learning Without Limits program. Learning Without Limits was the brainchild of Rick Johnson, Speaker of Michigan's House of Representatives (Johnson, 2002). Funded by joint grants from the federal and state government totaling nearly 9.5 million dollars (\$650,000 at TBAISD), the program was intended to improve student achievement by providing each participating student with access to a wireless learning device. According to Johnson, "Every student deserves a seat in the front row, and new technology makes that possible. Our plan allows kids to learn anytime, anywhere -- without limits. I want kids from St. Joseph to Sault Ste. Marie to have the same educational opportunities." (1)

In an attempt to distinguish itself from other grant applicants, TBAISD proposed in their grant application that their classrooms would also:

- 1) Develop strategies for improving reading through one to one wireless computing.*
- 2) Integrate handheld and other wireless computing applications into the daily life of students and teachers both inside and outside of the classroom*
- 3) Implement a web-based data management system to collect, analyze, and, report information related to student achievement. (TBAISD, 2003)*

Because my classroom wasn't self-contained, one of my first tasks was to decide which of my classes I would equip with handhelds. Because of TBAISD's focus on literacy, I chose my reading class. I also had the same group of students for language arts, which meant that I could integrate this new technology into two subject areas at the same time.

What is my research interest?

In January of 2003, I received my classroom set of handhelds (Palm m130). Although I had considered myself to be quite technologically versed, I immediately began experiencing a wide range of software and hardware problems. For this reason, I took my time integrating the Palms into our daily routine. Although we immediately began using them as word processors, it wasn't until April that I begin encouraging students to use their Palms as e-book readers. Not only did it take me some time to resolve the technical problems that had arisen, I was also having a difficult time finding quality e-books that my students would be interested in reading. Since we had been doing literature circles throughout the year, I decided I would allow a group of students that had just completed a novel set to choose an e-book to read together. Quickly, news of their enthusiasm and positive experiences began spreading throughout the class until everyone wanted to read books from their Palms. Within two weeks all of my students had given up traditional books in favor of e-books. Driven by popular demand, I was soon downloading e-books daily for anyone willing to read them.

While not completely unexpected, I was unprepared for the fervor with which students began reading both inside and outside of class. All students seemed to be reading books faster than ever before. I saw more and more students reading during "choice time" and transition periods. In the halls I began hearing students discussing the books they were reading. Perhaps the fact that many were now reading late into the night, without their parent's knowledge, added an attractive subversive element to it all. After all, the Palm's backlit screen meant that their lights didn't have to be on. I also was able to gauge how many books my students were reading because I was the one loading them on to their Palms. By far, the most satisfying experience was witnessing students that previously had little interest in reading, doing so on their own accord.

Once a week I took my students to the library to checkout and return books. I'll always remember a particular day towards the end of the school year when we visited the library. Only two students returned books on that day and none were looking at the stacks for new novels. Huddled around in small groups, some lying on cushions, were all of my students. Every single one of my normally talkative students was completely engrossed in their own e-books. I had begun to dread library time because it was difficult to keep students quiet; most didn't seem to want to read. That day I didn't have to say a word. Each student was so involved with reading that they were completely engaged and had lost track of time. Nell (1988) describes this state as "flow."

A chill shot up my spine as I basked in the glory of the moment. Students were reading because they wanted to. I knew then that I was witnessing an evolutionary moment: a transition regarding how increasing numbers of students would begin to read and relate to literature. I walked up to the librarian and pointed proudly to my students. She rolled her eyes at me, smiled and replied, "Does this mean that I'm out of a job?"

It was this experience that motivated me to study and try to quantify how the use of handheld computers or PDAs as e-book readers affects students' motivation to read independently.

Why is reading important?

Educational researchers and teachers have long recognized the importance of reading. Simply put, children that enjoy reading and frequently do so find greater success in school and in life. Making matters worse for students who do not enjoy reading, students who struggle with reading have historically received relatively poor instruction (Allington, 1994), "resulting in boredom and apathy and a cycle of persistent failure that leads to diminishing motivation and

self-confidence in school.” (Worthy, Patterson, & Salas, 2002).

Bernice E. Cullinan (1998-2000) wrote, "The amount of free reading done outside of school has consistently been found to relate to growth in vocabulary, reading comprehension, verbal fluency, and general information.... Students who read independently become better readers, score higher on achievement tests in all subject areas, and have greater content knowledge than those who do not.” Reading expert Stephen Krashen (1992), author of The Power of Reading: Insights from the Research, perhaps put it most bluntly when he stated, "children must develop a reading habit or they do not have a chance."

Unfortunately, as students progress through the elementary grades into middle school reading attitudes often fall and voluntary reading is not common (Anderson, Tollefson, & Gilbert, 1985; McKenna, Ellsworth, & Kear, 1995). Cullinan mentions two surveys that found clear decreases in independent reading during middle school with the majority of seventh- and eighth-graders "practically ceasing to read anything not required or assigned....” Therefore, a major challenge for teachers has been reaching students who have given up on reading. Worthy, Patterson, & Salas (2002) suggest that "radically different" approaches are necessary to help students gain an interest in reading.

What motivates students to read?

Children read for many reasons. As a young child lying in bed watching my mother read, I remember being fascinated by the fact that the tiny markings before me could hold such meaning. It was this great mystery that motivated me to learn my first letters and words. The reasons middle school students read are much more complex than simple curiosity. Background, opinions, feelings, self-expression, social interaction, and intrinsic, as well as extrinsic goals, all influence motivation. Truly, students’ motivation is as varied as their personalities.

Some teachers believe that rewards are good incentives to get students reading, but students generally don't consider them to be important (Worthy, 2000). In fact, points, grades, or other favors can have the opposite effect, giving the impression that reading is a chore not worth doing unless it is rewarded (Kohn, 1993).

Allowing students to choose the books they read strongly improves their motivation (Carlsen & Sherrill, 1988). Dewey (1913) recognized the importance of choice in schools nearly a century ago. Even students who say they "hate to read" are more willing to read if allowed to choose their own books (Ivey & Broaddus, in press; Worthy & McKool, 1996).

Making current and relevant literature readily available for students also appears to improve motivation. Worthy reported that many teachers "lack new (and) relevant books in their classroom libraries (2000)." Handheld computers and access to the Internet mean that entire libraries of books are available at the touch of a button.

Finally, technology seems to motivate students to read. In fact, "providing students with their own computers can help increase achievement in reading and writing, improve research and analytical skills, and boost attendance, among other gains" (McLester, 2001). Rosalia (2002) recognized this when she said, "Technology is a magnet for teens... Today's students are the first digital generation fully comfortable with technology as a way of life." This was especially true for one of my resistant readers who wrote, "It (his Palm) makes me feel like I can read anything in the world."

Survey description

From the first day I began downloading e-books, I started seeing students' interest in books and reading rise. Within a relatively short period of time, I also started noticing students beginning to read during transitional times and after completing homework- up until this point,

an unusual occurrence. Although I had been closely monitoring how many e-books they were reading, I had never attempted to collect any “hard” data to quantify the motivational affect.

The ISD had developed a survey that I administered to students before I gave them their Palms and at the end of the school year. Although it focused on their computer background, it didn't specifically touch on the subject of reading. As I stated early in this document, by the end of the year my interest as to how e-books were impacting my students had come to a peak. As a result, a few weeks before the end of school, I developed and administered an attitude survey of my own design to gauge students' attitudes toward their use of Palms and e-books. I developed my own because I was unable to find another that would suit my purposes. Based on what I was observing in the classroom and what I heard from my students, I was sure that their handhelds were motivating them to read. My survey was comprised of five questions. I have included a representative sampling of students' responses on the three questions that specifically relate to the use of e-books. Refer to the Appendix A for the full version of the survey.

1) Do your best to remember back to the time before you received your Palm. Compared to then, do you feel you read more, less, or the same amount since you started reading e-books? If you read more, try to estimate how much more per night.

I think I read more on e-books. I never like to read before but then Palms came along in our classroom so then I could read on a little computer that I could put in my pocket and fit in the palm of my hand.

When I first got my Palm I didn't read very much and now I read almost every night.

I read about 20 minutes more (per night) because it is just easier to read with.

I read a lot more. I usually read about 2 ½ hours every night now. They are so

much easier than normal books.

I read about the same. I don't care what form it's in.

2) What do you like about reading e-books? List as many things as you feel are necessary or relevant.

It glows in the dark. It's small, and portable.

I liked that I could take books anywhere.

You can read in the dark. It tells how much you have to read and how much you have read. It's easier to flip the pages and control the font size.

I like how you don't have to turn the pages. You don't have to move out of your comfy position to flip a page. I also like how you can read in the dark. You can hide under your covers and your parents won't know it.

I like that it automatically remembers which page you are on.

It makes me feel like I can read anything in the world.

3) What don't you like about reading e-books?

The screen is too small.

I don't like that there is a limited selection of e-books to choose from.

Results

The first survey question I asked students was if e-books motivated them to read more than traditional forms of literature do. Seventeen out of my class of

twenty-three students claimed to have read more; four stated that they read about the same; and two students commented that they read less due to, what they felt were, the limited number of e-

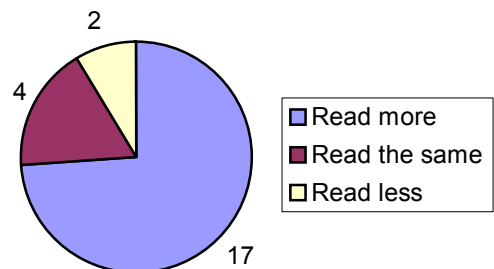


Figure 1

books that I had made available and the Palm's small screen size (see figure 1). Out of the seventeen that claimed that they read more, nine students either implicitly implied or explicitly stated that they read significantly more than they had before being given e-books. The reasons for this apparent increase in student motivation became clearer in their responses to my second question.

For question two, I asked students what they liked about reading e-books. Students' responses tended to focus on two areas: 1) Portability. Students appreciated the convenience of being able to carry around their books on a PDA. 2) Features. Students liked that fact that they could easily place and bookmark or make notes in their books without losing them. Most also liked the Palm's backlit screen because it allowed them to read in the dark. Fewer still, commented on the Palm's ease of turning pages.

On my third question I asked students what they didn't like about using their handhelds as readers. Nearly everyone mentioned the Palm's small screen size. Fewer, but yet still a significant number also mentioned that they would have liked a larger selection of e-books to choose from.

Conclusions

Based on my classroom research, handheld computers such as the Palm appear to motivate students to read more than traditional forms of literature. Although students tended to like the Palm's portable nature and some of its features, I also feel students were more motivated to read because they were able to choose titles that were significant and meaningful to them. Unfortunately, compared to the breadth of data available on other educational topics, data on the motivational effects of PDAs are relatively small. Still, numerous commentaries, books, and professional articles do exist. This said, PDAs are not the panacea some continue to hope for.

When surveyed, publishers felt that e-books would not obsolete traditional forms of literature “anytime soon” (Seybold, 2003). In addition, teachers’ skill continues to be identified as the most important contributing factor in determining a student’s success in school (Poftak, 2003).

Significant barriers still remain before technology such as handheld computers becomes widely available in classrooms across the nation. Perhaps the most significant of these barriers remains cost. Although the cost for computers continues to drop, at the time equipment was purchased for my students it cost over \$300 to outfit each with a Palm m130, portable keyboard, carrying case, and the necessary software. In my case, it cost significantly more because the ISD also chose to provide an IR printer, Y5 port, and laptop.

Regardless of people’s views on the value of PDA’s and e-books in the classroom, they are here to stay. Seybold Seminars & Publications, summarizing the result of an industry survey given to 2,880 people, made the following statement:

“In the past few months, there has been extensive press coverage of e-books and dedicated electronic reading devices... The opinions of print and online publishing professionals indicate that the e-book market, although rapidly growing, is still in its infancy. And, at this stage, the e-book market is positioning itself for expansion. There is real interest in reading electronic publications on electronic devices....”

Matt Freeman (2000), in his article titled, Mid-morning in the e-book age, calls e-books a “boon for students... who will soon be able to buy and carry the equivalent of a wheelbarrowful of traditional books with little trouble.” He continues by predicting, “Electronic books, in a variety of forms, will quickly become more and more a part of our work, leisure, and lives.”

Increasingly, researchers and organizations are beginning to focus on the benefits (and challenges) of e-books in the classroom. E-book.org is a comprehensive website designed and maintained by the Kent State University Institute. In partner with CyberInformation and FX Palo Alto Laboratory, Inc., it describes itself as a “non-commercial repository of information related to e-book research and products.” TechLEARNING is another organization, among many, focused on the educational uses of technology.

Confounding variables

Although my study lends credence to the view that e-books improve students’ motivation to read, one must always consider how confounding variables have influenced the testing or observable results. In this case, I feel the most significant are sample size and testing methodology.

First, is sample size. To my knowledge no one has ever attempted to quantify the effects of handheld computers on reading motivation. Clearly, additional studies need to occur in other classrooms across the nation before a definitive connection can be made.

Second, is the measurement vehicle. Opinion surveys, while important, don’t necessarily lend themselves to the kind of quantitative measurable results teachers, administrators, politicians, and parents demand. In the following section I describe tools for achieving this.

Where to go from here?

During the 2003-04 school year I plan on further exploring the motivational benefits of e-books in my classroom. Over the summer I have gathered new and relevant book titles for students to choose from. I have also been revising my surveying method. At the beginning and end of the school year I plan on having my students complete a more extensive survey comprised

of two parts: One that uses a five point scale to rate students' attitudes toward reading and a second part that asks for comments similar to the ones used during the 2002-03 school year.

In addition, The Center for Highly Interactive Computing (hi-ce) at the University of Michigan is expected to release a new program called RubberNeck in July that will keep track of the time each student spends reading e-books. I plan on using this and the survey described above to try quantifying the motivational effects of e-books.

Appendix-A

- 1) Do your best to remember back to the time before you received your Palm. Compared to then, do you feel you read more, less, or the same amount since you started reading e-books? If you read more, try to estimate how much more per night.

- 2) What do you like about reading e-books? List as many things as you feel are necessary or relevant.

- 3) What don't you like about reading e-books?

- 4) Overall, has your Palm experience been a good one? Explain

- 5) What has been your biggest complaint about using your Palm?

References

Background

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Where to go from here?

For information on The Center for Highly Interactive Computing
<http://hice.org/hiceinformation/>