Digital Literacy Devices in the Elementary Classroom

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I have wanted to implement the use of iPads and iPods into my 6th grade classroom for a few years now. Why do I want to use digital devices for literacy in the Elementary classroom? Digital Literacy allows students to apply their reading, writing, speaking, and listening skills in authentic learning situations (Donohue, 2010). With digital literacy we are able to go beyond the classroom and into the world. I personally think that the use of these devices will excite the students to read and write with various apps and other programs available on individual devices. I would have students write their own stories and record them on the iPods to share with the primary students. Possibly even have a set of iPods in the library that the older student’s will use to record their own stories and short stories from children’s books for the younger readers. In my usual practice I tie reading and writing into other subjects such as social studies, math and science. Using digital devices students can access different pieces of information as needed.

One big issue at my school is that of funding. Another is that of fear. “I don’t know how” to use them. Fear that the kids will know more than they do. Fear that it will take too much time. Some devices are banned in the school.

Some research that I read showed limited use of technologies or not in use equal amounts of time. Limited research or research that was not studied has been completed on classroom projects that attempted to link home and school technologies (Burnett, 2009).

Skepticism and limited confidence is another concern of teachers in many schools as these new devices become more readily assessable (D’Orio, 2011). In my school this past year we implemented the use of SmartBoards in several classrooms, teachers were afraid they would fail. There is also the concern of whether or not these devices will help raise test scores. Case
studies cited in the New York Times the fall 2011 showed that scores have stagnated with iPad use. In saying this, they have not fallen (Harrold, 2012).

The State of Alaska has a technology component in the State Standards (2006). Students should be able to (A) operate technology-based tools; (B) use technology to locate, select, and manage information; (C) use technology to explore ideas, solve problems, and derive meaning; (D) use technology to express ideas and exchange information; and (E) use technology responsibly and understand its impact on individuals in society (Alaska, 2005, p.31-32).

Reviews of research from 2003 into literacy and technology suggested that relatively few empirical studies have explored digital literacy in elementary schools, they address instead the use of technology to support the curriculum which is in print (Andrews, 2003; Lankshear & Knobel, 2003). More recent research into literacy and technology is showing that digital devices are having an impact on student scores (Harmon, 2008). Digital devices such as tablets, e-readers, video, and web browsing devices with instant access to thousands of apps are gradually replacing the physical textbooks. Technology can be a powerful tool for helping individuals achieve their goals, it can limit human suffering, help promote social justice to helping people “make a difference” in their worlds (Hansen, 2003, pg.117). Researchers wonder why more classrooms have not adopted available digital technologies into their curriculums (Abadiano & Turner, 2007; Hew & Bush, 2007; Wepner et al, 2007). The use of technology is transforming literary instruction. Students are excited to use these tools in the classroom (Harrold, 2012). Digital devices allow students to collaborate with others in the class, other classrooms, across town, around the world when working on research and writing activities (Donohue, 2010, Harrold, 2012). With various e-readers students can manipulate the text within the boundaries of the technology. By that they can re-size the font and change background colors. They can use
the dictionary to find meanings and/or pronunciations of words. There are writing apps on many of the devices that students use to make notes on their reading, write responses, and journal (Harmon, 2011).

An important part of literacy is that of communication. The ability to share information, collaborate and gather information. Students need to share this need to communicate with their family, peers, and friends. They speak, they listen, they negotiate. They need to connect to the world, communicate with others, add their voices to issues as they happen. They experience world events as they happen. Digital devices allow students to connect to the world without leaving the classroom (Donohue, 2010).

The level of technology that is used changes with each situation and group of students, but the goal of technology use remains the same: to enrich the classroom experience and enable students to not only reach but exceed grade-level expectations. We need to engage students if we want to keep them engaged in school (Talley, 2012). Digital environments provide opportunities for children to not only make meaning but to reach new audiences and express themselves in new ways (Burnett, 2009).

To implement digital devices into classrooms and schools a plan needs to be put into place. Plans should be created for each learner keeping them in engaged (Blagojevic, 2011). In the study in Auburn, Maine Muihr, Auburn’s Multiple Pathways’ Leader gave a speech entitled “Being Deliberate About Change” where he emphasized that the focus must always be on children’s learning (2011). That it is important to use a balanced approach of technology alongside regular classroom tools. Small mobile devices have become a routine part of day-to-day life for people of all ages (Erickson, 2012). “Being deliberate includes providing responsive
professional development and including all members of the teaching team when it comes to decisions about how to use a new technology, such as an iPad” (Blagojevic, 2011, pg.5).

So what digital devices are beneficial to schools? There is research out on various types of digital devices iPods, iPads, Amazon Kindle, e-Readers and so on. iPad’s (or any other digital device) are not being used because they are a “cool toy” they are used to enhance student learning (D’Orio, 2011). These digital devices can help eliminate the need to carry around the heavy, bulky textbooks since more textbook companies are creating their books as e-books today. They can also decrease the amount of paper generated to run daily classes (D’Orio, 2011). Canby Oregon School District has implemented an iPod and iPad program that has allowed the district to re-gain six full days of instruction though students always using the devices and the ability to use apps between classes to refresh any skill as they transition between classes. This was done through students being more engaged, they use the devices as tools (D’Orio, 2011). Resources and resources become accessible anytime, anywhere today with the Cloud Computing (Erickson, 2012).

The view of multiple literacies from a social constructionist framework is not a curriculum approach it is viewed as multiliteracies (Kitson, 2007). What counts as literacy? A variety of texts are now offered in both print and media; able to locate and retrieve information in print or digital form; being critical readers; being purposeful composers; classroom interactions and collaborations (Kitson, 2007).

How can the effect of digital devices in classrooms be measured? Enhanced levels of collaboration in older students take place when students share the digital devices. Typing on an iPad is more difficult among the middle school age students than a primary student (Harrold, 2012). Digital devices are not the answer to all teaching methods, students still like to read
books and draw on paper. These tablet devices are more than a device with a lot of apps. Students need to be empowered to use them for research, reading and writing activities. They can be used to access information, create a project, or even class response (Herlihy, 2011).

In chapter six of the National Reading Panel report (Big Book, 2000) they feel that until recently technology was not considered capable of delivering effective reading instruction, a human needed to do it. With speech recognition in the new computers and developments in the Internet, NRP is beginning to see benefits of using technology with reading. They felt it must be examined to see if it is capable of delivering instruction in vocabulary or phonemic awareness. They suggest that it is possible to use computers for reading instruction. An area outside of their scope of research is that of writing, they felt that computers may be good for word processing. Also that using word processing may make reading instruction more effective.

The White House and Secretary of Education Arne Duncan in September 2011 announced the launch of “Digital Promise,” which is a new national center created by Congress to support advance technologies to transform teaching and learning. This partnership is geared to bring educators, entrepreneurs, and researchers together to so use technology to help students learn and teachers teach. They will determine what is and what is not working in the schools with learning technologies.

Application

After reading about the research on various digital devices, what I would want in my classroom is enough iPads for one-half of my class, iPods for one-third of my class, and Amazon Kindles for one-half of my class. My reasoning behind these numbers is that it would be less
expensive to supply my classroom with the digital devices in this configuration than an entire class set of iPads. I group my students into smaller groups with a cross section of learning levels and backgrounds in each group when working on research type projects. The groups then collaborate with each other to complete learning activities. I find that even though there is a large academic range of the students they each bring something to the group. I have them rotate through different parts of the learning activities that they need to complete.

I use technology in my classroom as it gets my students out of the classroom to places around the world, past, present and future. They would work together building collaboration skills. My students will use the iPads to get on the Internet and research topics of study for their subject area. I incorporate a lot of reading into my Social Studies, therefore the students have the opportunity to research places in history past and present through lots of reading and online search. Students will research various topics, find the information and create some type of a presentation.

Using the iPad they can get on the Internet and research their topic, open up an app such as Evernote, Bamboo Paper, Noteability, Dragon, or Pentultimate where they can write, draw pictures, and record notes of their research. If there is information that could be accessed from a person across the country or in another country, Skype could be used to interview the person(s) the students could share one iPad or each join the group discussion. Use Pages to write the report if a paper report is the goal. iMovie and GarageBand can be used to put together a multi-media report. Numbers can be used for graphs, and the students can create a short video using PhotoBooth to explain the graph. Completed project, not necessarily written, is the final goal.

Using Amazon Kindles I would have books and newspapers for the students to read. The students can manipulate the text size, text-to-speech to help with pronunciation of words.
Students can also access the Internet to research assigned topics. If there are movies or YouTube clips they need to view, they can do this on the Kindle as well as the iPad. I view the Kindle more of a reading and research device to be used by the students where the iPad I view as a device that has a lot more capabilities available. The iPad can also be used for reading books and newspapers. This reasoning comes from my present usage of these devices.

The iPod has many uses also in class. I would have students use the iPods to create podcasts of their research topics and record notes on research or vocabulary words for later review. iPods would be used with student writing stories or poems and then record their writings. This type of activity will be done once a month to monitor growth in student writing and oral communication skills. The students will each month read and record a new children’s story that will be given to a primary class or the library for the primary students to listen to. Besides reading stories, students can also create facts that they record and listen to from various subject areas such as math, science, social studies.

Using these digital devices as noted in my research findings in the first part of my paper will engage students in their learning. Today’s students are digital natives, they have grown up with digital devices. Too many times those of who are older try to not allow the use of these devices in classrooms.

Implementation of these devices into classrooms needs to be done with organized thought, not just randomly handed to the teachers and walk away. I sat in a workshop at the National Council for Computer Education (NCCE) Conference in Seattle, March 2012 on Integrating iPads Into the Classroom (from my notes). One discussion was that of the Technology Adoption Life Cycle of iPads. Four points that were made on implementing these devices were that of:

• Substitution – You can read them just like a book.
• Augmentation – Share annotations with someone/teacher (notetaking)
• Modification – Interact with content in new ways. Look at media to bring to life what I’m reading.
• Redefinition – As a teacher I can create or curate my own textbooks. I can also have my students create their own book, teams working on chapters. (Schmit, 2012)

This could apply to any digital device that is being integrated into our classrooms. They need to be done with purpose and trainings.

Staff and students need guidelines to follow when using these devices. Putting them in the classroom and walking away is not implementation it is giving the class a “cool toy.” The staff needs to have ongoing support on how to use and updates on the devices as technologies are implemented or change. This can be done in various ways, the most expensive is to bring in professional trainers, but what can be done is that as the staff learns new ways to use them they can share at staff trainings. This can be done in building or have a person go to another building and help the staff.

Assessment will be done through observation of students working on assignments and projects. Using Google-Docs I will be able to record an observation of performance of students in my classroom. I will set up a simple form that I can use as I walk around the classroom and visit with students as they are working on their projects. This type of assessment will be done on-going through the time of the assignment. The form will have information such as: Student name; Skill(s) being observed (something related to the project); Level of Mastery – Exceeds expectations; Meets expectations;
Does not meet expectations; then a sections for notes where I can record responses from questions asked of the student, observations made on his/her participation, what type of device using, and any other information that would be helpful.

Students can give me responses to activities they are completing. They can use Dragon to dictate their response. Notes can be emailed or uploaded for me to review on assigned dates. Responses will be turned in weekly or at the end of an assigned activity.

Completed projects. These could be a typed or handwritten paper, a podcast, a PowerPoint presentation, a story, and the list goes on depending on the assignment given. The projects will be scored on a rubric style of grading which will be generated with objectives geared toward the intended outcome.

Using both the iPad and iPod Flashcards can be created for review of terms, spelling words, definitions, etc. The students then can be tested over these items an app like GWhiz Mobile Learning Assessment where they give simple multiple-choice responses. Our reading curriculum has a fluency component that is difficult to find time to assess to students, using an iPod the student could complete the reading and it can be is later when I don’t have a room full of students.

Listen to the online component books with our curriculum. This is especially good for the low readers they can listen to the story as they follow along in the book. After the story is complete, they can take the quiz that follows and to further develop skills assigned a written response of some type that can be completed using notes on the iPad.

To assess the effectiveness of these devices as they are used regularly in the classroom student test scores from the Alaska Standards Based Assessments (SBA) will be reviewed for increase in proficiency levels from fourth through sixth grade yearly. Another assessment that
will be looked at are the score levels on the AIMS (Aptitude Inventory Measurement Service) for improved reading skills through the course of the school year on looking for growth from the fall test to winter then spring tests.

The Ketchikan Gateway Borough School District (KGBSD) has included technology components into almost every curriculum area that tie into the Alaska State Technology Standards (Alaska, 2005). According to the National Reading Panel (NRP) even though the use of technology for reading is a relatively new field, the NRP reports positive results for using technology for reading instruction (NRP, 2000). The NRP feels that the addition of the text to speech component available may be beneficial to reading instruction, as well as word processing may benefit reading. “The current analysis has found general agreement in the experimental literature that computer technology can be used to deliver a variety of types of reading instruction successfully” (NRP, Big Book, 2000, p.6-9).

In summary, why I would implement these devices in my classroom and school is that I feel that they empower and engage the student to go further than he would if he were just handed a book or told to go to the library and research. Opening up a story on a digital device and being able to listen as you read if you are a struggling reader opens many new doors that are not possible with printed text. The student can read and record stories and their papers before making final edits which then they can do as they listen to what they wrote. They are tools that are mobile like our society is. Even though digital devices and literacy are new in the field of research, what research has been done to this point in time find the effects of using technology along with literacy to be beneficial to the student. Test scores are improving, student confidence is increasing, and the students enjoy using these devices.
Resources for Project


D’Orio, Wayne. (2011, Spring). iStudent: With benefits from apps to battery life to free e-books, is the iPad the ideal tool for today’s classroom?. *Scholasticadminstrator.com, 10*(5), 46-50. Retrieved from [http://www2.scholastic.com/browse/article.jsp?id=3755865](http://www2.scholastic.com/browse/article.jsp?id=3755865)


