LITERACY APPLICATIONS FOR TODAY'S LEARNER

Vickie Johnston, Ed.D.
Michael Lancellot
Florida Gulf Coast University

Author Biographies:

Dr. Vickie Johnston is an Instructor in the College of Education at Florida Gulf Coast University. Her recent research and scholarship have been in the areas of literacy, digital literacy, and best practices.

Michael Lancellot is a doctoral student at Florida Gulf Coast University. His research areas of interest include literacy, teacher education and multiculturalism.

ABSTRACT

Common Core English Language Arts Standards and changing technologies have shifted the ways students and teachers select and read text. Reasons for the lack of digital literacy implementation in instruction are due to the large amount of choices available without sufficient background information on how to critically evaluate literacy applications. This article presents the framework of the Common Core English Language Arts Standards and how they are used to enhance literacy instruction through implementation of literacy technology applications. Limitations and advantages of digital applications are explored, descriptions of the applications are provided, and strategies for implementation in the English/Language Arts classroom are discussed.

The Common Core State English Language Arts (ELA) Standards were created in order to develop a unified system with learning goals outlining what students should be able to know and do at the end of each grade (CCSS, 2010). These national standards set expectations for student achievement across each grade level and were created to ensure that all students, regardless of where they live, graduate from high school with the skills and knowledge necessary to succeed in college, career, and life (CCSS, 2010). The Common Core Standards contains a cumulative model of expectations, based on rigorous content and the application of knowledge through higher-order thinking skills (CCSS, 2010). The ELA component of the Common Core requires greater emphasis on informational text as well as an increase in text complexity, moving students into more complex texts earlier in their schooling in order to improve the text levels they will be able to read after graduating high school.

As states begin to implement these standards, it is important to remember that much of

today's text is found through digital text. Common Core State Standards require that students become technologically literate and ready to compete in a global digital world; consequently, there is a growing need for reading and writing skills utilizing digital technologies. Reading instruction that integrates digital texts can motivate students to want to read and increase reading fluency (Thoermer & Williams, 2012). Due to the enhancement of technology, students have access to not only digital text but also literacy applications. The introduction of the iPad and other tablets have transformed mobile learning for students and teachers. Mobile devices have promoted learning through portability and access to new information that facilitates teaching and learning (Hutchinson, Beschorner & Schmidt-Crawford, 2012).

While mobile applications represent a new resource for teachers and parents, new applications appear so rapidly that it is difficult to keep up with what is currently available. This article reviews recent studies that have focused on the value of digital applications and provides a description of three literacy applications with strategies for implementing these applications into literacy instruction.

Limitations of Digital Applications

While digital literacy offers many advantages, it also has its limitations. Teachers have many options when it comes to selecting websites and literacy applications. One commodity that is not available is time to thoroughly evaluate literacy applications and resources for instruction. Powell (2014) shared the struggles of a kindergarten classroom teacher that attended an in-service training which explored integrating technology in the classroom. After the in-service, the teacher applied for a grant. When the teacher received funding and was ready to purchase new technology, she realized she did not know how to select the best tools. Other challenges were found in how to select the best apps with the hundreds that are available in the iTunes store. While students can be provided with direct instruction on technology, technology used to implement the Common Core Standards needs to be done carefully to ensure positive learning outcomes for students. A limited amount of research has been done on the use of iPads and smartphones in the area of learning tools (Northrop & Killeen, 2013).

According to Koltay (2011) the four components of digital literacy include: internet searching, hypertext navigation, knowledge assembly and content evaluation. There are a variety of considerations when it comes to digital literacy education. The media needs to protect children from negative media influences (Flewitt, Messer & Kucircova, 2014). When evaluating digital media Kotlay (2011) suggests the following key questions to keep in mind:

Does it focus on popular culture texts?

Does it have an explicit political agenda?

Should media literacy be taught as a specialist subject or integrated within the curriculum?

Should digital media literacy initiatives be supported financially by media organizations? (p. 214)

Ng (2012) established the term ‘digital natives’ which is described as the generation of people born in or after 1980. This group of people has been surrounded by digital technologies their entire lives, and they learn differently from previous generations of people. When teaching digital natives, digital literacy or the overlapping systems include: cognitive or informational literacy, social-emotional literacy, and technical or operational/critical literacy (Ng, 2012). Educators need to know the various technological tools that are beneficial for their own teaching and students’ learning. In addition to knowing how to use the tools, there is a need to know how to model the tools for students.

Advantages of Digital Applications

According to Bolduc-Simpson and Simpson (2014), the use of digital technologies was most successful when stakeholders focused on the development of skills and when learners received immediate feedback. Bolduc-Simpson & Simpson (2014) collaborated with a first grade classroom to demonstrate children use of Web 2.0 applications. The authors reminded the reader that the Common Core State Standards in the 2013-2014 school year required students to be technologically literate in order to meet the challenges in a digital world. Teachers found that students increased academic learning time in reading and writing, and they had a curiosity to interact with the applications at home and in transit with access from mobile devices.

Bolduc-Simpson and Simpson (2014) reviewed four Web 2.0 applications and included not only a description of the application but also provided a review its capabilities for teachers and students. For example, Mrs. Davis, a first grade teacher, wanted to plan a pair-work Glog activity as a follow up to her Voki introduction to her Science Unit. The Voki application provided users with the ability to create avatars, add voice using a microphone, or type text to send as a blog or website. Teachers were able to use the free speaking avatar to engage their students throughout the course of a lesson. Delivery methods included presenting short concepts, making announcements, or summarizing homework. Students used Voki to study characters, such as historical figures or fantasy characters, to add innovation to a book report, or to reflect on learning.

Table of Contents

Flewitt (2011) conducted an ethnographical study in the South of England which included case studies of ten boys and girls from different social backgrounds and diverse learning needs. The ethnography included a study of the range of literacy resources available to the student at home, such as printed and audio books, TV, DVDs, computer, video games; and it included an examination of family literacy practices such as reading with family members, playing audio books at bedtime, and sharing in family readings of stories. An examination of literacy activities with families was included, such as making shopping lists or reading the newspaper with family members. Through studying students' experiences with literacy in the home environment, connections could be made with digital literacy experiences in the classroom. The digital applications served as a way to build collaboration between parents and the school community.

Greenhow, Robelia and Hughes (2009) informed the reader of the advantages with educational uses of the Web which included social interactions, sharing, interactivity, richness of information, and public accessibility. The authors introduced themes such as learner participation and creativity, online identity formation, and transformative social scholarship (Greenhow, Robelia & Hughes, 2009).

Mills and Levedo (2011) provided a pedagogy for digital text production. It included a link to activate prior knowledge; co-created digital multimedia scaffolded by experts, media technologies, and peers; shared media content within local and global networks; and included challenging social messages and interests that were served by media texts and practices. Students used iWeb skill sequences and iMovie skill sequences to create, film, and edit an All About Me page, blog page, podcast page, movie page, and storyboard. A comparative assessment rubric for website tasks was utilized, which included knowledge and understanding, application about the blog, podcast, and movie pages. Students and teachers needed to be critical evaluators in their selection and application of digital literacy. In addition to finding and selecting the best software, they found that it was necessary to develop a local curriculum and pedagogy to support their use (Flewitt, Messer & Kucirkova, 2014).

Lynch and Redpath (2014) reported patterns of use of Apple iPads in an Australian Preparatory classroom during the first year of implementation of the devices. Data was collected and included student and teacher interviews and classroom observation data. The data suggested that the primary students quickly developed competence in the use of the iPad and iPod touch devices, and they developed a high level of motivation in using these devices compared to desktop and laptop computers. Students responded that they liked the "games" the best. These included academic learning games that were designed to support early numeracy and literacy learning such as Pocket Phonics and interactive books applications including Dr. Seuss titles. Teachers reported that the applications were mainly used in literacy centers to practice phonics

skills including sounds, blends, and initial sounds; and they assisted in learning sight words and handwriting.

Mallette and Barone (2014) selected ten ideas on how to use Ipads in the Literacy classroom. The review included: Story Buddy, which is a way for children to make their own e-books; i-prompt, which helped children build fluency when reading or presenting orally; and i-Translate, which was used for non-native speakers of English to assist in conversation. Writer's Hat was used for generating words; Evernote, a cross-platform application, was used for note-taking, and Dragon dictation converted speech into editable text. Online Stickies was selected for storyboarding; Puppet pals created student stories with recorded voices; Story Wheel was used for collaborative storytelling; and SoundNote was implemented for typing notes and included handwritten notes. Flewitt, Messer and Kucirkova (2014) reported that the content applications engaged students more deeply and creatively in learning tasks. Through the use of Our Story, students developed a drama project where they wrote, planned, and acted out a play as they created their own stories; and they also included photographs with the applications. Teachers positively responded to the increased motivation experienced by their students.

One component of literacy that is important for educators to develop in their students is vocabulary. While children develop oral language through speaking to one another, there is an increasing concern for implementation of academic language, Academic language includes terms that are not part of everyday speech. According to Dalton and Grisham (2011), English Language Learners deserve careful attention because while they are learning a second language, they also need to learn a third language - academic content. One strategy teachers and students used to both teach and learn vocabulary was learning from visual displays of word relationships within text. A website found to provide such technology is Wordle.net which allows students and teachers to create word clouds. Teachers also facilitated digital field trips for students using a free online program called TrackStar (trackstar.4teachers.org). It is important for students to be connected with online vocabulary games to develop their skills. Students also need access to increase their reading volume by reading digital text (Daltan & Grisham, 2011). Trackstar allowed teachers to collect a series of websites to create a webquest for students that facilitated this vocabulary development.

A model for social scholarship can provide equitable opportunities and literacy development. Social scholarship requires rethinking economic, institutional, social, and cultural practices. There are disciplines that intersect, such as neurological research, to question how a young person's immersion in a digital world affects their brain functioning (Owston, 2009). According to Greenhow, Robelia and Hughes (2009) there is a need to understand the design, impact and scaling up of the online learning community. It is evident that teachers are exploring the current technology tools, but

research needs to also inform educators about how they are adopted, the extent to which they are used, and the affect in learning.

Description of applications and implementation for early literacy

After selecting and reviewing literacy applications with undergraduate teacher candidates in a university setting, the practicality of three of these applications as instructional tools was explored through implementation in a kindergarten classroom. The following information provides a summary of three literacy applications with strategies for implementing these applications into literacy instruction.

ABC Pocket Phonics Lite

This is a free application called ABC Pocket Phonics Lite by Apps in my Pocket. Students see the letters and hear their corresponding sounds. This application incorporates children's tactile/kinesthetic learning style by having students trace each letter with their finger. For example, the instructional sequence begins with saying and tracing three letters. Students are then provided with the same letters in random order for making words located inside bright, colorful circles. When making each consonant vowel consonant (CVC) word, the authentic digital voice provides the reader with the initial, medial, and final sounds. It then provides a bright, colorful picture. For example, with the word sap, an oak tree is displayed and the chirps of birds are heard.

Strategies for Literacy Implementation

Castles, Wilson and Coltheart (2010) indicated preschoolers' orthographic knowledge, such as knowledge of the printed letters corresponding to spoken sounds, influenced their performance on phonemic awareness tasks. Such tasks require phonological and working memory. The authors suggested when children visualized the letter corresponding to a particular sound, they were able to better hold it in their memory when there was no additional support available (Castles, Wilson & Coltheart, 2010). Alphabet knowledge in kindergarten and first grade predicts later literacy achievement (Stahl, 2014). Alphabet knowledge, including letter sounds and letter names, knowing how to form letters, and knowledge of letter-sound associations, is related to the ability to sound and out to spell words; and this awareness is necessary to understand the alphabetic principle (Stahl, 2014).

Knowledge of the alphabetic principle allows the learner to transition from pretend reading to a novice reader who is relying on print on the page. Explicit and systematic instruction is effective and teachers get the best results when differentiating small-group instruction in response to the students' existing alphabet knowledge (Stahl,

2014). Not all letters require equal effort in instruction, so there is not a need to rely on the “letter of the week” traditional sequence often seen in kindergarten classrooms. Letter-name knowledge is the strongest predictor of letter sounds (Stahl, 2014). Letters b,d,p,q require discrimination between critical features. Letters h,w,y are difficult because they names have no association in addition to letters c,g and vowels with ambiguous associations (Stahl, 2014). It is necessary to teach for transfer to connected text while practicing fluency and promoting comprehension (Stahl, 2014).

Often times in early literacy classrooms students are assigned to a literacy center to create and read alphabet books. The ABC Pocket Phonics Lite application may be integrated into this type of center as a supplemental tool to work towards mastery of the alphabetic principle. Due to its practicality and ease, it may also be used at the guided reading table or displayed underneath a document camera in a whole group setting. The digital technology simply replaces the traditional use of a whiteboard and marker while learning the alphabet.

Endless Reader

We practiced sight words with a free application named Endless Reader. It addresses phonemic awareness and phonics, while simultaneously building the reader’s oral language, vocabulary, fluency and comprehension. The student and teacher smiled as the bright, colorful letters with googly eyes were displayed. An outline of the word is provided while the letters are scattered around. A sentence was provided, “Pinkerton makes funny faces in the mirror” and then the student was prompted to match the sight words in context. As the student touches and drags each letter with a finger, an engaging sound of the letter is provided. Playful monsters are the theme.

Strategies for Literacy Implementation

Leveled-text selected for emergent readers often contains print which requires the reader to recognize and read high frequency words (sight words) with automaticity. As a way to scaffold student’s fluency prior to guided reading, teachers can preview leveled text and identify the collection of words the students will encounter multiple times. Along with making connections and predictions, teachers can incorporate the Endless Reader application as a brief, engaging pre-reading activity. This pre-reading activity can target the sight words students would encounter, and this would promote fluency, oral language, and early reading skills.

Learn with Homer is a free application which has a carnival-like theme. It is visually attractive with animated characters, inviting music, and excellent software design. The application creator is also quite generous with the lessons provided in the free version as there is plenty to explore. Homer is a pigeon character who guides the learner through the application. On the home screen, a carousel is displayed with majestic music. Each animal on the carousel has a corresponding reading skill. As the user drags her/his finger to rotate the characters, the options are read aloud in a soft, inviting voice: Learn to Read, Story Time, Record your Voice, Draw a Picture, Back to School, Songs and Rhymes, and Discover the World.

In Learn to Read, the reader travels with Homer to a lush, green forest with a dancing monkey, smiling tiger, open-mouthed alligator, and a peacock surrounded by mice. A soft banjo plays music while chirping birds are heard. A series of letters are displayed on each green tree and are marked by numbered red flags. Millie Monkey teaches the reader the /a/ sound and asks the user to tap the alligator.

Strategies for Literacy Implementation

Learn with Homer is a popular literacy application because of its comprehensive nature. It teaches all of the components of reading from foundational skills to fluency and comprehension. Learn With Homer is an ideal application to integrate into a literacy center due to the variety of reading skills and activities provided. Listening activities, such as listening to a text in Story Time, and text feature analysis, such as exploring volcanoes while learning about text features in nonfiction text, are great strategies for reading acquisition. As students become more familiar with the application and initial lessons, the teacher can introduce and assign additional lessons that promote fluency, comprehension, and phonological awareness. As a monitoring tool, Ipads have a feature in the Settings location which provides guided access, so the student is locked into the application and cannot get into other applications.

Conclusion

Common Core State Standards require that students become technologically literate and ready to compete in a global digital world; consequently, teachers must understand how to teach reading and writing skills utilizing digital technologies. Students and teachers have an array of choices available when implementing digital literacy in the classroom. The introduction of mobile devices in literacy instruction has transformed learning for students and teachers. Mobile devices have engaged students in learning and have promoted learning through portability and access to new information. However, while mobile applications represent a new resource for teachers and parents, new applications tend appear and disappear rapidly; consequently, evaluation of

Table of Contents

literacy applications and their use for literacy will continue to be an ongoing process. Instruction and learning with these applications has begun. Further research is needed in order to provide literacy educators with additional critical evaluations of these applications for their use in today's classrooms.

References

Bolduc-Simpson, S. & Simpson,M.W. (2014). Engaging our 21st century learners: Teaching tips for five free-n-easy web 2.0 apps. Childhood Education, 90(3), pp. 242-245.

Castles, A., Wilson, K. & Coltheart M. (2010). Early orthographic influences on phonemic awareness tasks: Evidence from a preschool training study. Journal of Experimental Child Psychology, 108(2011), pp. 203-210. doi: 10.1016/j.jecp.2010.07.006.

Common Core State Standards Initiative (CCSS(2010).Common Core State science, and technical subjects. Washington, DC: National Governors Association Center for Best Practices and the Council of Chief State School Officers. Retrieved from www.corestandards.org

Dalton, B. & Grisham, D.L. (2011). E-voc strategies: 10 ways to use technology to build vocabulary. The Reading Teacher, 64(5), pp. 306-317. doi: 10.1598/RT.64.5.1.

ESkillsLearning (2010). Mobile applications selections rubric. Retrieved from http://www.eskillslearning.net/

Flewitt, R. (2011). Brining ethnography to a multimodal investigation of early literacy in a digital age. Qualitative Researcher, 11(3), pp. 293-310. doi:10.1177/1468794111399838.

Flewitt, R., Messer, D. & Kucirkova, N.(2014). New directions for earl literacy in a digital age: The Ipad: Journal of Early Childhood Literacy. 0(0).pp.1-22. doi:10.1177/1468798414533560.

Greenhow, C.G., Robelia, B. & Hughes, J.E. (2009).Research on learning and teaching with web 2.0: bridging conversations. Educational Researcher, 38(4), pp. 280-283. doi: 10.3102/0013189X09336675.

Hutchinson, A., Beschorner, B. & Schmidt-Crawford, D.(2012). Exploring the use of

the iPad for literacy learning. The Reading Teacher, 66(1), pp. 15-23. doi:10.1002/TRTR.01090.

Koltay, T. (2011). The media and the literacies: media, literacy, information literacy, digital literacy. Media, Culture and Society. 33(2).pp.211-221. doi: 10.1177/0163443710393382

Lynch, J. & Redpath, T. (2014). 'Smart' technologies in early years literacy education: A meta-narrative of paradigmatic tension in ipad use in Australian preparatory classroom. Journal of Early Childhood Literacy 14(2), pp.147-174 doi: 10.1177/1468798412453150.

Mallette, M.H. & Barone, D. (2014). Interesting ways to use iPads in the classroom. The Reading Teacher, 67(8), pp. 621-625. doi: 10.1002/trtr.1264.

Mills, K.A. & Levido, A. (2011). Iped: Pedagogy for digital text production. The Reading Teacher, 65(1), pp. 80-91. doi: 10.1598/RT.65.1.11.

Ng, W. (2012). Can we teach digital natives digital literacy? Computers and Education, 59 (2012) pp.1065-1078. doi:10.1016/j.compedu.2012.04.016

Northrop, L. & Killeen, E. (2013). A framework for using iPads to build Early Literacy Skills. The Reading Teacher, 66(7), pp. 531-536. doi: 10.1002/TRTR.1155.

Owston, R.D. (2009).Digital Immersion, teacher learning, and games. Educational Researcher, 38(4), pp. 270-273. doi: 10.3102/0013189X09336673.

Powell, S. (2014). Choosing iPad apps with a purpose. Aligning skills and standards. Teaching Exceptional Children. 47(1), pp. 20-26.

Stahl, K.A. (2014). New insights about letter learning. The ReadingTeacher, 68(4), pp. 261-265. doi: 10.1002/trtr1320.

Thoermer, A. & Williams, L. (2012). Using digital texts to promote fluent reading. The Reading Teacher, 65(7), pp. 441-445. doi: 10.1002/TRTR.01065.

Table of Contents