Literature Review References

Citation: Shen, J. (2011). The E-Book Lifestyle: An Academic Library Perspective. *Reference Librarian*, *52*(1/2), 181-189.
Location: EBSCOhost / Academic Search Premier
Notes: This academic journal addresses current academic developments in the mobile technology market
Poster: Boy
Annotated Bibliography
In this revealing article, the author utilizes a host of graphs and charts to illustrate a growing academic trend among California State University (CSU) students. With emphasis on the widespread adoption of digital electronic books (e-books), Shen presents encouraging results from recent studies on student habits and attitudes toward their readiness for e-books. As a Computer Science Librarian, Shen provides an impartial and interesting perspective on the use of e-book readers and its upcoming place within the academic library system. Shen's case study is a convincing look at the prevailing potential for e-book readers as a successor to traditional printed books. The use of statistical data from a number of reputable sources with varying, yet positive results caters to the notion that the author is a proponent for this progressive new media format. While she refrains from expressing a firm position on the topic, her furtive use of language and context leans toward the supportive side. This is not entirely surprising considering the fast growing use of digital e-books within the public library system.

Citation: Hwang, G., Wu, P., Ke, H. (2011). An interactive concept map approach to supporting mobile learning activities for natural science courses, Computers & Education, *57*(4), 2272-2280.
Location: PsycNET
Notes: This academic journal illustrates the results of an experiment that proves to enhance learning attitudes and improve student achievements
Poster: Boy
Annotated Bibliography
Gwo-Jen Hwang, Po-Han Wu, and Hui-Ru Ke are academic graduates from three different prestigious universities in the western pacific island group of Taiwan. While their united approach to this research study is very compelling in terms of demonstrating the effectiveness of technology, as a supplemental tool for supporting mobile learning activities for natural science courses, there was nothing conveyed that would suggest partiality (for or against) the use of technology as an educational tool. The findings in this article suggest a notable difference in terms of the learning achievements and learning attitudes of both the experimental and control groups for this study. Within this study, the use of an interactive concept-map oriented mind tool remediation mechanism (ICM3) is contrasted against the traditional concept map approach. The

statistical results from the experiment study strongly indicate a significant learning advantage, proving that the ICM3 approach toward instant assessment and remediation is an effective pedagogic method of improving learning within the scope of field related courses. This case study article presents an empirical view of the topic and a foundation for implementing digital technologies within mobile learning activities.

Citation: Kagohara, D. M., Sigafoos, J., Achmadi, D., O'Reilly, M., & Lancioni, G. (2012). Teaching Children with Autism Spectrum Disorders to Check the Spelling of Words. *Research In Autism Spectrum Disorders*, *6*(1), 304-310.
Location: EBSCOhost / ERIC
Notes: This academic journal discusses a recent study that suggests a positive correlation between autistic children and the use of a digital mobile device
Poster: Boy
Annotated Bibliography
This well-written article is a collaborative effort penned by five academic individuals from different parts of the globe. The intent for this editorial piece is to discuss the positive findings of a recent study aimed at addressing two participants with autism spectrum disorder (ASD). The article is as much a social commentary as it is a revealing case study. The authors successfully utilized a rich pool of primary and secondary resources as a method of conveying the prudence and importance associated with the utilization of digital mobile devices (iPad) within a classroom setting for students with social constraints and learning impediments. Hailing from Universities in New Zealand, Italy, and the United States, with academic backgrounds in Educational Psychology and Educational Risk Prevention, this global coalition provides a convincing argument in favor of mobile digital devices and its effectiveness as a pedagogical tool. A wide range of positive examples helps to illustrate increases in social interactions, academic achievements, self-esteem, and self-efficacy. Catering to quantitative and qualitative analysis, this article is exceptionally persuasive in both presentation and content.

Citation: Nelson, L. L., Arthur, E. J., Jensen, W. R., & Van Horn, G.(2011) . Trading textbook for technology. *Phi Delta Kappan, 92*(7), 46-50.
Location:Academic Search Premier
Notes: This article discusses the pros and cons of electronic textbooks.
Poster: Marie Sack
Annotated Bibliography
Can technology help students be more engaged? This article discuss the process and benefits of replacing textbooks with digital media and how technology can provide students with multiple representation to promote participation and interest. The authors examined the Bartholomew Consolidated School Corporation (BCSC) process of replacing textbooka with digital media via creating a Curriculum Loft - "a storage and sharing platform where teachers can place lesson plans, study guides, rubric, and other classroom information" (p. 48). The transition process also

included the adoption of a digital database - NetTreckker. NetTrecker enables students to access reliable up-to-date audible and visual information online. A couple of years after the transition from "text to digital" (p. 48) the BCSC students were asked to complete an online survey about there learning in the digital platform. Results from the survey gave positive support for using digital media to enhance students' engage. The authors also noted that strong support from administration, technology department, and a well-designed professional development are needed to adopt the digital platform successfully. Overall, this article provided a thorough discussion about the proces of replacing textbooks with digital media.

Citation: Ardito, C. Raptis, D. (2010). Design Guidelines for Location-based Mobile Games for Learning, Social Applications for Lifelong Learning, 4(5), 96-100
Location: Ebsco
Notes: This article looks at the concept of using mobile location based games to create informal learning experiences.
Poster: Kālewa
Annotated Bibliography:
This article examines the use and impact of mobile devices for creating informal learning experiences. The authors primarily look at the way that GPS and location based services play into creating these informal game/learning opportunities. Additionally, the focus of these location-based games are on adults as the informal learner. The use of augmented reality, puzzles, and tasks that can engage the learner. According to the authors there are four types of characteristics that contribute to the success of a game they are: physical experience, mental challenge, social experience, and immersion into the play/learning space. These elements are needed to create a learning environment that captures and entices participation. The authors also present a number of guidelines that they are currently testing in order to create a framework by which informal location based games can be crafted. They state that these games are still in the alpha stage and are going through peer review at the time of the publication of the article.

Citation: M. El-Hussein, M., & Cronje, J. C. (2010). Defining Mobile Learning in the Higher Education Landscape. *Journal Of Educational Technology & Society*, *13*(3), 12-21.
Location: Academic Search Premier
Notes: This article is about the context and definition of mobile learning within higher education. The authors seek to explain and clarify that mobile learning should be broken down into three categories, technology mobility, learner mobility, and the dynamism and mobility processes of information.
Poster: Kālewa

Citation: Norman, N. (2011). Mobile Learning Made Easy. *T+D*, *65*(12), 52-55.
Location: EBSCO Host/Academic Search Premiere
Notes: This article discusses the pros and cons of employee training on devices such as ipads and smartphones. The article gathers data from research performed at the National Health Service at Oxford and the e-learning firm EPIC. The pros were increase in memory retention, social learning, and productivity during downtime and the cons were cheating prevention and platform incompatibility.

AB: Naomi Norman, the director of e-learning for Epic, an e-learning company in the UK and honorary visiting lecturer at the University of Sussex, discusses the research conducted by Epic and the UK National Health Service(NHS) over a span of four months from November 2010 to March 2011 to find out the pros and cons of mobile learning. Their target audience was close to 200 NHS medical staff. The study had critical stage reviews by Oxford University's E learning Research Group and was conducted due to the rapid growth of mobile devices such as smartphones and ipads. Norman states the research showed that the pros of mobile learning has many benefits- that it is more relevant and convenient, reduces the learning curve, enhances content retention and user confidence and initiative, and can take place at the very location of learning, amongst other benefits. The article also includes the ease of use in instant recording of audio and images through the mobile device encourages increased reflection as well as improvement of patient care and customer service. However, the research did find cons to mobile learning as well including motivation for resistant users, programming effective learning for mobile devices, cheating prevention, learner progress tracking, and costs of designing for multiple platforms. The article presents solutions to the challenges found. To overcome the challenges of mobile learning resistors, Epic states that the learning must be accessible through the PC as well for flexibility. Solution to the mobile design challenges are to 1. create bite sized chunks of applicable information, 2. have viewable content with minimized downwards scrolling (have feedback be popups rather than scrolling), and 3. be mindful of user limitations to texting and conduct testing of user limitations. Another solution is to convert Flash animations to video which plays on any device to overcome the iphone's lack of Flash software. As for cheating, EPIC states that built in cameras on the mobile device can randomly take pictures of the user to ensure the correct person is the user. For learner progress and security of data, the learning module should be on a separate system than from patient data and design mobile learning with offline capabilities that are already pre-installed on mobile devices which sync with a 3G connection when available to minimize data loss. As for multiple platforms for Android, Blackberries and iPhones/iPads, Epic recommends tools like GoMo Learning with multiple platform capabilities which can be customized by in house designers. The article concludes stating that organizations must take heed right now regarding the demand for mobile learning and designers must share tips and ways to solve challenges with everyone to make the inevitable transition to more mobile learning smoother.
Poster: Marisa

Citation: Chih-Kai, C. (2010). Acceptability of an asynchronous learning forum on mobile devices. *Behavior & Information Technology*, *29*(1), 23-33. doi:10.1080/01449290701806337

Location: EBSCO Host/Academic Search Premiere

Notes: This article states that a big drawback to mobile learning is the lack of effective asynchronous forums for mobile devices due to challenges of typing on keypads. The researchers create an audio based learning forum for wireless internet learning device (WILD) that is supported by streaming media technology as well as an evaluation of learner's satisfaction with asynchronous learning forums on WILD using Technology Acceptance Model (TAM). The results of the evaluation show very little difference in satisfaction between an audio based asynchronous forum and a written based asynchronous forum, however, the audio based forum is found to be more useful and beneficial in enhancing mobile learning on WILDs.

AB: Chih-Kai demonstrates a fully audio asynchronous forum on a wireless internet learning device (WILD) to study the acceptance of an audio forum over a text based one using streaming media technology. An open source forum was modified (phpBB) to encode audio clips to streaming format. Chih-Kai states that after informally interviewing learners, the results showed learners thought audio based forums for WILD's were more useful than text based asynchronous forums albeit not a critical need, however, there is not much significant differences or ease of use between acceptance of a text based forum and an audio based forum. Chih-Kai concludes that the study shows modified audio forums can be successfully implemented without compromising ease of use and usefulness of WILD systems.

Poster: Marisa

Citation: Ozdemir, S. (2010). Supporting printed books with multimedia: A new way to use mobile technology for learning. *British Journal of Educational Technology*, *41*(6), E135-D138. doi:10.1111/j.1467-8535.201001071.x

Location: EBSCO Host/Academic Search Premiere

Notes: This literature focuses on the pros and cons of mobile learning for supporting the content of printed books. The pros of mobile technology is the increase in mobility and interactivity compared to TV or radio, however, the cons of mobile learning is that the screen and keypads are too small. The solution presented is to compliment the printed book content by using 2-D barcodes for immediate access to various multimedia and using videos, audio, and images to support learning from printed material.

AB: Dr. Selcuk Ozdemir, an Assistant Professor in the Department of Computer Education and Instructional Technologies at Gazi University, discusses the use of 2D bar codes in order to supplement printed textbooks with multimedia on a mobile device in order to ease information overload for the learner. Ozdemir states that mobile devices can be taken anywhere by learners and although mobile learning is a fast growing field, the focus is mainly on the technology rather than the pedagogical issues. Mobile learning's focus is mainly on collaboration enhancement and

short messaging to access and disseminate information available on the Internet, to share files, and to deliver quizzes, amongst other things. However, a disadvantage of mobile learning are the small screens and keypads but if used as a support for traditional and existing educational settings and materials, mobile learning can be very useful, Ozdemir argues. With text intensive information, the mobile device is not ideal and reduces learning motivation and performance and so should focus mostly on audio and visualizations. Ozdemir states that further research is needed to fully analyze the effectiveness of mobile devices as a means of helping the learner disseminate complex information. Ozdemir suggests the use of QR codes and Microsoft Tag integration on printed textbooks as a means to supplement learning to fill the multimedia gap of text intense books and the combination of the two results in a more meaningful learning experience.

Poster: Marisa