

Literature Review

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Implementing Educational Technology into a Literacy Classroom

Literacy classrooms are student centred environments with instructors who try to make learning engaging and meaningful. Many students face barriers to learning including learning disabilities, transportation and child care. My report will show how using adult learning theory and effective pedagogy combined with educational technology will benefit the students, the instructors and the major stakeholders involved in a literacy classroom by enhancing learning.

Three main themes emerged as I researched the literature for this project: adult learning theory, principles of good education and the proper use of educational technology. I reviewed many articles and chose five to represent my findings thus far. An annotated bibliography outlining the articles accompanies this literature review.

Adult Learning Theory

Adult learning theory includes learner centred instruction, active learning, formative assessment, prompt feedback and meaningful course curriculum. Literacy classes take place in a learner centred environment based on the principles of adult learning. These principles address the unique needs and barriers of adult learners in the field of literacy.

Sabatini discusses adult learning principles including goals and relevant material in his article *Designing multimedia learning systems for adult learners: Basic skills with a workforce emphasis* (2001). The article addresses adult learning theory including lifelong learning, attributes of adult students, goals and the use of relevant material.

Sabatini (2001) suggests that course designers need to look at the different kinds of media available and apply the adult learning principles to the most suitable media for the task. Sabatini's article analyzes the process of implementing technology into the classroom with a focus on program design. This project resembles current literacy programs and included collaboration, interaction and goals which gave the study validity although research was based in 1998. Similarly, Palloff and Praff mention collaboration and interaction in the course notes.

Learner centred classes can occur in face to face classrooms or in online environments. I propose that a mixed mode classroom is most conducive to adult learning. Students who do not have computers at home can access the information in the literacy class, community centres or the library.

Principles of Good Education

Educational pedagogy is more important than using technology in a classroom. In order for learning to be useful to students, principles of good education or pedagogy must be met. Chickering and Gamson (1987) outline seven principles of good education that can be used to measure classroom success. These principles include student/faculty interaction, student interaction, active learning, feedback, timeliness, expectations, and diversity (Chickering, p.1.). They suggest ways to use technology with each principle in inexpensive ways.

Based on these principles, Chickering and Ehrmann (1996) suggest using the internet, online resources, asynchronous communication and email to achieve interaction and collaboration. Instructors can encourage active learning with computer programs,

research and virtual classes. They could use the computer to promote feedback and timeliness while promoting high expectations and diversity. Examples are outlined in detail in the article for each principle. Furthermore, Chickering and Ehrmann (2001) suggest the principles work but faculty and students must be on board and that students need to apply these principles to themselves while educational institutions help in the form of support.

Both of these articles relate to other studies in the field regarding the necessity of faculty and student support or training. However, there are limitations to these articles such as the implication that students know the principles and understand their importance. These articles substantiate my claim that technology can enhance learning if students and faculty are on board and are supported by stakeholders. Furthermore, many of the principles of adult learning adhere to these guidelines such as active learning, feedback, assessment, teaching to diversity and using real life to make learning meaningful. Therefore, these guidelines will be a basis for my article on implementing technology into the literacy field.

Ginsburg (2004) suggests that faculty and students need support in the form of training, funding and course development when implementing new technology. Ginsburg's article outlines the need for teacher support based on technological comfort level in the classroom. My report suggests that faculty and students need training and funding support in order for literacy programs to succeed.

Overall, instructors need sound pedagogy in the form of adult learning theory and the principles of good education to support educational technology in the classroom to ensure its use will enhance learning.

Educational Technology

Instructors can use the principles of adult learning theory and the principles of good education to choose the most effect educational technology for their classroom. Instructors need to find the right educational technology to support these educational goals.

By using technology like open sourceware, the internet, and synchronous and asynchronous tools, instructors can create an environment conducive to collaboration, interaction and communication. Palloff and Pratt also mention these issues in their article *When teaching and learning leave the classroom. Building Learning Communities in Cyberspace: Effective Strategies for the Online Classroom.*

For example, adult literacy classes could incorporate a learning management system into their classroom to create an interactive learning environment that students can access in and out of class. Instructors could create course material using Internet resources, discussion forums and digital medial. I would also like to suggest the use of adaptive technology like Kurzweil, Inspiration and Dragon Naturally Speaking to help disabled students.

In order to create a technological environment conducive to learning, educators must plan how they will implement technology. Sabatini (2001) mentions design issues in the process of implementing educational technology into a classroom. He suggests that course designers look at principles of adult learning and apply them to the media they choose.

Ginsburg's (2004) report looks at whether teachers are ready to use new technology in literacy classes. Practitioners must be aware of new issues regarding computers, teacher knowledge, professional development and course material creation. Technology can be used in the class or at a distance which helps learners overcome time and distance barriers.

Herord's (2000) report suggests using a process of collaboration and investigation to determine curriculum needs including how technology fits with literacy. Furthermore, his article suggests using a curriculum specialist to determine needs because most literacy curriculum is content based and developed by practitioners who have not been trained in pedagogy. Secondly, he suggests the use of curriculum deliberation in order to discuss the needs and methods of using educational technology in the field.

Another issue to consider is the need for a new definition of literacy. Ginsburg (2004) suggests that educational institutions should provide computer access and teach the computer skills necessary to succeed in today's society. She also suggests that literacy must move beyond reading and math to include computer skills.

I agree that the definition must be changed to include computer literacy which translates into workforce literacy and essential skills because of second career initiatives in Canada. Traditional programs that do not include computer literacy will not meet the needs of current students. Besides computer skills, students will need critical thinking and collaboration skills.

Conclusion

Overall, my findings suggest that sound pedagogy must come before the implementation of technology. Although grounded in these findings, my final paper will include information about the current situation including an analysis of the school, the literacy environment and society. This will be followed by the advantages and barriers of introducing technology in the literacy classroom. These advantages will include student and instructor advantages like fostering collaboration and critical thinking. Barriers include cost, support and faculty buy-in. I will then offer solutions to these barriers to show how incorporating technology into the classroom will still be advantageous. My resources will include sources mentioned in this paper, course material from several of my ETEC courses as well as material from the literacy field.

Reading these articles changed my view somewhat. For example, I will include the idea of curriculum specialist to oversee changes in the literacy classroom. Aside from this new idea, the articles I found support my idea to incorporate technology into the literacy classroom to enhance learning.

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