

Focus Paper written by Julie Lindsay for the Education Technology Leadership MA degree with the George Washington University.

Topic: Teacher Responsibility and Technology Integration

My Position

Teachers must be responsible for developing an awareness of and ability with integration skills for the use of technology in the classroom. The role of the educator is changing with the continued development of educational computing (EC). According to Roblyer, "Successful technology programs hinge on well-trained, motivated teachers". Turville recommends "...some abandonment of traditional roles and activities". In a new millennium the role of a 'good teacher' must include the responsibility to manage change. Dr Bill Lynch, ed234 streaming audio #3, referred to a benefit of educational computing as being greater efficiency and therefore the possible reallocation and redundancy of teachers. Whether this is an economic or philosophical problem the fact remains that adaptable teachers will always be needed as Gilster (author of Digital Literacy) summarises, "We still need the very best teachers we can find: We still need to teach essential skills in reading, math, listening, and thinking. I see computers as supplements – tools – in education".

Reasons for Adopting Responsibility for Technology Integration

In researching this topic I found many references to the benefits of EC and in particular the use of telecommunications. The impact that the use of telecommunications and the Internet has or can have and the benefits it provides for broadening student outlooks and addressing individual student needs is seen as one of the major benefits. McKenzie sees responsible use of the Internet for education as a means of, "...raising children to think, explore and make meaning for themselves....we work toward more independence and greater choice", and also that "...ultimate goal is the development of self directed learners and free range students".

Forms of Resistance

Despite the much discussed benefits of technology integration we have all seen in our various workplaces teacher resistance to change and inability to work comfortably with technology. Having to learn about new methods is often seen as a burden (see Watson) as is, for some, the thought of altering curriculum approaches and incorporating new ideas into existing teaching methods. There is also the 'suspicion of technology delivered instruction' attitude that, although in part can be justified, acts as a deterrent for some teachers to learn about new methods. Turville discusses other reasons and she summarises that, "Teachers' perceptions about being experts and their concerns about lack of time are the main barriers to technological literacy". It seems that some progress has been made up until now with developing computer literacy for individual use but the next hurdle is that of integration into everyday teaching. As Watson points out, there is really no excuse for not interacting or collaborating using technology, specifically the Internet.

Are there Ready Solutions?

It was implied on a streaming audio segment for this week that it is hard, challenging work to identify the possibilities in a learning situation and apply the computer appropriately. Watson writes creatively and poetically about the value of WebQuests in that they "...allow the teacher to make an easier transition into using Internet technology with minimal stress". The I*EARN foundation is another area where there's a focus on project based cooperative learning, see <http://www.learn.org/>. The benefits of EC need to be impressed on teachers. Such benefits as being a motivator, an engager and having a unique capability to deliver educational opportunities (such as distance learning!) not only apply to the learning environment of students but to educators in all fields. Part of the responsibility of an educator now is to look further afield for solutions, methods of integration that suit their learning scenario. As Roblyer says, "Technology using teachers must recognise that integration strategies differ according to which instructional model is followed". McKenzie writes about an 'engaged learning' model where the teachers role becomes that of a facilitator, a supporter, a 'guide on the side'. This implies more of a constructivist approach, this is discussed by Roblyer in juxtaposition with the directed approach, and is one that does not always feel comfortable to a teacher who has not been shown the methods and, procedures and possible outcomes.

There is help to be found on the web and I would suggest visiting

<http://www.classroom.com/edsoasis/TGuild/strategy/TechStrat.html>, 'Using Technology in the Classroom: Strategies and Paths', by Terrie Gray, a well presented page with very useful links.

Also http://www.techlearning.com/db_area/archives/WCE/archives/heese7.htm, an article by VanReane Heese on 'Using Online Resources: It's Elementary Too'. Both of these sites have been created with the intention of providing help to the busy educator and imparting experiential knowledge. EC is larger than the school classroom, a daunting thought, but a comforting one as we all should be able to take advantage of good research methods which are already available on the Internet, in order to challenge and motivate students (see McKenzie). A more relaxed approach to education should see the educator learning alongside the student and accepting that it is OK not to know something and also showing students that teachers are also constantly learning (see Kaczynski).

Standards – Making the Teacher Take Responsibility

This discussion would not be complete without mention of the move towards technology standards. It is inevitable that frameworks and policies in educational technology should define certain expectations of an educator. But, what are the skills required for the digital age classroom? The ISTE have put together NETS, see <http://cnets.iste.org/index.html> which outlines technology competencies for all teachers. Another interesting perspective comes from the Milken Exchange on Educational Technology who have introduced the Professional Competency Continuum (PCC), found at

<http://www.mff.org/publications/publications.taf?page=159>, "Recognising that a school technology program is only as successful as the teachers who use it...PCC, a road map for educators to use to assess their skills in integrating technology in the classroom".

Conclusion

As technology and approaches to its integration into the classroom continues to develop it is clear that one of the roles of an educator must be to know about and be able to use these resources in their teaching. Despite the inherent difficulties with professional development it should become part of the responsibility of a trained educator. There are numerous on and off line resources to help with the process of integration and guidelines in the form of written standards for technology as an incentive.

Resources: Five most important: (with an added 6th and 7th)

McKenzie, Jamie; (1998) Grazing the Net: Raising a Generation of Free Range Students, found at

<http://www.fno.org/text/grazing.html>

Pool, Carolyn R.; (1997) A New Digital Literacy: A Conversation with Paul Gilster, found at

<http://www.ascd.org/readingroom/edlead/9711/pool.html>

Turville, Joni; (2000) The Role of the Teacher in the Implementation of Technology in Education, found at

http://www.techlearning.com/db_area/archives/WCE/archives/turville.htm

Kaczynski, Kathy; (1999) The BEST Model: Looking Back and Looking Ahead, found at

http://www.techlearning.com/db_area/archives/WCE/archives/kaczynski.htm

O'Riordan, Karena; (2000) Good Teachers = High Academic Achievement, found at

http://www.mff.org/edtech/article.taf?function=default&Content_uidl=273

Watson, Kenneth Lee; (1999) WebQuests in the Middle School Curriculum: Promoting Technological Literacy in the Classroom, found at <http://www.ncsu.edu/meridian/jul99/webquest/index.html>

Roblyer, M.D. and Edwards, Jack; Integrating Educational Technology into Teaching, Prentice-Hall, New Jersey, 2nd Ed., 2000.