

Learning for Tomorrow: Connecting Teacher Candidates to Useful Technologies

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Introduction / Need for Idea or Innovation

There can be little doubt that technology plays a central role in the lives of many students and in the future careers of those students. However it is often difficult for teachers or “digital immigrants” to understand technology in the same way that younger students or “digital natives” do (Prensky, 2001a and 2001b).

Digital Natives are used to receiving information really fast. They like to parallel process and multitask. They prefer their graphics before their text rather than the opposite. They prefer random access (like hypertext). They function best when networked. They thrive on instant gratification and frequent rewards. They prefer games to "serious" work. (Prensky, 2001a, p. 1)

The purpose of this project was to assist teacher candidates in a graduate level career and technical education initial licensure program to construct their learning and understanding regarding technologies with which they were unfamiliar. Three important research findings regarding understanding and learning were used to form the foundational implementation of this project. First, students come to the learning context with perceptions about how the world works based upon previous experiences; second, competence in an area of inquiry is amplified by a deep foundation of factual knowledge organized within the context of a conceptual framework that facilitates retrieval and application; and third, metacognition assists learners in controlling their own learning by delineating goals and allowing them to monitor their own progress (Pellegrino, 2006).

How it works / Methodology / Program / Phases / Steps

The technology related content and activities were embedded into a program course centered around instructional management and technology. Classroom discussion and activities were employed to explore the participants' preexisting knowledge of the included technologies and their thoughts regarding the purposes of technology. This allowed for the construction of instructional activities, and resources to engage the participants in developing a deeper understanding of the technologies and their interconnections. In addition, activities and assignment were implemented to foster the metacognitive development of students related to the technologies and their creative applications. Students were also encouraged to share new forms of technology they “discovered” with the class and to create novel activities which could be employed to help their peers gain mastery over any of the included technologies.

The technology related activities consisted of experiences with:

- Blogs
- Podcasting / videocasting
- Internet archiving
- Video streaming
- Second Life
- Assistive technology (such as text to speech software)
- Interactive tutorials
- Online quiz / survey construction

Results to date / Implications / Recommendations

Overall, the student response to the implementation of the technology experiences was very positive. The end of semester course evaluations indicated that the students not only enjoyed the experiences, but believed them to be very practical as well. Several comments were “If I hadn’t been introduced to the technologies in class, I never would have realized how I could use them for instruction” and “Gaining a greater understanding of the computer technologies helped me forge better connections with the students at my practica site”.

Future plans

Analysis of current and future pertinent technologies will continue. In addition, faculty instructors will continue to create and implement appropriate ways to embed technologies within the contexts of the program courses.

Costs / Resources needed

Item	Source	Cost
Blog Account	Blogger.com	\$ 0.00
iTunes Account	Apple.com	\$ 0.00
Audacity Software Application	audacity.sourceforge.net/	\$ 0.00
Second Life Software Account	secondlife.com/	\$ 0.00
Stellar Survey Account	www.stellarsurvey.com/	\$ 14.95
Logitech Cam	Staples	\$ 30.00
Microphone Headset	Staples	\$ 25.00

References

- Pellegrino, J. (Eds.) (2006). *Rethinking and redesigning curriculum, instruction, and assessment: What contemporary research and theory suggests*. Washington, DC: National Academy Press.
- Prensky, M. (2001a, September/October). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1-6.
- Prensky, M. (2001b, November/December). Digital natives, digital immigrants, part 2: Do they really think differently? *On the Horizon*, 9(6), 1-6.