

The summer of 2009 has given me a second opportunity to attend the Technology in Education conference held annually in Copper Mountain, Colorado. I attended sessions by well known speakers in addition to sessions presented by individuals from several Colorado school districts who I believe demonstrate what TIE is all about—creating a collaborative learning environment for all of us involved in education across the state.

There was a new tone set for my learning experience at TIE this year. I formulated questions early in the conference that I would continue to seek answers for throughout all of the sessions. Working to support K-12 online learning in Colorado, I asked myself what are the implications for online learning and online K12 classrooms based on the need for 21st century skill building in our classrooms today. How do the online K12 schools implement the 21st century skill building into their classrooms and learning environments? I was reminded that online schools have students working on computers, some off-site and others in learning center environments, but teachers need to ensure that the targets of 21st century skill building are being met. Being an online student is not a pass for this need.

Greg Wilburn, Colorado Springs District 11, and Steve Kalmon, Denver Public Schools facilitated a very educational session that had my mind pondering all of these questions. These individuals are also part of the Council for 21st Century Learning (<http://www.c21l.org/>). The initial discussion centered on Understanding by Design concepts (McTighe & Wiggins). That framework is composed of three stages including stage one, what are the targets for learning which include the state

standards; stage two, assessment which helps us understand the targets; and stage three, designing learning activities. That discussion evolved into great interaction amongst the participants around 21st century skill building in our schools today. A list was formulated of those skills and included evaluating and disseminating of information (acquiring a skill set), critical thinking (which was defined as creating your own understanding from facts and information), information management, working collaboratively, creating meaningful connections and applications, social awareness and responsibility, creativity, transfer of skills and learning how to learn. They provided video examples of classrooms in several school districts and we discussed what 21st century skills were being developed in those classrooms.

One of the most challenging aspects of contemporary classroom teaching will be the development of projects for students that will encapsulate the content required, and the skill building that will be necessary for kids to survive and function in the world as adults. As the classrooms of today evolve, the definition of “a culture of learning” will be explored. This will raise many questions including who is responsible for the learning in a classroom? Will the students be in environments that will allow them to frame their own learning? An example of this was seen in one of the videos presented, in which there were second grade students in a group circle, commenting on their learning without the teacher even being present!

By attending TIE, I now have new ideas about the role the Colorado Department of Education could take regarding online teachers and their

professional development. Online teachers need exposure to web 2.0 tools, but more importantly, they need guidance on how to use these tools most effectively in their online classrooms. A starting point for many online teachers would be the exposure to specific uses of web 2.0 tools and the focus on collaboration amongst students. The session by Howard DiBlasi was excellent in that regard, as he provided many examples of the newest and most efficient Web 2.0 tools along with ideas for effective classroom implementation. I could see many applications for the online classroom based on his presentation and the discussion and have ideas for developing a series of podcasts that would touch on various tools and effective uses in the classroom.

In contrast, the session I attended by Elizabeth Hubbell, on using technology with classroom instruction that works, provided a very broad and somewhat fragmented presentation around the tools. Her session started out with information about Marzano's strategies, her involvement in research and then an attempt to weave the tools around the strategies. But as she stated in the beginning, 'if you really want to learn this information, you should attend my two day workshop.'

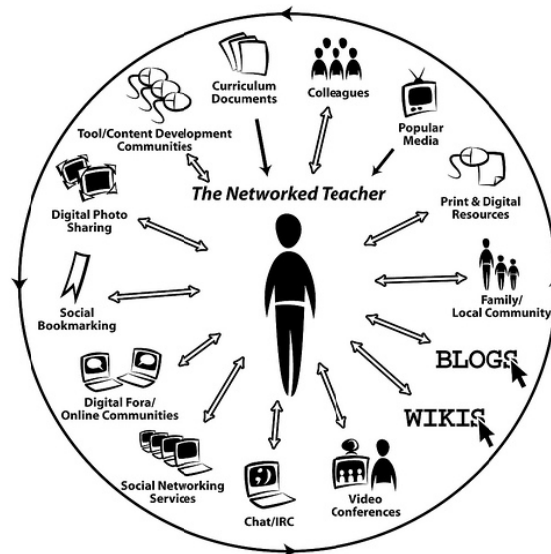
Of note, in this session, the facilitator presented a survey via cell phones. Of 50 respondents, close to 50% indicated that they were technology teachers or doing work that was tech related in education. My general impression is that most individuals attending TIE are technology savvy. In the future the presenters will need to go beyond simply presenting commonly known tools and general information, continually becoming more creative and innovative in their

presentations, and showing practical application.

Online teachers also need exposure to the wide variety of supplemental education resources available through web projects such as Thinkfinity.org (<http://www.coloradothinkfinity.org/> for Colorado). Thinkfinity is the rebirth of the Marco Polo product and five years ago Verizon took over the project. Also involved in the project are the National Council of Teachers, National Geographic and the Smithsonian Institute, just to name a few organizations. This website is packed with fifty-five thousand resources involving literacy, science, math and the arts—all safe for student use. Thinkfinity.org will allow teachers to find those materials and digital activities that are missing from their provided curriculum. These types of resources will enable teachers to move beyond the checklist of what is met for a content standard, and will move students into activities that allow for creativity, problem-solving and critical thinking. The Unit of Online Learning at the Department of Education will continue to encourage teachers to participate in the free online course for exploring Thinkfinity and to promote this great resource.

Of special interest was also the session I attended by the Littleton Public School District technology support specialist team of Randy Stall and Dana Levesque. They presented the online professional development they are building and providing for their teaching staff throughout the district. Randy and Dana provided a brief overview of where they started with face-to-face support and how that evolved into the initial planning stages of putting together an online course for their instructors.

After exploring resources, they started building a wiki. This provided a place to model the tools they wanted the teachers to learn. They chose wikispace.com (<http://www.wikispace.com>) to build their website with resources and assignments and provided access to their site during the session (<http://lpslearning2oh.wikispaces.com>). They discussed the concept of the networked teacher, and utilized an illustration (available through Google search) to help us visualize what the networked 21st century teacher should look like.



The Networked Teacher

I felt their presentation and methodologies reflected what 21st century learning is all about: determining what your targets are first, the skills that you want to build in your students, and then planning the activities around those targets using technology to facilitate.

One final session that I want to comment on was with Karl Fisch, Arapahoe High School Director of Technology. His presentation was titled *Shifting Literacies: The Case for a 21st Century Classroom* and provided great insight into the real

possibilities of first defining and then developing technology literacy in students. He encouraged all in attendance to become *media specialists*, even if that is not our job title or in the description. By doing so, we can all be involved in the process of developing the 21st century learning skills in our students. In the final hour of his presentation, he presented multiple examples of student collaboration projects. Many of these projects involved kids from across the country and across the world, reminding me of the infinite possibilities for learning through technology. Read more about shifting literacies at <http://www.lps.k12.co.us/schools/arapahoe/21c/21c.htm>.

I began a journey through the graduate program in Instructional Learning and Technology at the University of Colorado, Denver three years ago. Along with my prior work in web design and development starting in 1999, and now supporting K-12 online programs throughout the state of Colorado, not only has my own awareness of the 21st century technologies expanded, but the application of those tools has as well. In 2000, it seemed that the only online course delivery method was through a content management system designed for education, like Blackboard, WebCT or eCollege. With the choices available through web 2.0 tools like blogs and wikispaces, there are numerous ways to build online classrooms and websites. I'm developing a wikispace to organize my class assignments and I just converted my first youtube video into an mp4 file to use in my digital story, part of a curriculum unit I am developing for the Colorado online teachers. Application in practice! I have been exploring ways to design and create podcasts, learning

activities and virtual workspaces that promote 21st century learning, both for face-to-face and online classrooms.

I will continue to support The Technology in Education conference and encourage anyone involved in the education of students in Colorado to attend. It is a wonderful opportunity to learn from each other what is working and how we are making it work for our 21st century kids.

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Respectfully submitted for 2 graduate credits