

**FUTUREtakes**

Transcultural Futurist Magazine

ISSN 1554-7744

## **Vol. 8, no. 2 (Fall-Winter 2009-2010)**

### ***From the Desk of Tim Mack, President, World Future Society***

Hello –

On occasion, I like to share experiences and insights from the wide range of presentations WFS does in various parts of the world on a range of subjects that might interest to readers of *FUTUREtakes*. In this case, I recently did a series of lectures on the future of education in Mexico at the Monterrey Institute of Technology. Founded on the model of the Massachusetts Institute of Technology, it has been much more expansive, and now has more than 30 campuses throughout Mexico.



While a range of questions were addressed in these sessions, one set included what kinds of tools and techniques would be most useful in adapting education to new technologies and new contexts (such as globalization) over the coming decades. Accordingly, I will talk about a range of issues while attempting to pull out the common threads.

First, the infrastructure and institutional obstacles that plagued developing countries desiring to overtake developed countries are becoming less critical as technology develops that levels that playing field. One of these technologies is the Internet. While English continues to be the language of the Internet (80% of homepages are in English), Latin America is catching up fast. Spanish-speaking Internet use grew 405% in last 8 years with Spanish users now totaling 125 million or 9% of the total (3rd after English and Chinese).

Mexico itself had 24.9% Internet penetration in March 2009 with 27.4 million users (Nielsen/ITU) but Mexico shows even more robust growth in another technology with strong potential, which is cell phones. Mexico now stands 11th in world in absolute numbers with 79 million phones and 72% penetration. Especially useful are the increasingly available smart phones, which allow for testing and other interactive teaching activities in mountainous regions where class attendance is challenging.

A central technology problem in this new milieu is how to deliver meaningful educational content, but it is becoming clear that these challenges will be met. For example, the growth of iPod/iPhone content available through formats such as SMS (Short Message Service) is skyrocketing. There are certainly many more phones than computers in Mexico (at least 3X or more). Already possible uses of these phone formats (especially on 'Smart' phones) include instruction in research and study skills; reference FAQs; library collection searching; e-books; Website browsing. As well, phones can be used to text a teacher

and access sites like iTunes, University, and a range of RSS feeds. Most smart phones are now location aware and thus able to assist on projects on community history, mapping, geotags, etc.

Of course, there are many schools in Mexico and elsewhere who still see personal technology as a disruptive force rather than an educational tool. But even computer games do teach some desired skills – analytical thinking, team building, multitasking, and problem solving under stress. While there are inappropriate times for the use of personal electronics in classrooms, they should be considered as tools rather than totally prohibited. Preparing for the future means working to anticipate the nature and needs of students...and these needs are evolving, so the dialog is ongoing and connected. And the challenge should be not to control use of personal digital assistants (PDAs) of all types, but to add useful teaching content. And so my advice is to look at students and see who they are and what PDAs they are using. Both students and tools are getting more diverse all the time. Listen to change and understand it!

This observation also highlights the changing role of the residential campus in colleges (and the decline of on-campus students in the relative percentage of total enrollment versus participation via chat rooms and asynchronous discussion boards). Other technologies such as remote proctors for lectures can be additionally enhanced by new developments such as 360-degree cameras and the use of bioID techniques such as fingerprint scans to assure that the correct student is taking the correct exam, etc. Of course, this does not address the question of athletic and social events as a part of the school experience.

Another critical question for the future of education is, “What do students need to know?” This means developing a list of roles and skills that are desirable outcomes of education. Many say that a curriculum centering on “Knowledge Creation and Breakthrough Thinking” should be one critical focus, as we are faced with a challenging and rapidly changing world. Accordingly, more emphasis is being put on constructive skills including entrepreneurial ones. But understanding world economies and cultures is also critical. The concept of the ‘slavery of ignorance’ still holds true, as does the connection between education and democracy. The basic idea is to prepare for careers that do not yet exist...with skill sets like economic and media literacy/cross disciplinary learning/intellectual entrepreneurship (in other words, building citizens who are curious and persistent). When we look at critical skills for the Future we see that Creativity/ Analytical Problem Solving/ Teamwork & Collegiality/Communications Ability/Self-Directed Learning/ Cyber Literacy are critical... not just some of these but all.

A final strategy for the future is the integration of constructive student interests in curriculum content. Timely issues like the environment provide the grist for discussions and even action items through tracking these relevant issues in the news and planning constructive local activities. Environmental thinking easily lends itself to a foresight model...looking both at the longer view and the consequences of present actions. If there is not an existing curriculum track or textbook, a club approach can be taken at a school or as an adjunct activity in collaboration with any environmental curriculum that already exists. Often, a number of local teachers will not have an academic background in this area (or in the area of foresight) nor the tools to really dig down into the subject matter. In that case it may be possible to enlist community mentors with the relevant experience.

One club-oriented approach to environmental issues is as follows: 1) There is a problem; 2) Let’s develop a solution; 3) Carry out relevant action items. This effort might include one or more of the following: RESEARCH, REDUCE, REUSE, RECYCLE, REDESIGN, AND EDUCATE. A common model is that the club meets once a week and specific project subcommittees meet on other days of the week. The ideal mix is getting students, school staff, and administrators all involved in the effort. Usually, there is no budget for student clubs, so small scale fundraisers are necessary to cover expenses. One productive approach is that kids and adults work side by side as peers to solve environmental problems. Usually a problem, research, and solution approach is used, as noted above. The research is documented, along with the results. It has been found that the best programs are often student run –

where students choose the projects and do most or all of the work. In this setting, mistakes are great opportunities to learn and to manage short term results. The smaller scale (as opposed to school-wide projects) gives a chance for manageable wins.