

August 11, 2006

Looking At The ISSUES

21st Century Skills

Intel's Chairman, Craig Barrett in an address to the Education Writer's Association on June 2, 2006 said: "The blunt truth is: The new global economy is technology-based."¹ But, innovation is also important. As Visvha Dixit, vice president for research at Genentech says "Nothing will kill innovation faster than trying to put it on a timeline."²

In addition to meeting the standards set by the State of Ohio, Stark County schools are working to incorporate 21st Century Skills into the curriculum. As the statements by Barrett and Dixit indicate, this is a challenging endeavor with lots of new vocabulary and many new things for educators to master. NCREL³ produced a succinct list of these skills in four categories—digital-age literacy, inventive thinking, effective communication, and high productivity. Willard Daggart observes that now many students learn these skills outside of the classroom and the challenge for educators to incorporate these skills into all curricula so that students have the necessary technological skills to succeed.⁴ Educators need to know about notes and wireless sensor networks; enviromatics; grid computing; DNA computers; nanotechnology and nanobiotechnology; molecular imaging; mechatronics; biomechatronics; and language translation technology to name just a few of the new ideas that surround us.

Having said all of the above, what will instruction look like with 21st Century Skills incorporated into the curricula? A demonstration can be found at <http://ocw.mit.edu/OcwWeb/index.htm>. This website from MIT has 1400 full courses published—almost all of their graduate and undergraduate courses. Many of the courses include most of the lectures on video available for free access by anyone with a computer. The lectures are chock full of up-to-date information and the requirements for students that are listed in the accompanying syllabi are fascinating. For example, the introductory biology course requires that students find solutions to professor designed application problems during the course of the semester. The optional labs that accompany the course allow students the opportunity to study their own DNA etc.

At this website, links are provided to 156 courses at Chinese Universities and courses in France, Japan, the United States (Johns Hopkins University School of Public Health, Tufts University, and Utah State University) and Vietnam. This open courseware (OCW) project is a "large-scale, Web-based electronic publishing initiative funded jointly by the William and Flora Hewlett Foundation, the Andrew W. Mellon Foundation, MIT, and generous support from the Ab Initio software company."

Pod Cast Pilot

Drawing on the MIT example and Allan November's presentation, Dr. Joe Rochford, who is also a Walsh adjunct, will be piloting pod cast technology this fall when he teaches Legal and Ethical Issues in Education. This will be the first time lectures and materials for this graduate course will be web accessible.

Questions or Comments?

Email aoNeill@edpartner.org or call 330-452-0829.

Our Website
www.edpartner.org

Our Address
220 Market Ave S - Suite 350
Canton, Ohio 44702-2181

Thinking about an educational system with access to open courseware opens new possibilities. Teachers and students in the K-16 system can access this courseware to supplement what they already know. School systems that cannot afford to upgrade their libraries or available course materials at a rate fast enough to keep up with the explosion of knowledge can direct students to open courseware sites to supplement the information available without worry that the content is flawed. The comment part of the MIT website makes mention of many ways that this site is already being used by students and professors from around the world. And more possibilities exist. For example, this author wanted to contact the biology professors at MIT (“This course features a complete set of [video lectures](#) by Professor Eric Lander, Director of the Broad Institute at MIT and a principal leader of the Human Genome Project and Professor Robert A. Weinberg, winner of the 1997 National Medal of Science”) to understand what was required of students so that they could solve the assigned problems, but will leave this option open to practicing biology teachers.

For those with degrees, accessing this open courseware would allow them to keep current as knowledge moves on beyond they learned in class, thus keeping them current in their specialty field. Or, some of us might just like to learn more about the new knowledge available.

Allan November conducted the Stark County administrators’ in-service on August 1, 2006. His presentation gave us a clear idea of what teaching in the upcoming years will look like. He suggested that administrators in the 21st century need to be checking that students are using multiple websites to access and evaluate information and are blogging on websites that enhance their opportunity to learn. As an example, see <http://www.dr-bob.org/vpc/virtulets.html#Study-Skills> for information from a variety of colleges and universities on college study skills. Listening to podcasts enables the learner to quickly expand knowledge and November suggested easy access through RSS (Rich Site Summary or Really Simple Syndication) by registering for a bloglines account (<http://www.bloglines.com>). And finally, the 21st Century teacher will teach using podcasts and will check assignments using bloglines. Students will interact with their teacher/professor using bloglines. An example can be found for AP calculus at Allan November’s website (<http://apcalc.blogspot.com/>).

¹ As quoted in the August 2006 issue of *eSchoolNews*. p. 36

² As quoted in the July 24, 2006 issue of *Fortune*. p. 84

³ www.ncrel.org/engage.skills.skill21.htm

⁴ International Center for Leadership in Education. (2006). *The education challenge: Preparing students for a changing world*.

Looking At The Week

Adrienne O’Neill attended a final meeting of the *sub-committee of the Partnership for Continued Learning* in Columbus on August 9, 2006. The topic was post-secondary opportunities for all Ohio students. A Stark County proposal was submitted to the committee.

Mel Lio and Adrienne O’Neill hosted meetings with the Stark County Superintendents to discuss new and continued post-secondary opportunities for Stark County high school students, a federal grant opportunity that would fund the EPAS system, and the continuation of OCAN access advisors in the urban high schools.

Dr. John O’Donnell and Adrienne O’Neill made a presentation about P-16 at the *United Way Board meeting* on August 10, 2006.

Adrienne O’Neill and Joe Rochford attended a meeting about the implementation of the *JAGS grant* on August 11, 2006 at Stark State College of Technology.