

The Most Dramatic Changes in Education Since Socrates

Allen Schmieder

JDL Technologies, USA

THE CURRENT CONTEXT

This is an urgently needed topic. It is the author's conviction that, currently, there are no 21st century schools and, even worse, there is no substantive and widely held vision about what such schools should look like, and what the role and competencies of teachers in those schools should be. So, the tendency of most educators writing about needed 21st century teaching competencies will be to pretty much "rear-range the deck chairs on the Titanic." Most will be driven by another equally repugnant cliché, "Technology is only a tool," and they will try to determine how this misunderstood tool can best enhance out-of-date and fast-aging approaches to K-12 curriculum, instruction, and assessment. This is not to say that the wonderful array of traditional teaching competencies and skills that have enabled teachers to have generally done such an impressive job of teaching our children over the last century will cease to be important. The ability of teachers to understand and connect with students; to impart considerable knowledge and wisdom about their subject; to provide them with good adult role models; to cultivate their motivation for learning; to encourage their sensitivity toward, and appreciation of, individual and cultural differences; to prepare them for post-secondary education and/or the world of work; and even, to sometimes be "the sage on the stage," will remain critical competencies as long as there is a teaching profession. *But just as technology has dramatically transformed society, the way we work, the way we live, even the way we think about things, schools must be dramatically transformed in the way they work, in the way content is processed, and maybe most importantly, in the way teachers teach and students learn.*

Given the context of this book, it should be noted that one of the major factors in any positive reform and improvement relative to the dramatic changes

that are needed in teacher preparation will be the way that colleges of education respond to the challenge. They have the capacity to accelerate and lead this desperately needed reform; but, they and their host institutions (which have historically failed to give them the priority and support that they deserve) can continue to underestimate the technology-centered revolution that is taking place (albeit, much too slowly) in schools, and thus impede the inevitable changes that are needed to effectively prepare both teachers and students to thrive in the 21st century.

GENERAL 21ST CENTURY TEACHING COMPETENCIES

21st century teachers:

- must recognize and understand the rapidly increasing globalization of our world, and know how to infuse international and multi-cultural lessons and activities into their teaching;
- must have, and relentlessly reflect, a personal philosophy that all students have unlimited potential and the personal growth and development of every student is of critical importance;
- must help develop, and effectively use, curriculum and instructional approaches that customize education for every student;
- must be able to develop a classroom climate that places the highest possible emphasis on human rights, diversity, character-building, and individual responsibility;
- must be able to "take the lead" in developing a dynamic community of learners in which teachers, administrators, students, parents, and business and community persons work together to enhance the learning and growth of those involved during the regular school day;

- must advocate for, and be able to teach, a curriculum that gives the highest priority to the richness of our human and cultural heritage—one that centers on the history, growth, and present nature of the United States, and that introduces and emphasizes the general nature and positive contributions of all of the world's peoples and cultures;
- must take the lead in developing the school as a learning center for the community—for parents, for community organizations, for local businesses that do not have adequate facilities or technologies for accomplishing their goals and objectives;
- must provide students with the knowledge and skills needed to succeed in higher education and/or in the most promising careers into which they will enter in the world of work—and for the rapidly changing world in which they will live, prosper, and eventually lead; and
- must know, keep abreast of, and be able to reflect in their teaching, the latest research on teaching and learning, and the latest standards for using cutting-edge technology, for engaging in quality professional development, and for building effective schools.

TECHNOLOGY-RELATED 21ST CENTURY TEACHING COMPETENCIES

No matter how great a teacher's command of technology-centered 21st century teaching competencies, they will not be able to provide 21st century teaching and learning unless their school and district (and hopefully, most student homes) have a world-class technology infrastructure that provides students and teachers with unlimited and easy access to the most powerful available personal computers; unlimited and easy access to the information highway; unlimited access to, and ability to use, a broad range of emerging technologies (e.g., handhelds, voice recognition instruments, handheld devices, GPSs, GISs, data loggers); and software and educational databases linked to the school's curriculum.

21st century, technology-savvy teachers:

- must be fully aware of the critical importance of technology in every aspect of American society, economic development, and global understanding, and must realize that unless students have a thorough knowledge of the importance of technology in future careers and a solid foundation in technology literacy and skills, they will not be well prepared to thrive in, and lead, in the 21st century;
- must be relentless advocates of the importance of technology in school policy, finance, management, instruction, and assessment. Being advocates and activists for the use of technology in teaching and learning is even more important than being able to easily use technology;
- must be aware of, and knowledgeable about, the large and rapidly growing array of new technologies that are essential to teaching effectively the basic subjects—for example, Internet I, Internet II, computers, proxy servers, handheld devices, GPSs, GISs, streaming video, and voice recognition technologies;
- must be facile with, and model the use of, appropriate technology in required reporting, classroom management, instruction, learning assessment, extra-curricular activities, and home and community communication;
- must know how to access and use the vast and growing resources of the Internet in transforming the way content is presented and processed in their assigned subject/s, and must be able to teach students how to evaluate and effectively use these same resources;
- must be aware of, and able to use, the enormous range of instructional approaches that are made possible by a technology-rich school and classroom—for example, individualized, small group, large group, distance learning, and field-based learning;
- must be aware of, recognize the value of, and know how to teach students to use the huge and dynamic databases that are now available to energize classroom instruction and make lessons more current, substantive, and “real” on

1 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/most-dramatic-changes-education-since/12273

Related Content

Online Scaffolding for Data Modeling in Low-Cost Physical Labs

Wing-Kwong Wong, Tsung-Kai Chao, Ching-Lung Chang and Kai-Ping Chen (2019). *International Journal of Distance Education Technologies* (pp. 1-20).

www.irma-international.org/article/online-scaffolding-for-data-modeling-in-low-cost-physical-labs/236115

Distance-Learning for Advanced Military Education: Using Wargame Simulation Course as an Example

Huan-Chao Keh, Kuei-Min Wang, Shu-Shen Wai, Jiung-yao Huang, Hui Lin and Ji-Jen Wu (2008). *International Journal of Distance Education Technologies* (pp. 50-61).

www.irma-international.org/article/distance-learning-advanced-military-education/1735

Agent-Based Distributed Intelligent Tutoring System Using Case-Based Reasoning

Shweta, Praveen Dhyani and O. P. Rishi (2015). *Artificial Intelligence Applications in Distance Education* (pp. 211-236).

www.irma-international.org/chapter/agent-based-distributed-intelligent-tutoring-system-using-case-based-reasoning/114449

Teacher Assessment of Young Children Learning with Technology in Early Childhood Education

Esther Ntuli and Lydia Kyei-Blankson (2012). *International Journal of Information and Communication Technology Education* (pp. 1-10).

www.irma-international.org/article/teacher-assessment-young-children-learning/70914

Advancing the Effective Use of Technology in Higher Education

Sally M. Johnstone (2008). *Online and Distance Learning: Concepts, Methodologies, Tools, and Applications* (pp. 1759-1762).

www.irma-international.org/chapter/advancing-effective-use-technology-higher/27505