Drexel Center for Academic Transformation

Tomorrow’s teachers will be expected and required to use technology in all aspects of curricular delivery. Their students will have grown up with word processing, internet research, online communication and information access and online business transactions. They will expect information important to them to be available 24x7 and will be used to immediate response and feedback from systems and

Mission:

The use of technology to enhance learning covers a huge continuum from the simplest non-electronic technologies, such as paper and pencil and chalk and a chalkboard, to the most sophisticated “smart classroom” or “smart environment”. However the rapid societal transformation based on electronic access has had an extraordinary impact on the immediacy of interpersonal communications and information delivery. The students of tomorrow will bear little resemblance to today’s students when it comes to the use of technologies for communication, personal productivity, research and information access.

The challenge is to provide tomorrow’s teachers/professors not only the understanding of and appropriate use of technology itself but the implied pedagogical / androgogical transformations that should occur in education itself. There are many academic Institutes and Centers that focus on training and education in e-learning environments, but they attract the early adopters within faculties and often do not provide the pedagogical analysis and design instruction necessary.

The focus of the Drexel Center for Academic Transformation is on preparing prospective classroom teachers to deliver information and instruction using various technologies to accommodate and support learning modes and technology astuteness of tomorrow’s K-20 students. Teachers must be prepared to understand how students who have grown up with computers, the web, PDA’s, instant communication and customer relations learn and how best to take advantage of technologies to enhance the learning process and complement individual learning styles.

Goals:

The goals of the Drexel Center for Academic Transformation are: (note the term pedagogy below will refer to both pedagogy and androgogy)

Knowledge Building

1) review the research and “schools” of thought concerning learning pedagogy and the impact of technology on these pedagogies
2) review the range of teacher-centric thru learner-centric pedagogies and the impact of technology on these pedagogies
3) review the implications of learner styles and research the impact of technology on these styles
4) survey technologies as to their appropriateness and value-added in the education environment
5) review and assess the technology preparedness of typical learners and how they will perform with both traditional face-to-face and e-learning pedagogies
6) review the technological preparedness of typical facilitators, instructors, faculties and other knowledge workers responsible for teaching and learning

Pedagogical Transformation

1) recast instructional pedagogies in an attempt to accommodate instructional environment, instructional purpose, the technological sophistication of both learners and instructors and the availability of technology.
2) recast instructional design as it relates to appropriate and available technology when applied to instructional pedagogy.

Faculty Transformation

1) provide pedagogical transformation tools and approaches for faculty depending on their teaching environment, availability of technology, technological sophistication and educational goals.
2) instruct faculty in pedagogical reengineering that is precipitated by the introduction of technology.
3) instruct faculty in appropriate technologies and provide them an opportunity for testing reengineered curricula

The Institute is designed and intended to prepare students in our K-20 Teacher Preparation program, however it will be open to and have programs for teaching assistants, practicing teachers, corporate trainers, and other constituents as well. We will aggressively seek new constituents to participate in the program. The program will be piloted from January to June 2004 with full implementation scheduled for Fall 2004. This paper will present the design of the program, the process of establishing and implementing the program, samples of courses taught and methodologies used, formative evaluation done to date and lessons learned. The project represents a well designed, comprehensive, thorough approach to infusing and integrating technology in the entire curricular design and teaching process.