



## **Wexford's 10 Years of Program Evaluation**

*A Summary of Findings About  
Using Technology for Teaching and Learning*

Over the last decade, Wexford has conducted research and evaluation studies related to teacher and student development of 21<sup>st</sup> Century Learning Skills for global learning and working. Included in those skills are using technology for teaching and learning – lifelong learning skills and achievement in the content areas. Included in the summary of findings is information from studies at the university level, at the K-12 level, and studies about online resources for teachers and students.

At the university level, studies focused on programs about faculty professional development, course redesign to effectively use technology, and programs for preservice students. Studies included:

- Intel Teach to the Future Pre-Service Pilot Training Program
- Preparing Tomorrow's Teachers to use Technology (PT3) Projects
- Ohio PDA Project

At the K-12 level, programs focused both on professional development (online and onsite) for teachers, and on student learning. Studies included:

- Middle School Math Teachers - Preferences Related to Online Professional Development
- The MATRIX Star Schools Distance Learning and Mobile Technologies Project
- The MathStar Star Schools Program
- Technology Integration Challenge Grant
- Regional Technology in Education Consortia - HPR\*TEC and PSR\*TEC
- E2T2 State Technology Competitive Grants - KS, NV
- Texas Intel Teacher Training

Other studies focused on online resources for teachers and students created by Quantum Simulations Artificial Intelligence Assessors & Tutors, [www.quantumsimulations.com](http://www.quantumsimulations.com), and the ALTEC (University of Kansas) Tools at [www.altec.org](http://www.altec.org).

Many of the studies focused on better understanding strategies to increase faculty and teachers use of technology. In those studies we found six factors linked to increase use of technology by teachers and faculty (which in most cases also meant increased use by students). A description of those factors are provided below.

\* **Motivate Faculty and Teachers to Use Technology**

- Teachers and faculty must see the benefits of the use of technology.
- They need examples of substantive uses of technology in their content areas - how to use technology to teach concepts that are hard to teach or hard to learn.
- Their benefits and incentives must outweigh what individuals see as “costs” of adopting technology - time, energy, and material resources.

\* **Create a Community of Learners**

- Include learners from inside and outside of the organization

\* **Provide Structured Training**

- Use practices based on research on professional development
  - <http://www.wexford.org/evidence/index.html>
  - <http://www.aera.net/>
- Link training to prior knowledge related to
  - Technology skills
  - Use of technology for teaching and learning

\* **Establish Support Systems**

- Mentoring
- Just in Time training and support
- Technical support

\* **Create Tools that Meet Specific Needs of Faculty, Teachers, Administrators, Students, and Parents**

- ALTEC: [www.altec.org](http://www.altec.org)
- Quantum Simulations - artificial intelligence tutors and assessors - [www.quantumsimulations.com](http://www.quantumsimulations.com)

\* **Create Systemic Linkages**

- K-12 and University Partnerships
- District-School-Community Collaboration