

## The Effects of Student Achievement in a 24/7 Technology Rich Learning Environment

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The “Tech Know Build Challenge Grant project is developing and implementing a learner-centered and problem-based curriculum, beginning in the sixth grade, focused on collaborative construction of knowledge, in authentic contexts, using technology.

This project is:

- \* Implementing a holistic approach to reform by directly involving all who impact or are impacted by this effort (students, pre- and in-service teachers, administrators, teacher educators, parents, IDOE officials, business and community leaders).
- \* Creating and implementing a learner-centered and problem-based curriculum utilizing portable laptop technology for every student 24/7, developed by teachers in cooperation with other stakeholders, in alignment with local, state, and national standards.
- \* Creating a network of electronic mentors (preservice teachers, parents, community members) who will collaborate with students and teachers to design, implement, and evaluate students' problem-solving activities.
- \* Evaluating and disseminating results of extensive research data compiled by researchers at ROCKMAN ET AL.

Partners include two leading universities (Purdue University and Indiana University Purdue University in Indianapolis), one large urban school (Indianapolis Public Schools), a small rural school (Crawfordsville Community Schools), the Indiana Department of Education, and business partners.

Three urban middle schools (with a 77% free and reduced lunch rate) provide students with one-to-one laptop technology in school and at home. Access to the network and Internet is seamless using wireless technology within the building and direct high-speed cable modem access at home. Students work in a paperless environment using an interactive web portal. This portal provides these students with access to assignments, resources and communication with teachers. Students login to post discussion forum messages, download homework, take an online quiz, participate in a chat with a local area expert, or ask the teacher a questions. Online mentors (preservice teachers) through the university partnership also communicate with the middle school students through this portal. Distance Learning technology which includes internet based and two-way real time audio and video conferencing has been used to connect the students to a wide variety of community and city leaders for authentic problem-based learning projects.

This “Work-in-Progress” will discuss the planning, implementation, and training involved with the onset of this project. Research data will be summarized to discuss impacts on student achievement, attendance, and parent involvement. The presenters will demonstrate the online environment and provide examples of course information.

Through the partnership, Indianapolis Public Schools and Indiana University School of Education at Indianapolis (IUPUI) work closely in providing experiences in teacher preparation of diverse urban environments. The partners will explain the professional development model shared and implemented for this project. This model incorporates lead teachers from each middle school, on-site Educational Technology graduate students, a summer institute for teachers and middle school students, and preservice teacher online mentors.