

Developing a Comprehensive Instructional Planning and Improvement Model for use in K-12 Classrooms

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Description

This PT3 initiative focuses on the development and dissemination of the Instructional Technology, Assessment and Action Research (ITAAR) Model, an instructional planning and improvement model for use in K-12 classrooms that incorporates instructional design principles, data driven decision-making, technology, classroom-based assessment, and action research. This presentation will report on accomplishments from the first of a three year grant including the development of the ITAAR model, as well as resulting revised course designs and implementation plans.

Abstract

Introduction

With the NCLB legislation of 2001 requiring all teachers to measure student progress using tests aligned to state standards and holding schools accountable for student achievement, all teachers must be familiar with not only high stakes assessment, but also using data from ongoing assessment to make instructional decisions. The Instructional Technology, Assessment and Action Research (ITAAR) Project (PT3 funded 2003) attempts to address this by developing an instructional planning and improvement model that incorporates the use of advanced technologies for, data driven decision making and action research into the assessment and instructional processes for the improvement of student achievement.

The ITAAR project is a curriculum redesign effort with several supporting initiatives including the development of the ITAAR Model, the integration of the model in course work, the training of teams of faculty, clinical supervisors, and cooperating teachers and preservice teachers. This first year of the ITAAR Project focused on developing the Model and training faculty teams.

Building The ITAAR Model

At the core of the ITAAR Project is a consortium that includes the Colleges of Education and Liberal Arts and Sciences at a Major Midwestern University and five school districts including one large urban district and four smaller districts. University faculty, clinical supervisors, and cooperating (mentor) teachers worked collaboratively to develop the ITAAR Model that introduces prospective teachers to instructional technologies, continuous classroom assessment, and action research. The ITAAR Model includes basic and advanced technologies, an instructional design model, and purposeful accumulation of evidence of learning and achievement through handheld technology. One of the primary challenges in conceptualizing the model is its usability. Therefore, readily available, authentically designed and practical resources were integrated. Resources include techniques in eportfolios and action research using classroom data, the INTIME instructional modules, specific methods of instruction, and a newly developed collaboration technology used to track clinical experiences and network preservice teachers with each other and faculty teams.

The ITAAR Model was introduced to faculty teams in a four-day intensive training institute for paired teams of faculty, clinical supervisors and cooperating teachers. Courses in technology and assessment were revised to include instruction for preservice teachers in the components of the Model. These teams will continue their work in curricular revision throughout the year.

Core Components of the Model

Assessment. By using standards aligned assessments, and efficient data collection methods and analyses, time-strapped teachers can implement proven instructional design strategies aimed at facilitating student achievement. The standards-based, objective nature of the assessments will facilitate the connection between the results of the data analysis and the continuous improvement of instruction stressed in the Data Driven Decision instructional technology model. With the increased demands for accountability, teachers must be able to

demonstrate student achievement through high stakes and alternate assessments, through report cards and IEP reporting systems, and must have a built in structure for not only collecting the data, but for analyzing, reporting, and using the data to make informed instructional decisions

Handheld Computers. Fortunately, advances in technology through the use of handheld PDA's or other technology can make this feat much easier. The portable nature of these technologies allows these "decisions" to be made "on-the-fly," with coherency and transparency. As the knowledge base of handhelds in education is growing by leaps and bounds, one area that needs definite attention mirrors the goals of this project: using handhelds for assessment and improvement of instruction.

Instructional Technology and Action Research Since we believe that teachers need to assess and discover for themselves the effectiveness and the problems of technology integration, action research needs to be encouraged as a methodological tool to help improve instruction. We see action research as a tool for enhancing learning environments by involving teachers and their students in focusing on solutions to instructional problems.

Electronic Portfolios By tightly integrating electronic portfolio concepts within the assessment driven instructional design model, itself integrated at the college and university level, building on the successes of previous projects, and remaining dedicated to preparing our pre-service teachers to engage in effective, standards based, decision making assessment practices, this program will lead to more targeted and efficient instruction, enabling K-12 students to achieve their potential.

Continuing the Project

As adoption and implementation of the model continues, faculty will evaluate the Model for many factors that will contribute to the continuous improvement of the Model and the learning materials used to communicate it. These factors include the overall usability of the model, the degree to which the Model is consistent with underlying theories of research, assessment, and instructional technology, and the degree to which the Model is appropriate, in research and application, for the specific content areas represented by faculty.

In future phases of the project, content and methods courses for preservice teachers will be revised to include the use of components of the Model. Prospective teachers will be further supported in *building their capacity in employing advanced technologies to interpret, analyze and incorporate student achievement and testing data into the instruction process* by attending Preservice Teacher Workshops that repeat, reinforce, and expand on technology and assessment components of their regular, program courses. Independent Learning Modules, available on CD or on the Web, elaborating on the Model will provide as-needed support for faculty, clinical supervisors, and cooperating teachers. Preservice teachers will be able to access specific Modules to support their clinical experiences and subsequent teaching.