

## CAN DEVELOPMENTAL STUDIES LEARNERS SUCCEED IN DISTANCE LEARNING?

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### Abstract

This action research program involved implementation of distance education-based developmental studies programs for mathematics using PLATO via the Internet at 8 participating institutions. Twelve characteristics were found to be in common over the most successful of the programs. We present the twelve characteristics and summarize overall effectiveness of the programs.

The Internet and distance learning hold untapped potential to change the culture, curriculum, and course of educational institutions around the world. But, most distance education models assume highly skilled and self-motivated learners: exactly the opposite of the typical developmental studies learner. The League for Innovation in the Community College and PLATO® Learning, Inc. initiated an action research project exploring the questions and challenges of implementing successful distance learning developmental math programs for community colleges across the country.

### College Participants

Selection of participants from League colleges and League Alliance members was based on specific commitment criteria. Each participating college was asked to designate two faculty members and commit training and service time to research and program development. The research consortium initially included nine colleges; however, eight fully implemented PLATO On the Internet<sup>i</sup> (POI) as part of their developmental mathematics program:<sup>ii</sup>

Central Florida Community College, Ocala, FL  
Delta College, University Center, MI  
Kapiolani Community College, Honolulu, HI  
Kirkwood Community College, Cedar Rapids, IA  
Moraine Valley Community College, Palos Hills, IL  
Miami-Dade Community College, Miami, FL  
Santa Fe Community College, Gainesville, FL  
Sinclair Community College, Dayton, OH

### PLATO on the Internet Courseware

PLATO on the Internet (POI) courseware is a modular, self-paced, computer-based learning system that offers students interactive learning opportunities in mathematics, reading, English, and core work skills with over 2,000 hours of instructional content available. As a comprehensive academic and applied skills courseware system, PLATO uses computer-adaptive integrated learning processes for student assessment, prescriptive placement, interactive instruction, and evaluative testing and feedback.

### Project Goals

The purpose of this project was to explore critical success factors for computer-based distance learning in developmental math programs during a summer trial implementation session and a full fall semester term. College participants, League research team members, and PLATO service teams outlined four areas of investigation:

- Development of effective, individualized, open entry/open exit programs for developmental students via distance education
- Cultivation of learners' motivation through the use of technology in developmental studies programs using distance education

- Exploration of successful developmental student profiles using distance learning technology
- Effective combinations of campus-based support service and distance learning delivery systems as models of success for developmental learners

### **Formative Conclusions**

The study identified these critical success factors:

- Easy Access to Internet and Easy Navigational Courseware.
- Technical Support.
- Alignment of Online Courseware and Course Objectives.
- Individualized Instructional Format.
- Student Recruitment and Counseling.
- Orientation.
- Student Connections
- Faculty Development.
- High Standards of Quality and Content Development.
- College Leadership and Program Support.

Project Outcomes, at end of the study

Total Participants (n =)	Course Completers (at the close of the project)	In-Progress	Anticipated Success Rate
185	89 (48%)	27 (14%)	116 (62%)

### **Reference**

Perez, S. and Foshay, R. (2001). *Adding Up the Distance: Critical Success Factors for Internet-Based Learning in Developmental Mathematics*. Mission Viejo, CA: The League for Innovation in the Community College.

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<sup>i</sup> This product has been superceded by the PLATO Web Learning Network.

<sup>ii</sup> Eastfield College (Dallas County Community College District, Dallas, TX) initially planned on being a member of the consortium, but college and departmental obstacles prevented implementation of the PLATO on the Internet® curriculum.