

EXECUTIVE SUMMARY

By Dr. David Hough, Project Investigator
Ms. Vicki Schmitt, Project Consultant

OVERVIEW

This evaluation of the Discovery Center of Springfield's Technology Innovation Challenge Grant examines the level of use, user profiles, usability and overall effectiveness of the distance learning programs operational during year two (6/1/02 to 5/31/03) of the project's three-year funding cycle – 6/1/01 to 5/31/04. The evaluation focuses on the amount and types of professional development and support provided to teachers as well as the value and appropriateness of the curriculum/content and materials provided to students in the Dial In / Dial Out video conferences. Unstructured observation protocols and survey questionnaires were used to collect information. These data will be used in year three to fashion focus group protocols, principal questionnaires, and telephone interviews, to be added to these findings in an effort to examine relationships to student achievement.

METHODOLOGY

A mixed design utilizing both qualitative and quantitative approaches was used. Age/grade appropriate survey questionnaires were developed and administered to children who participated in the activities provided by the grant. Teacher survey questionnaires were also developed and administered. Itinerate, unstructured observations of program activities were conducted. These are delineated as follows:

Dial-In & Dial-Out Survey Instruments:

The evaluation team revised year one survey questionnaires to gauge more fully teachers' and students' perceptions of DCS's distance learning program. Four different instruments were developed and used to examine: (1) teacher perceptions of professional development activities, (2) teacher perceptions of Dial In / Dial Out videoconferencing activities for students, (3) student perceptions of Dial In videoconferencing activities, (4) student perceptions of Dial Out videoconferencing activities. These revised questionnaires allow for examination of teacher/student perceptions of the value of the services provided, usefulness, appropriateness, and effectiveness of curriculum and materials. In addition, the level of classroom use by teachers, and the overall impact on student involvement and learning as perceived by teachers was also addressed. Survey questionnaires were also developed to address teacher perceptions of the level of professional development and support received as a part of the video conferencing programs.

Activity Observations

Members of the evaluation team observed interactions between participants and presenters. Information was collected by three different observers on five different occasions to examine

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effectiveness of technology, communication techniques, facilitation techniques, and the overall learning environment.

Student Achievement Data

Communication Arts and Mathematics Missouri Assessment Program (MAP) 2000-2001 data for each school included in the sample was obtained from the Missouri Department of Elementary and Secondary Education (MDESE) Core Data for examination. This effort will continue in year three. Missouri Assessment Program (MAP) scores were collected and reported for this function of the evaluation to indicate the percentage of those students scoring proficient and above on the MAP assessments. This information was used to compare achievement levels of students in schools who participated in the video conferencing activities as well as those students whose teacher participated in the professional development component of the project.

Principal Questionnaire:

In addition, the team developed a survey questionnaire designed to gauge principals' perceptions of their teachers' participation in the DCS's distance learning programs. Principal surveys were mailed during the summer 2003 and will be included in the 2003-2004 report. Data will include a profile of administrator perceptions regarding the value of the services provided, usefulness and effectiveness of curriculum, the school's level of usage, and the overall perceived impact on student learning. Surveys will also address principals' perceptions of the level of professional development and support received by teachers during the programs.

Unobtrusive Document Examination

The research team examined curricular materials, web site information, brochures and other marketing materials to determine the level of program activity taking place. These documents provided valuable information documenting daily preparation for program activities and sustained follow-up.

Follow-Up Telephone Interviews with School Principals

The research team began making follow-up phone calls to principals in June 2003 and will use this information to fashion a telephone interview protocol for implementation in year three both to teachers and principals. These data will be used to cross-validate survey information.

Focus Group Interviews with Teachers

The research team began developing focus group protocols to conduct with three groups of teachers during year three. The information collected from this effort will be used for data triangulation and will be included in the year three summative evaluation.

MAJOR FINDINGS

- **Level of Program Activity**

- **Dial-Out Video Conferencing**

On average, schools identified as “high” professional development sites had higher percentages of students scoring at the proficient and advanced levels on both the Communication Arts and Mathematics sections of the MAP, regardless of grade level, elementary or secondary. Tables 30a, 30b and 31 along with Figures 30a-30d and 31a-b display these data graphically (see pages 99-103).

- **Dial-In Video Conferencing**

On average, schools identified as “high” professional development sites also had a higher percentage of principals defining their school’s involvement with the RPDC as “active.” Table 32a and 32b with Figures 32a and 32b show these data (see pages 105-106).