

MIDWEST CENTER FOR INFORMATION TECHNOLOGY

DUE-0532660

Annual Report for Period: 09/2005 - 08/2006 **Submitted on:** 04/06/2006

Principal Investigator: Kirlin, Dennis

Award ID: 0532660

Organization: AIM Institute

Title: Midwest Center for Information Technology

Project Participants

Senior Personnel

Name: Kirlin, Dennis

Worked for more than 160 Hours: Yes

Contribution to Project: Principal Investigator

Name: Jeanetta, John

Worked for more than 160 Hours: Yes

Contribution to Project: Co-Principal Investigator

Name: Watne, Jeffory

Worked for more than 160 Hours: Yes

Contribution to Project: Co-Principal Investigator

Name: Sweeney, Robert

Worked for more than 160 Hours: Yes

Contribution to Project: Co-Principal Investigator

Name: Pensabene, Thomas

Worked for more than 160 Hours: Yes

Contribution to Project: Co-Principal Investigator

Other Participants

Name: Surface, Jeanne

Worked for more than 160 Hours: No

Contribution to Project:

Provides administrative leadership for the project, coordinating the work of the college partners, planning and implementing grant activities and events, and facilitating evaluation and reporting requirements.

Name: Coover, Dave

Worked for more than 160 Hours: Yes

Contribution to Project:

Coordinates training activities and provides technical support to project teams.

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Name: Vankat, Dave

Worked for more than 160 Hours: Yes

Contribution to Project:

Directs the Working Connections IT Faculty Development Institute and coordinates the activities of the Emerging Technologies Team.

Name: Dishman, Jackie

Worked for more than 160 Hours: Yes

Contribution to Project:

Provides site coordination for grant activities at Central Community College (Nebraska), including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Name: Magill, John

Worked for more than 160 Hours: Yes

Contribution to Project:

Provides site coordination for grant activities at Iowa Western Community College, including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Name: Zeimens, Dora

Worked for more than 160 Hours: Yes

Contribution to Project:

Provides site coordination for grant activities at Mid-Plains Community College (Nebraska), including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Name: Sparks, Gary

Worked for more than 160 Hours: Yes

Contribution to Project:

Provides site coordination for grant activities at Metropolitan Community College (Nebraska), including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Name: Coan, Kris

Worked for more than 160 Hours: Yes

Contribution to Project:

Provides site coordination for grant activities at Northeast Community College (Nebraska), including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Name: Penry, Sharon

Worked for more than 160 Hours: Yes

Contribution to Project:

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Provides site coordination for grant activities at Southeast Community College (Nebraska), including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Name: Peters, Craig

Worked for more than 160 Hours: Yes

Contribution to Project:

Provides site coordination for grant activities at Southeast Technical Institute (South Dakota), including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Name: Muthukrishnan, Kamali

Worked for more than 160 Hours: Yes

Contribution to Project:

Provides site coordination for grant activities at Western Iowa Tech Community College, including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Name: Spurgeon, Bill

Worked for more than 160 Hours: Yes

Contribution to Project:

Provides site coordination for grant activities at Western Nebraska Community College, including faculty development, curriculum adaptation, articulation, student outreach and recruitment, and workforce development.

Organizational Partners

Central Community College
Iowa Western Community College
Metropolitan Community College
Mid-Plains Community College Area
Northeast Community College
North Dakota State College of Science
Southeast Community College
Southeast Technical Institute
Western Iowa Tech Community College
Western Nebraska Community College

Other Collaborators or Contacts

None at this time.

Activities and Findings

Research and Education Activities

MAJOR ACHIEVEMENTS AND PROGRESS TO DATE

In keeping with the goals and objectives of the Midwest Center for Information Technology, activities to date have focused on the following objectives: (1) to identify the IT skills needed for the region's highest demand career pathways and adapting curriculum to provide the most appropriate level of IT education in conjunction with these programs of study; (2) to laterally diffuse the best practices developed by the MCIT consortium members in order to leverage resources, standardize the quality of IT education across the region and better meet the needs of employers and four-year colleges/universities, and more effectively recruit new students to programs of study; (3) to expand the participation of MCIT colleges in emerging frontiers in IT, especially bioinformatics and health informatics, by jointly adapting and sharing curriculum and instructional resources to meet the needs of employers across the region; and (4) to increase the retention of IT students, particularly women and students of color, and ensure all graduates possess both the technical and non-technical skills required for postsecondary transfer and career success.

Objective 1: Identifying the IT Skills in Region's Highest Demand Career Pathways

A regional Curriculum Adaptation team was developed and implemented, comprised of Principal Investigators, project staff, faculty from each MCIT college. The Curriculum Adaptation Team will identify the IT competencies needed for selected career/educational pathways with highest demand, according to regional local labor market information. This year's focus is on Agriculture/Natural Resources and Business. To this end, MCIT partnered with the National Workforce Center for Emerging Technologies to identify potential career pathways through an Agriculture and IT focus group. This process was expensive, time consuming and the information gained was over and above what was necessary for our goal. With the guidance, support, and approval, of the National Visiting Committee we decided to instead use a survey method to access input from more employers across the entire region using the IT Across Careers –Core applications Rubric from the NSF-ATE Project with Education Development Center, Inc. to guide the formation of the survey. The survey will be conducted at each MCIT college utilizing their advisory committee business partners as participants.

Objective 2: Laterally Diffusing Best Practices

In order to systematically ensure the sharing of promising practices developed by the MCIT colleges and other entities, a regional Lateral Diffusion Team, comprised of principal investigators, project staff, faculty, and student support services staff from each MCIT college, was formed. This team is responsible for expanding and institutionalizing the following activities: student-run help desk; cyber-security curriculum; recruitment of female students; and the expansion of the Working Connections IT Faculty Development Institute.

Student-run Help Desk. Taking a successful model developed by one of the MCIT colleges where students, with faculty supervision, run a help desk to support other students taking online classes, the Lateral Diffusion Team will expand the concept to include the provision of support to both community college and secondary school students in the region, as well as community organizations and the populations they serve, focusing initially on support for Microsoft applications. A significant effort has been made thus far in the research and selection of the help desk, or call center, software that the students will use. Once the software decision is finalized, the product will be purchased and installed, faculty from the MCIT colleges will be trained, and the project piloted with two high schools. At the same time, the Lateral Diffusion Team is working through all of the logistics issues regarding the hours of operation, how the schedule for working the call center will be developed and coordinated to best match the curriculum progression at each school. In addition, efforts are focused on deciding the best way to support customer access to the call center, including voice over IP solutions, a toll-free number, etc., keeping in mind future sustainability.

Cybersecurity Curriculum. Several colleges have already developed or adapted cybersecurity curricula prototypes, offering cybersecurity as a separate certification program, a degree program, or integrating it throughout the other IT courses. These prototype curricula will be analyzed against proven national models, such as those developed by the ATE-funded Center for System Security and Information Assurance, the standards developed by the National Workforce center for Emerging Technologies and the National Center for Telecommunications Technologies, employer feedback derived from MCIT surveys, as well as any applicable information generated by the Curriculum Adaptation Team as they implemented the IT core applications survey to their targeted career pathways. To this end, each of the colleges has been posting their security curricula on a SharePoint site and will begin to review these curricula and compare them to the aforementioned standards.

Recruitment of Women in IT. The MCIT is working with the National Institute from Women in the Trades, Technology, and Science (IWITTS) to consolidate many of the promising practices for recruiting women into IT developed by the participating colleges over the past four years. MCIT plans include the creation of a Women in Technology Club kit, which will describe how to develop a club, explain the role of the club advisor, provide a sample club charter, include sample club activities (including those already developed by the colleges), and share sample club recruitment materials. The IWITTS will also provide training to the MCIT site Coordinators and other college faculty and staff in the development and implementation of female mentoring programs. A sub-award with IWITTS was finalized and the initial research of best practices has been started by Donna Milgram, IWITTS' Executive Director.

Working Connections IT Faculty Development Institute. The successful Working Connections Faculty Institute is being planned and will continue and

expand with a major emphasis placed on institutionalization of the program each year through an employer sponsorship model. Faculty members are continuing to help guide the development of the Institute, and have selected the educational tracks that meet their needs. The Working Connections 2006 tracks include: Project Management Institute Certification; Dream Weaver; Fireworks and Flash; Network/Internet Security; SQL Server; Linux; Photoshop, Illustrator and InDesign; and Project-based learning. In addition, content will continue to focus both on the targeted technical skills as well as the pedagogy required to most effectively teach those skills to students.

Objective 3: Expanding the Participation of MCIT Colleges in Emerging Frontiers in IT

An Emerging Technologies Team was formed, comprised of faculty from each MCIT college, to identify best practices in bioinformatics and health informatics education at the two-year college level and to adapt these best practices to the MCIT region. Western Iowa Tech Community College has taken the lead in creating a bioinformatics program and Central Community College has taken the lead in developing a health informatics program. Once the programs are operational, the colleges will be discussing how the curricula can be shared. In addition, the Team is exploring convergence technology and will be examining the best practices being developed by the ATE-funded Convergence Technology Center in Texas.

Objective 4: Increasing the Retention and Technical/Non-technical Skills of IT Students

A number of initiatives are being developed and implemented to increase student retention and increase the quality and quantity of the regions' information technology workforce. These initiatives include the integration of project-based learning, the development of a bridge program of women interested in IT, and system-wide improvements to ensure the needs of the colleges' adult learners are met and the likelihood of persistence to graduation is increased.

Project-based Learning. Principal Investigators, project staff, faculty, high school teachers, and business representatives recently completed training in Project Based Learning (Case Files) as provided by Dr. Ruth Loring, the professional development specialist at Nashville State Community College. Participants were taught a learning cycle process that has been proven to actively engage students in the learning environment both in and outside the classroom using a real business problem that must be solved using the knowledge and skills targeted by the course in which the Case File is used. Within this model, students work in teams to gather, organize, validate and interpret data as they work toward solutions which they present in a proposal. Each of the colleges sent a team to the training and each team completed with the training with a completed Case File. Each of the colleges has subsequently continued to develop their own Case File and many have moved on to creating new Case Files targeting different curricular outcomes. The training was so popular and well received, that the participants requested Dr. Loring return to present a week-long track on PBL (Case Files) as part of the Working Connections conference this summer. Dr. Loring has agreed to return; however,

the structure of her involvement will shift. Instead of facilitating the training, she will have three of the participants from the MCIT training she conducted earlier this year serve as the facilitators, making this a train-the-trainer experience and allowing the MCIT to have an internal capacity to continue expanding PBL (Case Files) implementation over the remainder of the grant period.

Bridge Program. Given the fact that many women avoid or fail to persist in IT programs of study due to low self confidence, a lack of identification with the stereotypic “computer geek,” and a greater interest in social applications of computing than in computing itself,. Each of the participating colleges will develop and implement a “community of learners” bridge program for women interested in exploring a career in IT. To this end, a cohort of ten women with limited computing experience will be recruited to participate in this 11-week (one quarter) program where the cohort remains together for all instruction and integrated support services. Weekly seminars will be offered to provide additional career awareness, build employment skills, and assist with technology skill building. Initial planning efforts have been conducted and will continue over the summer, with a fall implementation date.

System-wide Improvements. In order to increase IT student retention, the MCIT and its ten participating colleges will examine the institutional “four corners of friction,” identified by Hagedorn (2005) and her research on the retention and transfer of community college students as being critical to long-term student success. This process includes access, success, retention, and institutional accommodation. The first step in the process is to conduct an assessment of each college to determine where gaps exist in these areas using the Council for Adult and Experiential Learning’s Institutional Self-assessment Survey (ISAS) and their Adult Learning Inventory (ALI). To this end, a Kick-off Conference was held for representatives from all of the MCIT colleges to learn more about the ALFI tools and to discuss how the project would roll out at each of the colleges. At this point, administrative leadership, faculty, and staff have completed the ISAS identifying what they see as the strengths and weaknesses of their institution. Currently, a sample of 500 students is completing the ALI assessment. The sample includes all IT students at each college. The MCIT was also able to add five project-related questions specific to our objectives to be contained within the ALI instrument. The results of the two surveys will be compared and gaps identified for focused improvements. The Council for Adult and Experiential Learning will provide recommendations based on this analysis, presenting their findings in September at the MCIT’s regularly scheduled Site Coordinators meeting.

In addition to the above activities specific to the objectives of the grant, additional complementary initiatives to support IT curriculum adaptation, faculty development, workforce development, and articulation/recruitment were completed.

Curriculum Adaptation -

- Continued to adapt curriculum for online delivery.

- Developed new degree options: Web Development; Security; Nanoscience Technician; Telepharmacy Technician, and eBusiness.

Faculty Development -

- Developed and implemented a faculty survey (completed annually).
- Developed and implemented sub-awards to each college to support faculty IT certification and tuition remission for advanced degree attainment.
- 99 instructors completed IT training and/or certification: 8 certifications were earned and 175 training sessions were completed.
- 11 additional personnel completed IT training, including IT staff, administrators, secondary teachers, and 4-year college/university faculty.
- Two instructors earned a bachelor's degree.
- Two instructors earned a on master's degree.
- Nine instructors began/continued work on advanced degrees.
- Areas of training were varied but aligned with needs of employers as established by the MCIT Employer Survey: ASP.Net (13); CCNA 1 and 2; CCNP 1 Update (6); Dreamweaver (3); Photoshop (30); Industrial Networking; Information Security (7); Information Security (7); Internet Scripting (5); Java (4); Linux Essentials (7); Macromedia (2); MCSE Group Policy (13); Active Director (13); MS Office (2); Red Hat Linux Administration; SQL Server; SQL Using Oracle (7); Virtual Gibbs (3); Web Server and Network Security (8); Windows 2003 Server; and Wireless Networking (14).
- Certificates were earned in the following areas: CCNA (2); Macromedia Dreamweaver MX 2004; MCAD (2); and MCP.

Workforce Development -

- Develop and implemented Heartland Technology Expo.
- Developed and implemented customized training for businesses on site. Topics include: Access; Excel; Visio; InDesign; MS Project; Network Administration; Service Point; Customer Service; and Communication Skills.
 - 15 companies
 - 523 participants
 - 67 training events
- Worked with local Workforce Investment Boards to provide training for dislocated workers.

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- Partnered with private training partners to deliver certification training.
- Developed and implemented a rural Security Summit.

Articulation and Recruitment -

- Developed 14 new articulation agreements with various feeder high schools.
- Revised 48 articulation agreements with the feeder high schools.
- Developed nine new articulation agreements with four-year colleges and universities.
- Revised four articulation agreements with four-year colleges and universities.
- Offered IT courses at the high school/college for dual credit.
- Created and implemented IT training for secondary teachers to increase capacity to teach dual credit courses.
- Continued to disseminate the 'Is IT for You?' career exploratory CD-ROM in English and Spanish.
- Developed and implemented a wide variety of student recruitment and support activities, including: career fairs; expos; job fairs; student assessment/test out procedures; student-run help desk; guest speaker programs; school-based visits and recruitment; early alert systems; campus-based internship programs; Microsoft Academy; Cisco Academy; computer programming contests; career camp for girls; 'Women in IT' events; 'Build a Computer in a Day' events; implementation of introductory IT courses in Spanish; and delivery of introductory IT courses by students to underrepresented populations (offered free).
- Five of the ten participating colleges developed projects and will be submitting proposals to the S-STEMS competition to obtain grant funds to support student scholarships.

IMPACT INFORMATION

As this grant started only six months ago, it is too early to report any meaningful impact information. However, progress continues in the Center's original goals of increasing the number of high school students enrolling in community college IT programs of study, the number of community college IT students that graduate, the number of IT community college graduates that articulate to a four-year college and university, and the number of community college IT faculty that obtain industry-validated certification and/or an advanced degree. These findings are shared below.

EVALUATION ACTIVITIES

As with previous years, two major evaluation activities were implemented by the project's external evaluators, Midwest Educational Technology Services, Inc., to capture both quantitative and qualitative data. The first activity was to survey each of the Site Coordinators working at the ten participating community colleges in order to collect quantitative data relative to each of the project's objectives. The second activity was to conduct site visits at each of the colleges to confirm quantitative data, as well as provide a qualitative context. The site visits included focus groups and interviews with students, faculty, and administrators.

In addition, the evaluators developed two central evaluation questions around which the evaluation process will now be structured:

1. How effective is the collaborate model represented by MCIT in encouraging an organizational culture that supports IT student success, industry responsiveness, and regional innovation?

Key Initiatives

- Working Connections
- Project-based Learning
- Student Help Desk

Data Sources

- Participant Surveys; Participant Focus Group
- Participant Faculty Surveys; CAEL Student Survey; Institutional Statistics
- Call Log; Model Cost Effectiveness

2. How are IT students, and particularly women and minorities, moving through the educational pathways as they transition from initial recruitment to long-term career success?

Key Initiatives

- Career Pathways
- Bridge Program
- Student Retention

Data Sources

- Employer Pathway Survey; Course-related Statistics; CAEL Student Survey
- Participant Statistics; Two Focus Groups (In/Out)
- Institutional Statistics; CAEL Student Survey

LEVERAGED RESOURCES

Resources leveraged by MCIT colleges and partners this year totaled \$172,152. This included the time and effort of the Site Coordinators, faculty and administrators, travel and costs associated with professional development, instructional materials, supplies, and equipment, and space for project activities.

ASPECTS WHERE THE PROJECT IS EITHER ON SCHEDULE OR AHEAD OF SCHEDULE

Of the 31 major activities planned for implementation the first year of this project, seven (23 percent) have been started, seven (23 percent) are well into the implementation phase, 16 (52 percent) are inactive as they are not yet scheduled to start, and one (3 percent) has been completed.

SMALL ADDITIONS OR CHANGES TO THE PROJECT

The project continues to be implemented as planned.

DIFFICULTIES IN ACHIEVING MILESTONES AND POTENTIAL SOLUTIONS

With only six months of implementation thus far under this new grant award, difficulties in reaching the anticipated milestones have not yet emerged. However, some trends have been noted that could prove problematic in the future if not addressed soon. While significant progress has been made in starting the various activities outlined in the proposal, the staggering of activities has not been optimal, with too many activities occurring simultaneously and thereby creating a tremendous burden on the Site Coordinators (who are only released 25 percent time to work on this project) and other faculty. To address this problem, we have adjusted the timeline for some of the initiatives to dilute the implementation process over a greater period of time but still attain the desired deliverables before the end of the grant period.

Findings

Given the brief timeframe for implementation thus far, evaluation findings thus far have focused primarily on the student enrollment, persistence, and graduation data that has been tracked by the Center for the past four years. Additional findings relative to the new initiatives, as defined by the two central evaluation questions described above will be forthcoming. In summary, the findings include:

- 72% of IT faculty in the region now hold an industry-validated IT certification and/or an advanced degree.
 - Represents an increase of 82.2% over baseline
- 70% increase in the number of high school students articulating to the community college IT programs of study.
 - 31.6% increase in female students articulating
 - 113% increase in students of color articulating
- 20% increase in the number of community college students graduating from IT programs of study.
 - 4.4% increase in female graduates
- 123% increase in the number of community college IT graduates the articulated to a four-year college or university.
 - 10% increase in female students articulating
 - 120.3% increase in students of color articulating

In addition, although this new project is just starting its first year of activities, an article reporting on the findings from the earlier project and representing the new innovations being undertaken for this current project has been prepared and

submitted to the Journal of Workforce Development. The article is entitled "Developing the Information Technology Workforce: A Four State Collaborative Effort" and describes some of the last project's most promising practices that are now being extended and more formally investigated in this project.

Training and Development

The project leadership developed and implemented the sub-awards to each of the ten participating colleges, with slightly over 30 percent of these funds directed to faculty training and development (tuition remission, IT certification, and attendance at regional and national IT conferences).

In addition to the faculty development activities described previously, quarterly conferences were continued for the faculty Site Coordinators, in keeping with one of the project's aims to develop faculty leaders at each of the participating colleges. The conferences provide an opportunity for joint planning, frequently involving other college faculty and staff, and cover topics such as: grant management; outreach to underrepresented populations; articulation; faculty development; IT certifications; curriculum adaptation; curriculum alignment with employers' needs and standards; best practices, etc.

Outreach Activities

A variety of articles describing the project were developed, published and disseminated through various media across the four-state region, in collaboration with each of the participating community colleges. Articles appeared in local newspapers, local Chamber of Commerce newsletters, college newsletters, and the Applied Information Management Institute's quarterly newsletter. Two proposals have also been submitted for presentations at national conferences. The content of these presentation proposals focuses on the background and successes of the Midwest Center for Information Technology to date and the innovative goals, objectives, and activities planned for this current project.

The project website is currently under revision. A new site map has been developed and once refined; the site itself will be rebuilt. In addition to reflecting the Center's new objectives and activities, greater capacity to support joint work and best practices will be included. In addition, a companion site for the Center's Working Connections IT Faculty Development Institute was revised to reflect this year's program and content. Both sites can be accessed at www.midwestcenterforIT.org.

The project website has been averaging 2,834 hits per week. Average user sessions last 14 minutes.

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The Midwest Center for Information Technology provided technical assistance to colleges/universities and other entities interested in pursuing an ATE Center or project grant. To this end, one of the Co-PIs was asked to serve as the chair of the NVC for an ATE project funded in 2004: Institute of Excellence for Information Technology (Virginia Community College System). The Midwest Center for Information Technology was also invited to partner in an ATE proposal submitted by the Educational Development Center to strengthen the evaluation of ATE Centers.

The Midwest Center for Information Technology also disseminated information about the project and its deliverables through participation in a variety of conferences, such as the Governor's Workforce Development Summit (Nebraska), the Nebraska Educational Technology Association annual conference, the ATE PI Conference in Washington, DC., the ACM Convention in Newark, NJ, the League for Innovation in the Community College Conference on Information Technology in Dallas, TX, and the League for Innovation in the Community College Innovation Conference in Atlanta, GA.

Lastly, as described above, a wide variety of student recruitment materials were disseminated across the region and an enormous diversity of events and activities were undertaken at each of the participating colleges to attract students to information technology programs of study.

Journal Publications

None at this time.

Books or Other One-time Publications

None at this time.

Web/Internet Site

URL(s): www.midwestcenterforit.org

Description: Contains general information about the project, its goals and objectives, partners, key personnel, and results. It also provides resources relative to information technology research and careers.

Other Specific Products

None at this time.

Contributions

Contributions within Discipline

Although this new project is just starting its first year of activities, an article reporting on the findings from the earlier project and new innovations being undertaken for this current project has been prepared and submitted to the Journal of Workforce Development. The article is entitled 'Developing the Information Technology Workforce: A Four State Collaborative Effort' and describes some of the last project's most promising practices in IT education, student recruitment and retention, articulation, and general workforce development. In addition, new paradigms for this current project are discussed and described.

Two Proposals have been submitted for presentation at national conferences. The content of these presentation proposals focuses on the background and successes of the Midwest Center for Information Technology and the innovative goals, objectives, and activities planned for the current funded Midwest Center for Information Technology.

Contributions to Other Disciplines

Again, the project is relatively new. However, we will indeed expect to have the potential to contribute to disciplines outside of information technology. One example of such potential contributions, will be our evolving efforts for documenting student educational pathways. As individuals move from high school, to community colleges, to four-year colleges and universities in pursuit of career options and advantages, we are going to try to develop models representing some of these pathways both quantitatively and qualitatively. Such pathway models should be very useful for helping understand the workforce preparation dynamics in a variety of disciplines.

Contributions to Human Resource Development

Since we believe that information technology is a real catalyst to each of the STEM disciplines, it is expected that our future work will be supportive of the national progress in each of these disciplines. Again, this current project is in its initial stages,, but we expect our evaluation and embedded research to be generally applicable to understanding human resource issues in STEM disciplines.

Contributions to Resources for Research and Education

The ongoing training models being initiated in the project should have some excellent human resource information to share. Thus far, the 'Working Connections in Information Technology Summer Institutes' have been quite successful as a human resource development opportunity, and we expect to continue to document this very successful faculty professional development effort.

Contributions Beyond Science and Engineering

Although the project is currently focused directly the 10 participating community colleges, we are also starting to initiate a general 'help desk' model that we believe will indeed have considerable contributions to the regional public welfare. Our help desk model essentially allows community college students to receive valuable work experience by assisting fellow

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students and the general public with information technology related questions. We will be carefully monitoring this aspect of the new project and we hope to document some of these more general contributions.

Special Requirements

Special reporting requirements: None

Change in Objectives or Scope: None

Unobligated funds: \$ 0.00

Animal, Human Subjects, Biohazards: None

Categories for Which Nothing is Reported

Any Journal

Any Book

Any Product