

## **AC 2007-2105: THE MENTORLINKS PROGRAM: ADVANCING TECHNOLOGICAL EDUCATION PROGRAM OF THE AACC**

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## **The *MentorLinks* Program: Advancing Technological Education Program of the AACC**

In the spring of 1998, a small but forward looking group of community college faculty and administrators from across the United States gathered in Seattle, Washington for the opening reception of the *Working Connections* program. For the next several days they met on the campus of Microsoft's Cooperate headquarters in Redmond where they became better acquainted, exchanged ideas, and made plans for how they would proceed forward over the next two years. Chosen through a competitive grant application process, the meeting participants were from thirteen different community colleges but they all had one thing in common. They all wanted to be in the forefront of instruction of new and emerging information technology (IT) software tools. Faculty "teams" from eight mentee colleges and five mentor colleges took part in this initial gathering of this innovative, collaborative program that was conceived by the Microsoft Corp. and managed by the American Association of Community Colleges (AACC). The program matched colleges that were already leaders in information technology education (i.e. the mentors) with colleges that were interested in either developing their existing IT programs or starting new programs (i.e. the mentees). This highly successful program was continually expanded through a yearly grant application process so that by the year 2002 some sixty-three community colleges had received grants that directly addressed the IT workforce training needs of their local communities <sup>[1]</sup>. To a great extent, the success of this program was due to the vision and generous philanthropy of the Microsoft Corp., the expertise of the AACC management team who oversaw the program on a day-to-day basis, and the dedication of the community college faculty and administrators that took part in the mentoring process.

It should be noted that prior to the *Working Connections* program and the start of the National Science Foundation's Advanced Technology Education (ATE) program in the early 1990's, most community college faculty worked in relative isolation with very little contact with colleagues that taught in the same or similar disciplines at other colleges or in many cases at their own institutions! These innovative programs and other corporate programs like the Cisco Networking Academies initiative and the (now) Verizon NextStep Program <sup>[2]</sup> started to break down these barriers and provide the necessary avenues for the exchange of ideas and expertise and the chance to build faculty and college collaborations that spanned both regional and large geographic distances. These events have proven to be invaluable tools in our effort to improve the quality of technology education in the United States and to rapidly, bring on-line, degree and certificate programs dealing with new and emerging technologies.

An interesting and unique aspect of the Microsoft *Working Connections* program was the strong personal and professional relationships that developed between the faculty mentees and their mentors and the professional development experienced by the program participants. The AACC staff took note of the powerful "faculty professional development" aspects of the program and in the early years of the new millennium, in collaboration with the National Science Foundation (NSF), developed their own mentee/mentor based advanced technological education faculty development project. Dubbed the *MentorLinks* program, its first class consisted of seven mentee community colleges and six mentor community colleges competitively selected for the two year program that commenced in September of 2002. The stated goals of the program were to: "help

community colleges develop or strengthen technician training programs in the science, technology, engineering, and mathematics (STEM) fields.” To achieve these goals, the *MentorLinks* program matched each of the mentee colleges with an experienced mentor with the requisite expertise necessary to assist the mentee college with the development of a new program or the revitalization of a program already in place. In addition to the support of the mentor, the mentee college team was given the opportunity to network with other similar program development initiatives through program visits, program meetings, and national conferences.

In an AACC Project Brief, the activities of the first group of *MentorLinks* colleges are well chronicled: developing programs in biotechnology, natural resources planning, aquatic science, and geographic information systems (GIS) and improving business, industry, and high school links to in-place information technology programs. Furthermore, the project brief states that the mentee colleges had been successfully working with their mentors in the areas of curriculum development, student recruitment into individual courses and certificate programs, training programs for faculty and staff, engagement of local industry, increased recognition and program support among administrators, and program assessment <sup>[3]</sup>. This first ATE project was very successful in terms of the tangible results achieved in program development but it also provided what some participants have described as “... one of the best experiences in my professional life” and “transformational events” in terms of new relationships formed between mentees and mentors and the faculty professional development that occurred during the mentoring process. The AACC thought so highly of the project that it returned to the NSF for additional funding to continue the program with an additional mentee/mentor class for the years 2005 – 2007 <sup>[4]</sup>. The rest of this paper will be devoted to a discussion of the details of this new program, its successes and challenges, and its impact on community college technology education.

During the first half of 2005, the AACC published a *Request for Proposals* for prospective mentee colleges and a similar *Request for Applications* for potential project mentors for the 2005 – 2007 version of the *MentorLinks: Advancing Technological Education* Project. The mentee colleges would create teams that would consist of a faculty member in an academic/occupational science, technology, engineering, or mathematics field of study and an administrator who would have oversight responsibility for the program. Each mentee college would receive \$15,000 in funding over the two year time period for the purpose of facilitating the development or strengthening of a program in a specified technology area <sup>[5]</sup>. Furthermore, the mentee team would participate in yearly project meetings in conjunction with three upcoming annual national ATE Principle Investigators Conferences to be held in Washington, DC and also participate in a mentor site visit and a reverse site visit by the mentee team to the mentor’s home institution. The ten mentee colleges and their assigned mentors were selected and would gather in the nation’s capital for their first meeting in early October of 2005. The mentors were primarily chosen on the basis of their experience in planning and implementing a major program change in a STEM field and their familiarity with the goals of the Advanced Technological Education program. To facilitate the mentoring process in its early stages, the AACC project staff supplied the mentors-to-be with their mentee college’s proposals and a set of mentoring guidelines and then held several conference calls prior to the initial meeting to support the newly chosen mentors in their upcoming mentoring roles.

The AACC lead project staff held an evening pre-conference meeting for the mentors before the entire group met for the first time for the Project Planning Meeting. This meeting allowed the mentor team to network with one another and also provided an opportunity for several mentors from the first *MentorLinks* project to share their experiences with the group. The next day, the entire mentee/mentor group met (Figure 1 shows the members of the cohort and the AACC Project Directors) at the first project meeting.



Figure 1 – The 2005 – 2007 *MentorLinks* Cohort and the AACC Project Directors

This initial mentee/mentor meeting was invaluable to the participants. Even though the mentors and mentees had been in varying degrees of contact prior to the meeting, getting to sit down for a face-to-face meeting with the person or persons that were the voice or voices on the other end of the telephone or the authors of the e-mails that had been sent back-and-forth has no substitute in this author's opinion. Again, led by the AACC project staff, the group was given an overview of the *MentorLinks* project and its goals, went through extended introductions of the entire cohort, and heard presentations from several former mentors and a former mentee now turned mentor about their experiences from the previous project. Additionally, details of how the group would utilize the BlackBoard web site hosted by the Madison Area Technical College were given. Essentially, the BlackBoard platform would be used to provide a vehicle for collaboration among the members of the *MentorLinks* cohort and serve as a resource for program documents and a

repository for information generated over the life of the project. Each mentee college was given an opportunity to explain their particular program development project to the other members of the group and the mentors for the mentee colleges were given an opportunity to discuss what they would bring to the project and how they thought they could best facilitate the project effort. Time was also spent detailing the documentation aspects of the project and each mentee/mentor team was given time to discuss the projects in further detail and determine if changes needed to be made due to either unrealistic goals or events that might have occurred since the submission of the proposal. The mentee/mentor cohort spent the next several days attending the ATE Principle Investigators annual conference which gave them a chance to listen to presentations, attend conference sessions and roundtable discussions about issues in technology education, and to investigate other technology education initiatives on display during the ATE conference Showcases. Typically, there were technology programs on display similar to or related to what they had planned to develop during the showcases. The networking opportunities that were presented to the *MentorLinks* participants were both incredibly timely and invaluable.

The following is a list of the 2005 - 2007 mentee colleges and a brief title of their program development projects:

- City College of San Francisco, CA  
Project Title: Applied GIS
- Lake Michigan College, MI  
Project Title: Building a Nano Workforce
- McHenry County College, IL  
Project Title: Video Game Programming and Design Degree
- Oregon Coast Community College, OR  
Project Title: Enhanced Aquaculture Curriculum and Husbandry (EACH)
- Owensboro Community and Technical College, KY  
Project Title: Advanced Manufacturing for the 21<sup>st</sup> Century
- Seminole Community College, FL  
Project Title: Recruiting Students to Re-emerging Information Technology Programs
- Spoon River College, IL  
Project Title: New Beginnings with Manufacturing Technology
- Springfield Technical Community College, MA  
Project Title: Advancing Workforce Education in GIS
- Technical College of the Lowcountry, SC  
Project Title: TCL's Biotech Bridge Initiative

- Waubonsee Community College, IL  
Project Title: Enhancing and Strengthening Information Systems Technology

Further information about the 2005 - 2007 *MentorLinks* project, mentee teams, project mentors, and individual Power Point Presentations about progress to date are available at the AACC web site ([www.aacc.nche.edu](http://www.aacc.nche.edu)) under the Advanced Technological Education link.

Continuing with the project details: one of the key mentee college responsibilities is to host at least one site visit for the assigned mentor. During this visit, the mentor is to meet with principal stakeholders in the proposed program. To some extent, this site visit is somewhat reminiscent of an ABET accreditation visit but certainly not as intense, as long in duration (typically one day), or for such high stakes! It is helpful if this meeting takes place sooner rather than later since it gives the mentor an opportunity to see what circumstances might potentially adversely effect the proposed program development. A reverse site visit during which the mentee team visits the mentor's home institution usually takes place after the site visit. This visit usually allows the mentee to observe a similar successful program in operation. Although the timing and order of these visits is not absolute, the majority of the mentee/mentor visits took place in this fashion. It is also possible that the mentee/mentor team will identify a workshop or conference that the mentee team will attend for professional development purposes or another venue that will provide valuable input to the program development process. Further collaboration between several teams for a visit to another mentee college is an additional possibility. Other mentee college responsibilities include the creation of a project advisory team that will meet on a consistent basis throughout the project duration and hopefully beyond it, a willingness to collaborate with all the other participants in the *MentorLinks* program, and participation in all reporting activities required by the AACC or its external evaluator.

The current *Mentorlinks* project participants returned to Washington, DC in mid-October, 2006 for a day and-a-half meeting prior to the start of the annual ATE conference. As before, the mentors met separately before the rest of the project cohort joined the meeting. This short meeting focused on sharing the successes and challenges experienced by the mentoring team and the sharing of ideas about how to overcome some of the problems encountered in the mentoring process. The rest of the first day's meeting consisted of mentee/mentor progress reports, roundtable discussions about topics pertinent to technology education initiatives, and mentee/mentor meetings about the mentee's action plans for year two. Aside from several general presentations about evaluation and STEM education, the next day's activities were mostly reflective in nature: evaluating the first year of the program and thinking about where we can go from here forward. As a tangible result of the meeting, the individual mentee/mentor teams converged upon a plan of how best to utilize their remaining resources in light of what had happened during the first year of the project and their rethought optimum project outcomes. The rest of the week was spent by the cohort attending the ATE conference and networking with the other attendees or in some cases actually participating in the conference by giving presentations or talking part in sessions or roundtable discussions. Since then, the mentee/mentor teams have continued to work on the implementations of their programs and now the end of this two-year project is looming into view. A final project wrap-up meeting will be held in conjunction with

the ATE annual conference in October of 2007. One can only hope that there will be another *MentorLinks* class in the near future.

The successes of the *MentorLinks* program are many<sup>[6]</sup>. Testimonials from the mentees about the fact that they could not have accomplished what they did without the help of their mentor and the support of the AACC are the rule not the exception. One would be hard pressed to find anyone that feels that this project has not been helpful in the promotion and improvement of technology education at the community college level. Beyond the relationships formed between the mentee/mentor teams and the positive professional development of the involved faculty, are the collaborations of faculty at geographically distant or not so distant locations that will continue after the project ends and possibly grow as time goes on. In some cases, community college faculty are interacting with faculty at four-year institutions or with high school teachers or both in an effort to grow their network of collaborators. Some of the mentee teams have talked about the idea of forming national centers of collaboration for the emerging technologies that they are involved with. These entities would serve as resource centers that could disseminate information about their new programs to others that are contemplating starting their own programs in a newly emerging technology. The reality is that it is not easy to find another degree or certificate program in video game technology, for instance, let alone be able to talk to the faculty that teach the program without these types of resources! Challenges to the success of the mentee/mentor teams tend to be mostly political or out of the control of the team. Budgets do get cut, Deans and College Presidents come and go, and institutions do reorganize or change focus. These realities are a part of life, and as frustrating as it may be, they do happen. Individual project team members may leave the host institution or take on different roles within the institution and are therefore, unable to continue with the project. Unfortunately, team members can become ill and be unable to continue their project involvement or even pass-on unexpectedly. Life happens. All in all, the *MentorLinks* program has been an overwhelming success at improving technology education at both the regional and national level through the faculty collaborations that have formed during the life of the project. *MentorLinks* serves as a national model of how faculty collaboration and mentoring can provide benefits to the community college educational system and eventually have an impact on the development of a national technology workforce. And, as the expression goes, the resulting faculty professional development has been priceless!

#### References:

1. Web site reference: [www.microsoft.com/presspass/press/2000/jan00/classof02pr.mspx](http://www.microsoft.com/presspass/press/2000/jan00/classof02pr.mspx)
2. See web site reference: [www.nspinfo.com](http://www.nspinfo.com)
3. AACC Project Brief, 2004, AACC-PB-04-1, *MentorLinks: Advancing Technological Education*, by Ellen Hause
4. *AACC will continue MentorLinks with NSF funds*, by Madeline Patton, Community College Times, October 26, 2004
5. *Request for Proposals: MentorLinks Colleges*, AACC, 2005

6. Ref. 1