

Year One Interim Report of the Project M³ - Preparing Tomorrow's Teachers to Use Technology

Executive Summary

Project M³: Models, Mentors, and Mobility is a three-year project funded for over \$1.1 million by a Preparing Tomorrow's Teachers to Use Technology (PT3) grant from the United States Department of Education. Over the next three years, Project M³ will focus on preparing COE pre-service teacher education students to use technology in educational settings.

Project M³ is based on three basic beliefs. First, pre-service teachers must see **Models** of meaningful methods to integrate technology into their subjects to help students reach standards of achievement. Second, pre-service teachers need faculty or student **Mentors** who know and understand technology and who are already using technology effectively. Finally, we must bring technology to students rather than the students to technology and thus overcome technology **Mobility** problems. An important part of the M³ Grant includes the use of mobile computing as a method of engaging students and teachers in innovative applications of technology in instruction.

Five K-12 Partner Schools are included in the grant. The K-12 partners include a comprehensive high school, an alternative high school, a middle magnet school, a parochial elementary school, and an inner city elementary school. All public schools are a part of Unified School District 259, Wichita Public Schools, and the parochial school is a part of the Wichita Catholic Diocese.

Three main goals were established to guide project activities and the project evaluation. The goals were:

Goal 1 Models. Members of the WSU Teacher Education (TE) faculty, PreK-12 Partner faculty, and Liberal Arts and Sciences (LAS) and Fine Arts (FA) faculty will effectively model the integration of technology into pre-service teacher education and content area coursework, by designing, implementing, and disseminating models of practice.

Goal 2 Mentors. The COE will coordinate the development of a broad-based network of mentors that will provide training and support for TE faculty, LAS and FA faculty, K-12 partners, and pre-service teachers.

Goal 3 Mobility. Project M³ participants will expand student access to technology in classrooms and authentic learning environments by using laptops, wireless networks, and on-line instruction.

A number of objectives were written for each goal area. Shown below are key findings, conclusions and recommendations based on evaluation findings related to each of the Year 1 Project Objectives.

Goal 1 Models

Year 1 Objective 1.1 Models in Teacher Education

TE faculty in the COE will increase the use of technology in teacher education coursework.

- Baseline documentation was developed to assess infusion of ISTE standards into core teacher education courses. Preliminary results indicated the need to expand the use of technology in most of the core courses offered during the student teaching block.
- Baseline questionnaire results indicated that 43% of the COE Faculty and K-12 Partner Teachers responding rated their stage of adoption of technology at the awareness, basic use, or beginning use levels. Thirty-three percent (33%) reported that they were gaining a sense of confidence about using the computer and other forms of technology for specific tasks. Eighteen percent (18%) reported that they were using technology to prepare for and involve students in instruction. However, at the beginning of the year, only 8% of those completing the questionnaire reported frequently integrating technology in a way that involved students in instruction.
- Thirty-three percent (33%) of COE Faculty and K-12 Partner Teachers responding to the baseline survey expressed little concern or involvement with the use of technology. Other respondents expressed concerns related to learning more about technology (7%), their role in its use (13%), or how they would manage the use of technology in instruction (40%). Only 7% expressed concerns about how the use of technology might impact instruction. None of the respondents made initial statements about how they might collaborate with others about using technology or exploring more universal benefits of integrating technology into instruction.
- A high percentage of COE Faculty and K-12 Partner Teachers participated in a number of technology related Project M³ workshops during the first year of the grant. Feedback from participants regarding the workshops was positive.
- First year M³ evaluation results obtained from interviews and surveys indicate that COE Faculty and K-12 Partner Teachers are beginning to use a greater variety of hardware and software applications to redesign courses and present instruction. Several faculty and staff indicated that they have begun to use the Wireless Mobile labs, BlackBoard, and other web-based software to involve students in instruction.
- Pre- and post HP*RTEC PT3 Basic Skills survey results indicated that pre-service teachers participating in student teaching block courses increased their technology skill levels in 97% of the items included on the survey between fall and spring semesters.

Year 1 Objective 1.2 Models in PreK-12 Schools

PreK-12 teachers identified as technology mentors for pre-service teachers will increase the use of and level of use of technology in their classrooms by designing, implementing, and disseminating models of practice.

- The TIPS website for posting models of practice was developed. There is evidence that teachers are not only accessing the website but also sharing formally and informally the models presented.

- Several teachers participating in interviews about the M³ Project reported developing their own applications of technology, for example, through design of multimedia projects and web pages.
- Feedback obtained from K-12 Partner School teachers during interviews indicated that information about the M³ Grant was not well publicized in their schools. They felt that there was a lack of understanding about the M³ Project and how teachers could access support or services available through the grant.

Year 1 Objective 1.3 Models in LAS and FA

Faculty in LAS and FA who teach pre-service teacher education students during their General Education and major coursework will increase the use of and level of use of technology in their classrooms by designing and implementing models of practice.

- Demonstrations of wireless technology increased communication about its use within the COE, as well as with other colleges and units on campus.
- Exposure to and use of technology in LAS and FA were expanded to include video, Internet, and PDA projects.
- Development has begun in the use of technology in some music education course offered in LAS/FA.

Year 1 Objective 1.4 Model Practitioners in Partner Schools

WSU will increase the number of model practitioners infusing information technology into their PreK-12 classrooms to serve as role models and mentors for pre-service teachers.

- During Year 1 of the project, M³ staff began an informal process of identifying K-12 teachers that demonstrated higher levels of skills and integration of technology. M³ Staff is designing a process for involving these practitioners as models, cooperating teachers, mentors, and/or in-service instructors during the second and third years of the M³ grant.

Conclusions/Recommendations

- Analysis of data gathered from multiple sources indicates that M³ Project personnel effectively planned and implemented a number of activities designed to achieve objectives related to Goal 1 during the first year of the M³ Project.
- It is recommended that the M³ Staff continue to involve a broad base of M³ Grant participants in developing and implementing a year 2 plan that outlines grant activities, levels of participation, and project evaluation activities.
- Project personnel should continue to plan for and provide opportunities for participants to expand their knowledge and technology related skills during the second year of the grant with emphasis on:
 1. infusing technology into core courses included in the student teaching block,
 2. expansion in the use of technology in K-12 Partner Schools, and
 3. increasing faculty involvement in teacher education related courses in LAS/FA.
- A greater effort should be made to develop a comprehensive set of materials outlining information about the grant and how individuals can access grant services. These materials should be made available for dissemination to all Project participants.

Goal 2 Mentors

Year 1 Objective 2.1 Mentors from Business/Industry

Identify and utilize mentors from business/industry to provide training for grant partners.

- Five COE faculty and the M³ Project Evaluator participated in the on-line course provided by Apple Computer entitled, "Teaching, Learning and Technology, A Planning Guide." This course occurred over several weeks.
- A systems engineer from Apple Computer worked with the M³ staff and provided assistance in setting up the AirPort for the North High Network.
- The Boeing Company provided a \$10,000 grant for M³ to purchase and train K-12 teachers in Lego MindStorm Robotic Kits.
- Bob Ward, a business partner with the M³ Grant provided access to a server for St. Patrick's School to build a web site.

Year 1 Objective 2.2 Mentors from Professional Resources

Identify and utilize mentors from professional resources to provide training and support for grant partners

- The M³ Project co-sponsored EXCITED about On-line Teaching. M³ staff provided technical support for laptop poster sessions.

Year 1 Objective 2.3 Mentors from Model Practitioners

Identify and utilize mentors from model practitioners in the schools to provide training for partners

- Several teachers from non-partner Wichita Public Schools participated in the TIPS project. Teachers involved in TIPS were recruited to help in mentoring and training M³ Partner School teachers and staff.

Year 1 Objective 2.4 Student Mentors

Continue to use student mentors to provide training and support for grant partners

- A total of 99 project participants were served through the Student Mentoring program during the 2000-2001 school year. In all, 102 different projects were initiated, which resulted in 1194 separate mentoring sessions. Student mentors logged a total of 2,429.5 mentoring hours during the first year of the M³ grant.
- Feedback from Mentees on their post-project feedback forms indicated a high level of satisfaction with their participation in the M³ Mentoring Project. After disregarding N/A responses, 100% of those responding were in agreement that they would recommend the experience to others.

Year 1 Objective 2.5 Parent Mentors

Develop parent mentors from the partner schools to provide support and training for grant partners.

- Principals from the Partner Schools identified 2 parents from each school to participate in the Parent Advisory Board. The first meeting was held in May 2001.
- A parent section has been developed on the M³ Web Site providing parents with links to 15 different Web Sites containing parent resources. An interface containing "search engines for kids" was also built to assist parents in helping students in K-12 schools access and use the Internet.

Conclusions/Recommendations

- There is considerable evidence that M³ Grant Personnel facilitated a number of activities throughout 2000-2001 that supported the accomplishment of Goal 2 objectives.
- It is recommended that the M³ Project staff explore ways that additional mentors from business and professional sources can be identified and trained in an effort to provide more support for WSU Faculty and Partner School Teachers.
- The Student Mentoring Project should be continued with a greater emphasis on providing direct services and support for teachers toward the infusion of technology into classroom instruction.
- M³ Project staff should explore ways that additional Parent mentors can be identified and trained in an effort to provide additional parental resources for families and students involved in K-12 Partner Schools.

Goal 3 Mobility

Year 1 Objective 3.1 Mobile Labs

Provide mobile computer labs with wireless technology for anytime, anywhere instruction in the College of Education and in Partner Schools.

- Feedback from multiple sources provided considerable evidence that the mobile computer labs purchased through the grant were utilized extensively in classrooms at WSU and in the two partner schools involved in the project.

Year 1 Objective 3.2 Mobile Instruction

Utilize on-line instruction to increase training for students and faculty at WSU and grant partners

- Twenty-five PK-12, three M³ staff and eight WSU M³ Student mentors took part in Connected University courses during the year. Participants reported high levels of satisfaction with the courses that were taken.

Conclusions/Recommendations

- M³ Staff purchased the necessary hardware and software to provide 4 Wireless Mobile Labs to teachers and staff at WSU College of Education and two Partner Schools.
- The faculty and staff's at WSU and in Partner schools received training on how to use the equipment and software in their instructional program.
- It is recommended that Wireless Mobile Labs be purchased and provided for the remainder of the Partner Schools and that the staffs become involved in training on how to use the equipment and software in their instructional programs.