

Best Practices and Exemplary Application of Technology in Higher Education

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Overview

Delta State University is a regional institution providing educational opportunities for a population that has been traditionally underserved. The poverty level of communities in the region has risen in the last ten years while the general population has declined in the small towns and communities that make up the Mississippi Delta. These factors have meant the tax base for schools of the region has diminished significantly creating a climate that limits access to technology in area schools and communities.

The Center for Teaching and Learning (CTL) located in the College of Education at Delta State was envisioned in the 1999-2000 school year as a catalyst for systemic change across the college and region as related to technology and its place in the education of the P-12 community. The mission of the CTL is to create a resource-rich culture of teaching and learning with full staff capabilities to support technology utilization in a variety of settings for DSU faculty and students, the P-12 schools and the community at large. The Center is committed to promoting an infusion of varying levels of technological practices into curriculum through its innovative structures as well as through the more traditional avenue of computer labs, hardware, software, and other resources. The physical layout of the CTL was designed to offer opportunities for high levels of student engagement with peers, faculty, staff, and technology resources.

The Center's goals include: 1) implementing appropriate standards for technology and high quality educator preparation programs across the graduate and undergraduate curricula, 2) providing access to technology for students and faculty in a variety of settings within the college, 3) providing access to state-of-the-art, technologically resource-rich environments for PK-12 partner schools and the greater community, 4) supporting web-based teaching and learning components, and 5) expanding e-learning capabilities to meet regional needs.

Staff

The staff of the CTL provides on-going, on-site training and technical support for the greater DSU community. The Technology Coordinator for the College, the CTL Director and the Computer Technical Specialist provide a full range of services for all CTL users. Individual and small group training sessions for faculty, students, and community participants, as well as topical seminars, are regularly offered to meet individual needs and to assist in the full implementation of all technology initiatives. These staff members also develop training products and processes and oversee the student technology support system developed for the Center.

Student Support System

Student staff members in the Center for Teaching and Learning (CTL) have been a vital and valuable component of the Center's success. The student staff members provide individual and small group training and support for a wide range of technological applications including WebCT and the full complement of Microsoft Office programs. In an effort to provide more technical support to students, faculty, and the community, Tech Fellows have been added to the CTL staff to augment the graduate assistants and other student workers. While all student staff members provide regular assistance to those using the CTL, the Tech Fellows are student workers who have been specifically trained to provide assistance with the most intense and sophisticated offerings of the Center. The student members of the CTL staff are not only providing a valuable service but are enhancing their own capabilities in demonstrating leadership in technological advancement.

Major Initiatives of the Center for Teaching and Learning

The E-Learning Program

The Delta State University E-Learning Pilot Program was implemented in the 2004-05 school year as a new initiative of the Center for Teaching and Learning. The pilot allowed the university to identify the most efficient means for developing a full-scale e-learning program for Delta schools. After a needs assessment was conducted with area school districts, it was determined that Spanish language classes were the courses to be included in the pilot. During the pilot year, a certified Spanish teacher appropriately trained in distance learning techniques taught classes to 60+ students via an interactive video system. Because the pilot year proved to be very successful, additional funding to continue the program was sought and provided from the State Board of the Institutions of Higher Learning and the Mississippi Department of Education.

The Technology Coordinator for the College of Education provides oversight for the E-Learning Program with the involvement of the Executive Director of the Delta Area Association for the Improvement of Schools (DAAIS) and the Dean of the College of Education. The staff of the Center for Teaching and Learning supports the technical aspects of the program. Mississippi Public Broadcasting serves as the bridge to allow for connectivity between the school districts and the university while Delta State University provides financial and managerial oversight for the program.

Participating school districts have provided appropriate classroom space and on-site equipment including computer access for students. Additionally, districts have purchased textbooks and workbooks, provided a classroom facilitator, and made technical support available as needed.

Qualitative data obtained through multiple school site visits, email correspondence and written feedback from students and school personnel formed the basis of the evaluation of the pilot program. All evaluative information indicated a very high degree of satisfaction with the e-learning pilot. Additional evaluation strategies will be employed at the end of the 2005-06 school year and will focus on student/teacher success, technology effectiveness, and efficiency of program operations. Evaluation results will be used in planning subsequent years of the E-Learning Program.

The major components of the E-Learning Program include the following:

- Two interactive video studios used to broadcast classes to area schools;
- Fully certified faculty providing instruction in advanced courses;
- Appropriate staff to ensure efficient operation and sufficient technology support;

- State-of-the-art equipment for operations and broadcasts;
- Training for Center faculty/staff and district personnel; and
- Collaborative structures to foster strong communication among districts, university personnel, and Center staff.

Five area high schools with a total of 205 students are currently enrolled in e-learning classes of Spanish I and Spanish II for the 2005-06 school year. Plans are to expand the program for the spring 2006 semester to include additional faculty to teach advanced placement classes in the sciences and mathematics and to offer enrichment activities in the arts as an after-school component.

Mississippi Teacher Fellowship Program

In a collaborative effort with the Mississippi Teacher Fellowship Program (MTFP) and the University of Mississippi, the Coordinator of Technology for the College of Education at Delta State University conducts technology training each year for the new fellows selected for the MTFP. With a program designed to encourage graduates of teacher education programs to stay in Mississippi and teach, MTFP pays for these graduates to earn advanced degrees. Along with tuition and stipends for books, each fellow is given a laptop computer. Delta State University's Technology Coordinator provides training for the new fellows and mentors in the group throughout their first year of teaching. Mentoring involves contact through meetings, email, and facilitated regular chat sessions. The mentoring process not only builds capability in using technology but also enhances the support system for the fellows in the program.

TEK PAKS

Although teacher candidates have the responsibility of including technology in their field experience lesson presentations, many Delta area schools do not provide the technology needed for teacher candidates to be successful in this aspect of their teaching. The Office of Field Experiences and the Center for Teaching and Learning have equipped TEK PAKS for student to check out and use during their field experiences. Each TEK PAK includes a digital still camera, a digital movie camera, a laptop computer, and an LCD projector to provide teacher candidates with the most up-to-date technology tools needed for the immersion of technology into their lessons. Additionally, teacher candidates are provided with appropriate training and support to allow them to be successful in their technology implementation.

Resource Training Site

It is fully recognized that simply "having" technology is not the same as "using" technology. With this in mind, the CTL has positioned itself to serve as a resource to university faculty and students, teachers and administrators in the PK-12 schools, and other community entities in developing an appropriate level of confidence in the use of a variety of technological tools.

College of Education faculty ensure that all teacher education students are aware of the expectations of their program in building the capacity to positively impact technology use in their schools. Class training, small group sessions, individual tutoring, and tutorial software are all provided to students to assist in their development in effective technology use. Faculty training sessions and individual assistance is also provided in the CTL Faculty Development area. This

section of the CTL allows faculty privacy for tutoring sessions when developing their technology skills.

The College of Education at DSU partners with the Delta Area Association for the Improvement of Schools (DAAIS) in working toward meeting the needs of the PK-12 community. The consortium is composed of 30+ school district members as well as a local community college and is housed in the College of Education. This physical proximity allows appropriate planning and collaboration to take place with member schools. Training sessions within the Center for Teaching and Learning, on-site training provided at individual schools, and individual and small group assistance are all regular features of the work of the CTL with our partner schools.

Additionally, the CTL is available to community entities for training sessions as needed. Because the training facilities are state-of-the-art, they provide community members with an excellent location at which to meet their training needs.

Demystifying technology and focusing on its applicability to improve the quality of life and services in the Delta region have served as the two focal points for all CTL endeavors.

Site-Based Support

The staff of the CTL is available to serve as on-site facilitators and/or consultants for the PK-12 schools of the Delta. Workshop offerings at schools have ranged from the use of PowerPoint as a presentation tool to using technology as a means of mentoring new teachers. Requests for on-site support are received by the DAAIS Consortium office and coordinated by them through the CTL to ensure an appropriate “match” with the needs of the district/school needing assistance.

The Portable Lab

A portable lab with wireless connectivity and 20 state of the art lap top computers is available to faculty for use in their classrooms. Each lap top is equipped with all software applications available to students and faculty in the Center for Teaching and Learning training lab. The increasing use of technology by all programs in the College of Education has been evidenced by the large number of reservation requests for the training lab. The portable lab offers faculty members an alternate solution for technology use when the CTL training lab is not available.

Mini-Labs

Mini-Labs containing program-specific software and 5-8 computers have been provided through the CTL for several programs within the college. These labs allow faculty close proximity to computer use for research activities with their students. The labs provide an invaluable service in promoting student research activities in a user-friendly environment and support the belief that research can inform practice.

Technology Model Classrooms/Smart Carts

Two model classrooms have been developed within the College of Education to allow faculty to model “best practices” in the use of technology. Each classroom is equipped with a ceiling-mounted LCD projection system, a document camera, and a Symposium to be utilized for presentations by faculty and students, instruction using Internet access, and lesson development activities. Additionally, SMART carts are also available in the College for use in those classrooms that have not yet been equipped as Model Classrooms.

Technology Assessment for Teacher Candidates

The College of Education at Delta State University has created a Technology Assessment for Teacher Candidates. Using a technology model created through a PT³ grant at the University of Southern Mississippi as a model, the College of Education Technology Assessment consists of four modules, each of which assesses basic computer skills in the areas of word processing, multimedia presentations, telecommunications, and databases/spreadsheets. Students complete each module on the computer, banking each portion successfully completed and receiving the opportunity for instruction on portions needing remediation and reassessment. The successful completion of this assessment is a requirement for admission to Teacher Education.

The Learning Curve

An increasing number of students come to Delta State University with deficiencies in one or more areas of basic skills. In an effort to assist these students, the College of Education has created *The Learning Curve*, a lab within a lab in The Center for Teaching and Learning. *The Learning Curve* provides computer-assisted instruction and technology support to students under the tutelage of the Tech Fellows. Faculty members send students to the CTL using referral forms noting areas in which student need improvement. Students receive instruction in generating programs and sites to help with their remedial areas. Successful remediation and assessment will be reported to the appropriate faculty member(s) and tracked by the CTL.

TaskStream Tools of Engagement

The College of Education has adopted the use of TaskStream for programs involved in the preparation of teacher candidates. TaskStream provides an array of web-based tools for teacher education programs. Faculty and administrators manage and distribute course materials, review student work and track student progress, create portfolio templates and assess student portfolios online, develop curriculum easily referencing state and national standards, and prepare assessment rubrics. TaskStream’s reporting tools aggregate and disaggregate data for accreditation support.

Students submit work for review and evaluation, receive feedback from instructors and peers, and author standards-based lessons and units. TaskStream’s Web Folio Builder makes it easy for students to create, organize, and share electronic portfolios that demonstrate standards compliance for certification. Instructors create online programs through which they distribute course materials and review students work. College of Education students access these class resources and submit work to their instructors online. Email and instant messaging systems facilitate collaboration, and faculty members establish discussion groups and post announcements for their classes to support multiple modes of communication.

Outcomes

The success of the Center for Teaching and Learning can be seen in the increased number of students, faculty, and school districts making use of the services. As an example, data collected in student use since the CLT opened shows a dramatic increase as noted below:

Student Lab Use

1. 2011	
1. 7416	
2001-2002	8623
2002-2003	15508
2003-2004	16011
2004-2005	16876

Training lab data was only collecting since 2003 but shows an increase of almost 2000 participants.

Training Lab Use

2003-2004	5374
2004-2005	7111

Additionally, the E-Learning Program grew from 2 schools with 60 students in 2004-2005 school year to 5 schools with over 200 students in the fall semester of 2005. Several additional school sites have indicated a desire to be part of the e-learning program as it expands during the spring of 2006.

Qualitative data has also been collected through faculty and student surveys, informal feedback via conferences and email, and formal feedback sessions with division and school district representatives, structured interviews by external evaluators, and written letters of thanks and support. All data collected has indicated a highly positive rate of approval for activities of the Center for Teaching and Learning. Annual evaluation of all components of the CTL allows decisions to be made to both sustain successful programs and to enhance programmatic offerings.

Sustainability

The administration of Delta State University has regularly demonstrated its commitment to sustaining all activities and initiatives of the Center for Teaching and Learning. While grant monies have allowed the development of the CTL's programmatic offerings, all can be sustained with funding from other sources. Faculty, staff, students, and the Office of Institutional Technology also have indicated their support of the initiatives of the Center for Teaching and Learning.