

E-Learning for University of Hawaii's Professional and Graduate Programs for Teachers on Neighboring Islands

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This paper describes the preparation and implementation of professional and graduate programs by the College of Education (COE) at the University of Hawai'i at Manoa for teachers on the neighboring islands of Hawai'i. The phenomenal growth in online and blended programs in the College and the recent change in course management system at the University has created added stress for busy faculty. The investment in providing quality professional development has been fruitful. The Online Master's in Educational Technology is one of ten online programs offered by the COE. The program of study duplicates the campus-based program but a flexible schedule accommodates the unique needs of neighbor island students. Several observations are shared about the OTEC program that may provide insight to those interested in designing an online program.

Keywords: e-Learning, professional development, educational technology,
online program, Hawaii islands

Introduction

The geographical and logistical challenges of preparing teachers in the state of Hawai'i have required the College of Education (COE) at the University of Hawai'i at Manoa (UHM) to be innovative in delivering instruction to distant learners across six islands. Like many other institutions with growing online programs (Allen & Seaman, 2007), the COE has implemented e-learning to make courses more accessible to students. Since 2003, the COE has shifted from delivering programs over interactive and cable TV to using Internet-based delivery systems that allow instructors and students to participate in a classroom-like environment.

Course management systems (CMS) such as WebCT and Blackboard are online software systems that facilitate e-learning through their content delivery, communication and assessment tools (Carnevale, 2005 and Hutchins, 2001). CMS are crucial for online and hybrid course delivery and are becoming increasingly important for face-to-face course facilitation as well (Eichelberger, 2008). Many institutions are implementing a CMS due to increased student

demand, pedagogical advantages and more efficient student services (Masi & Winer, 2005). Additionally, many institutions are switching from proprietary, fee-based CMS such as WebCT and Blackboard to an open-source CMS such as Sakai, not only for obvious financial advantages but also for increased functionality. The cost for the customization of Sakai to fit an institution's needs is nominal compared to paying expensive and recurring software licensing fees. This open-source system is developed and upgraded and freely distributed among its community of users. The inherent flexibility in pedagogical applications is appealing especially since the locus of control remains with the host institution (Beatty & Ulasewicz, 2006).

In 2007 the University of Hawai'i migrated from WebCT to its own Sakai-based LMS known as Laulima. Faculty members who invested a lot of time in developing WebCT courses were not happy with the change. Faculty in the COE were similarly concerned about the change instituted by administration. Nevertheless, faculty have remained committed to e-learning and have moved forward to meet the challenges of providing courses and programs to students with limited access because of geographical or time restrictions.

The purpose of this paper is to describe the preparation and implementation of professional and graduate programs by the COE for teachers on the neighboring islands of Hawaii and in particular, highlight the implementation of an online master's degree program.

e-Learning Programs for Teacher Education

Hawai'i faces a severe shortage of licensed teachers, especially on the neighbor islands. Over 5,000 new teachers will be needed over the next few years. Since Fall 2003 the College of Education has increased the number of teaching degree and graduate programs statewide. Five programs leading to teaching degrees and five graduate degree programs are offered through blended or online modes (see Table 1). While the fully online programs may require a face-to-face orientation at the start of the program, the blended programs vary in the proportion of face-to-face and online activities throughout each course. As the blended programs have matured, the frequency of face-to-face activities has diminished. The teaching degree programs require student teaching in the final semester. This is accomplished at local schools with assigned student teacher supervisors on each island.

Whether blended or fully online, e-learning courses are perceived by students to be time flexible with improved learning outcomes. However, technology issues, expectations of less work, time management, and readiness for an active learning role are reality challenges (Vaughan, 2007). For instructors, their perceptions of e-learning teaching are: enhanced teacher/student interaction, improved student engagement, flexible teaching-learning environment and continuous student improvement over time. Their challenges, however, are: greater than expected time commitment, need for professional development and technical support, and the risk of losing control over students and receiving lower student evaluations (Vaughan, 2007). There is also a concern by faculty that the extra time and effort to teach an e-learning course is not adequately recognized for tenure and promotion and that their time would be better spent publishing articles and books.

Table 1. *COE e-Learning Programs by Mode*

Teaching Degrees	Mode
Elementary Education, B.Ed./Certificate	Blended
Secondary Education, Post-Baccalaureate	Fully Online
Special Education, Certificate/Master's	Blended
Early Childhood, Master's	Blended
Curriculum Studies, Master's	Blended
Graduate Degrees	
Educational Administration, Master's	Blended
Educational Foundations, Master's	Fully Online
Educational Technology, Master's	Blended
Rehabilitation Counseling, Master's	Blended
Middle School Teaching, Master's	Fully Online

Faculty and Course Development

The issue with faculty preparedness to teach with technology is ongoing and pervasive among institutions of higher education (Hartman, Dziuban & Brophy-Ellison, 2007). A university's adoption of a CMS for all courses, even face-to-face ones, brings added pressure and stress to faculty. Faculty concerns in the College of Education at UHM are no exception. Eichelberger (2008) surveyed technologically successful COE faculty about their perception on technical changes faculty are faced with, especially with the transition from WebCT to Sakai and found that most participants have a strong resistance to change. One participant went on to say,

“My experience is that technology change comes in spurts from others (usually as a mandate) and that as an instructor, I have little time to adapt or adjust...I always feel like I'm fixing the car while driving it. Not a very pleasant thought!” (p.4)

In this same study, (Eichelberger, 2008) participants cited faculty development as being crucial for the successful integration of technology in courses. The COE offers technology workshops, seminars and technical support to all faculty members. It also offers one-on-one technology mentoring, in which a faculty member is paired with a graduate student to work on a specific technology application for a particular course. Although faculty initially resisted the change to a new CMS, their attitudes have remained positive, especially knowing that they can count on support from the College. Many were highly motivated to attend Lulima (Sakai-based) workshops when help was provided to transfer WebCT course content to the new CMS. Many more took advantage of the technology mentors who helped with content organization and

course design. Faculty who were required to teach in an online program were given a course release to re-design their courses for Lualima delivery.

Design and Implementation of an Online Master's Program

The department of Educational Technology offers a master's degree and a Ph.D. specialization in the College of Education. The master's program began in 1966 and is the only graduate degree program in educational technology offered in the state of Hawaii'i. Although individual courses have been offered statewide since 1990 through interactive television and then online, the master's program was campus-based and unavailable to those living on the neighbor islands. As the population growth on the neighbor islands expanded, so did the demand for a master's program. Elementary and secondary school teachers, community college staff, and higher education faculty living on the islands of Hawaii, Maui, Molokai and Kauai made many requests for a statewide program over the years. Many wanted to continue their academic growth and advance their knowledge and skills in designing, developing, implementing and evaluating educational technology.

In 2005, the department of Educational Technology began re-designing its campus-based master's program for online delivery based on research and from lessons learned from 15 years of offering distance education courses. The Online Master's in Educational Technology (OTEC) was designed for practitioners, especially on the neighbor islands, who use technology in creative and effective ways in their teaching and work (Menchaca, 2007). The initial cohort of 20 students began in Fall 2006 with subsequent cohorts of 13 and 16 students in 2007 and 2008 respectively (see Table 2). A cohort of 20 students was determined to be too large based on feedback by all faculty teaching and advising students in OTEC, therefore a smaller cohort of 13 students was admitted the following year. However, because the OTEC program is offered through the UH Outreach College, a smaller cohort size did not generate enough tuition for the program to be fiscally sustainable. The target size of 16-17 students was determined to be optimal for faculty workload and fiscal sustainability.

Table 2. *Demographics of Online Students*

Cohort Year	2006	2007	2008
Cohort Size	20 students	13 students	16 students
Working Full-time	100%	100%	100%
K-12 Teachers	65%	54%	38%
Higher Education	15%	38%	38%
Neighbor Islanders	80%	100%	88%

Table 2 also illustrates that most of the OTEC students reside on a neighbor island and that all are working full-time either as a K-12 teacher or higher education faculty or staff.

Flexible Schedule, Blended Program

The program of study for the OTEC program is identical to the campus-based version with 12 courses that total 36 credit hours. OTEC was designed as a 2-year program, though students may choose to take an extra year if needed. Through past experience in offering courses to neighbor islanders, it was determined that a more flexible schedule was needed. Neighbor island students come from rural towns and are deeply involved with family and community activities while working full-time. A split, three-course semester was designed so that one course (Part A) could be taken in the first five weeks of the semester and two courses (Part B) could be offered concurrently in the remaining ten weeks of the semester (see Table 3). Students have appreciated having only two concurrent courses in a semester but find that a compressed five-week course is a challenge.

Table 3. *OTEC Program of Study*

Year 1 - Fall Semester	
Part A (5 weeks)	Part B (10 weeks)
ETEC 602 Teaching/Training Tech	ETEC 600 Ed Tech Theory & Practice & ETEC Elective 1
Year 1 - Spring Semester	
Part A (5 weeks)	Part B (10 weeks)
ETEC 603 Instructional Design	ETEC 601 Ed Tech Research Review & ETEC Elective 2
Year 1 – Summer Session (6 weeks)	
ETEC Elective 3	
Year 2 – Fall Semester	
Part A (5 weeks)	Part B (10 weeks)
ETEC 750 Seminar - Master's Project	ETEC 687 Instructional Dev. Practicum & ETEC Elective 4
Year 2 – Spring Semester (15 weeks)	
ETEC 690 Culminating Seminar & ETEC Elective 5	

OTEC was designed as a blended program that includes limited but mandatory face-to-face sessions during the first semester of study. Students take seven required courses as a cohort to facilitate the building of a learning community. They choose five elective courses from a flexible schedule to meet their needs and interests. To foster community building, the program starts with a required 3-day weekend retreat on the UHM campus as part of the first required

course. The retreat is also used to provide students with basic skills in being a success online learner and for developing skills in basic software applications and in using the Laulima CMS. Two other mandatory face-to-face weekend meetings are scheduled in the first semester, one as a transition from the first 5-week course to the second required 10-week course, and the other at the end of the semester. No other face-to-face meetings are required for the remainder of the program.

Observations and Generalizations

Data from several sources have been useful in informing OTEC faculty about revising courses and the program of study. Course evaluations, student reflections, online discussions, and electronic portfolios provide insight into what works well and what needs fixing. A formal study to examine the data is underway but in the meantime, discussions with OTEC faculty based on their own interpretation of the data have yielded several interesting observations and generalizations.

Synchronous sessions are valued. Elluminate Live is a web-conferencing platform used by the COE to support online and blended courses. This platform is java-based and works with a range of bandwidths. Most instructors use Powerpoint slides on Elluminate to present content. Websites, video, animation and other applications through application-sharing are also used to engage students with the content. Thus, instructors have been able to appeal to the multiple learning styles of their students. It is interesting to note that students mainly appreciate the ability to interactive live with other students through voice and text. They especially value the group discussions in breakout rooms that allow them to share their thoughts and ideas with a smaller, less threatening group. For the required OTEC courses, weekly 2-hour meetings are scheduled. All sessions are recorded and made available for review. Another synchronous application, Skype, is used by student to collaborate on projects through VoIP and text messaging and for one-to-one meetings between student and instructor.

Technology should match instructional strategy. A variety of strategies are used in an e-learning environment and it is important to select the most appropriate tool that most optimally supports the activity. For example, for processing content, websites, learning objects, podcasts, wikis and online articles and books have been particularly effective. For discussing content, online discussion forums and web conferencing have worked well. Blogs and wikis have been excellent tools for reflection and sharing. OTEC students are frequently involved in problem-solving through collaboration and rely on Skype and discussion forums quite frequently.

Learning in a social context is vital to the success of e-learning. From the outset of the OTEC program, it was determined that the online learning community should have a social basis to increase motivation and collaboration and to decrease the sense of isolation. The face-to-face retreat at the beginning of the program includes activities that foster formal and informal student interaction. Social activities such as lunch, dinner and movies are also employed to get students to know each other. The social connection is carried on virtually through online courses using a number of tools such as blogs, discussion forums, Elluminate Live and Skype. Recently, a social

networking application called Ning has been used as a virtual social center for students to share stories, pictures, videos and other personal information. Ning is similar to Facebook, Mixi and CyWorld however Ning presents more options to customize a social networking site to the level of privacy desired by the users. Ning has been used for the past year and both students and faculty are highly satisfied with the results.

Neighbor island students have unique needs. Many students from the neighbor islands reside in rural areas that have a strong community presence. In many instances, work is accomplished with a neighbor helping another neighbor. With this background, it was important for OTEC courses to include a large number of group projects. Although the coordination of multiple schedules made life more complicated, most students preferred working in groups to stay motivated and on task. Neighbor islands students are typically older adults with work and family obligations, therefore, all synchronous sessions for OTEC are scheduled from 6 – 8 pm. The typical class time at UHM is 4:30 – 7:00 pm. The later class time provides ample opportunity for students to complete work and personal business before class starts.

Conclusion

The College of Education at UHM is committed to providing quality programs to all residents of the state of Hawai'i. The growth of online and blended teacher education and graduate programs required changes in the design and delivery of courses. Although the focus is often on the technology, e-learning works best when human needs are addressed. Therefore, it is critical to provide faculty with time, incentive and professional development to be able to teach online. It is also crucial to design programs that take into account the uniqueness of distant students. The Online Master's in Educational Technology started three years ago and the students have been very positive about their experiences. 85% of the students from first cohort have completed their master's degree. A similar level of completion is expected from the second cohort. Although practical tips based on personal observation and student feedback are shared among OTEC faculty to improve the program, a formal study is needed to provide a more objective perspective. Data from multiple sources have been collected and are being prepared for analysis with the hope of disseminating the results soon.

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