Professional Development

A Central American Success Story: Innovation in International Distance Education

Donald W. Poucher and Dave King

Abstract

Based on actual workshop experiences, faculty at the Honduran Zamorano University in Central America created an effective, size–neutral, world-class distance education (e–learning) program for serving learners throughout Latin America through online and distance learning technology. The program is known as PAC @ D (Programa de Aprendizaje Continuo a Distancia or Life Long Learning Program at a Distance). It is administered by Zamorano's global center for distance learning.

The establishment of PAC @ D in 2010 was preceded by workshop efforts begun in 2004 by the authors. The workshop efforts focused on bridging the cultural uniqueness of educational programs in Latin America and the United States. The goal was to assist local faculty and staff at Zamorano University to build their own digital platform effectively and extend academic and outreach programs through that digital platform.

The use of online and distance learning technologies can help extend intellectual capital beyond the limits of the physical campus in fulfilling the teaching, outreach/extension, and, to a limited extent, research missions. However, as we shall see in this professional paper, distance learning is more than turning on the technology with a click and a keystroke. At Zamorano, the development of PAC @ D required many hours of a full range of pedagogical and technological training, spread over 18 months. This professional development paper provides the rationale for PAC @ D, outlines its development, and provides suggestions for enhancing the educational experiences of distance learners.

Keywords

e-learning, distance learning, continuing education.

Introduction

During the late 1900s and into the 21st Century, online and distance learning/education technology has blossomed into a major teaching tool for adult education as well as for educating young people. Online education popularity is attributed to the emphasis on computer and Internet technologies, facilitation of interactive communications between instructors and learners in an online learning environment, use of electronic text and multimedia learning resources, the access to global learning resources and communities, and applications in both traditional as well as distance education courses.

The increasing popularity of online learning also is based on a changing communications paradigm: marketplace access versus distribution. In the information marketplace, learners can access any number of educational sources for their needed information as opposed to the delivery model where educators presented what they thought learners needed in a situation that afforded little choice of the information source or the information received (Poucher & King, 2007).

The popularity and utility of online learning continued to increase during the first decade of the 21st Century. In the United States, 3.5 million university-level learners were participating in online learning in 2006 (Ambient Insight Research, 2009). The Sloan Foundation reports an average increase of 12% to 14% per year in fully online enrollments between 2004 and 2009 among university-level learners as opposed to about 2% overall increases (Allen & Seaman, 2008). Kim and Bonk (2006) reflect that

> Institutions of higher education have increasingly embraced online education, and the number of students enrolled in distance programs is rapidly rising in colleges and universities throughout the United States. In response to these changes in enrollment demands, many states, institutions, and organizations have been working on strategic plans to implement online education. (para. 1)

Kim and Bonk also report that in the future, online learning will continue to be combined with face-to-face teaching, forming a blended environment. Furthermore, the quality of online education will improve in the future. Some 60% of respondents expected the quality of online courses will be identical to traditional instruction. Also, a majority of the respondents predicted the quality of online courses will be superior to (47%) or the same as (39%) that of traditional instruction by 2013. Only 8% predicted the quality of online courses would be inferior to courses taught by traditional instruction (Kim & Bonk, 2006).

In a Pew Internet/Elon University study, 60% of Internet experts, researchers, observers, and users agreed that in U.S. institutions by 2020, "there will be mass adoption of teleconferencing and distance learning to leverage expert resources … a transition to 'hybrid' classes that combine online learning components with less-frequent on-campus, in person class meetings" (Pew Research Center, 2012, para. 14).

Other studies support the supposition that the quality of online education will improve in the future. According to a U.S. Department of Education study, there are data indicating that among U.S. K–12 students, the older learners in online situations performed moderately better on average than those learning the same material through traditional face-to-face instruction (U.S. Department of Education, 2010). Florida is currently considering development of a totally online university much like that found among several private institutions and public ones in other states such as Colorado.

A so-called "flipped classroom" concept enables teachers to utilize recorded video lecture presentations for student viewing as homework assignments, reserving classroom sessions for problem solving applications in practice sessions. In one reported case, flipping resulted in a 33% decline in high school failure rates and after a year of use, a 66% drop in the number of disciplinary incidents from the previous year (Huffingfton Post, 2013).

The use of online and distance learning technologies can help you and your institution extend intellectual capital beyond the limits of the physical campus in fulfilling not only the teaching mission but also in succeeding in outreach/extension and, to a limited extent, research challenges. However, as we shall see, online and distance learning is more than a click and a keystroke. A case in point: The use of online and distance learning technologies has helped Zamorano University in Central America extend teaching and outreach programs beyond its physical campus. However, the Zamo-

rano experience involved more than turning on the technology. The development of the Zamorano digital platform required many hours of a full range of pedagogical and technological training, spread over 18 months.

The Case of Zamorano

Zamorano is an international university in Honduras with an academic focus on agricultural and natural resource development. Since its inception in 1941, Zamorano University has served more than 6,500 resident students (learners) from more than 20 countries throughout the Americas. About 1,100 resident learners live and study on a 7,000 hectare (more than 17,000 acres) campus and forest reserves located some 30 kilometers (19 miles) southeast of the Honduran Capital of Tegucigalpa.

Using online learning practitioners and developers from land-grant universities throughout the United States, volunteers Don Poucher and Dave King helped establish the foundation for an effective, size-neutral, world-class online and distance learning program at Zamorano. The project began in 2004 and assisted Zamorano faculty and staff in building their own program effectively, and, at the same time, creating a network of resources they can call on well past the completion of the first year for information and support as the Zamorano online and distance learning effort became a reality. The program aimed at supporting resident as well as distance academic programs and outreach.

Workshops

A series of eight two-day workshops over 18 months were designed and conducted to help Zamorano faculty and staff develop and implement effective e-learning programs throughout Honduras and other parts of Latin America. The workshops were hands-on and interactive, and they included outcomes or deliverables that could be replicated in an ongoing fashion after the workshops ended. The workshops were led by Poucher and King, who were primary resources in the 18-month Zamorano e-learning effort. Poucher and King engaged a high-level design team known as Technologia, Informacion, y Communicacion. Through that team, some 35 faculty, staff and student-learners were engaged in developing e-learning modules in support of campus activities. The workshops also included direct involvement of notable U.S. expertise in the e-learning area from several land-grant universities, industry, and professional organizations and covered the following elements:

Guiding Principles

Several sets of guiding principles currently offer support to a myriad of e-learning programs in the United States and around the world. *The Roadmap for Effective Distance Education Instructional Design* (Telg, Anderson, Bielema, & Dooley, 2005) was a primary resource tool. The workshop reviewed sets of guiding principles and how they could be adapted and implemented as customized sets relating directly to Zamorano's individual programs.

Needs Assessment

In higher education, faculty tend to assume they are the experts and overlook needs assessment, because as experts they know what their learners need. While faculty know much about what they think their learners need, they also tend to look at learner needs from a singular perspective. Needs assessment must take into account what people need as well as their wants, desires and motivations. The workshops included hands-on use of the detailed needs assessment matrix developed by Purdue University called Proposal Enhancement Tools (Purdue University, 2005).

Planning

Once the fundamentals were in place and well understood, a baseline was established and a long-term plan created that could be tested against the baseline over time. The ongoing program must be constantly redefined and refocused to address a relentless expansion and evolution of needs. In planning exercises, to accommodate programs that inevitably expand and increase with success, participants established a process that is size neutral and developed as deliverables a step-by-step timeline, including immediate next steps, dependencies that must be accomplished before moving on, a series of bench marks for periodic review, and a long-term set of attainable goals.

Content Adaptation and Development

Selecting content that matches and satisfies the identified learner needs, adapting that content, and developing the interactive environment in which learners can thrive requires a team approach with a broader understanding of the all of the factors — technology, instructional design, and subject matter expertise — to be successful. For content adaptation and development, participants reviewed the basic program management options and conducted hands-on testing of those options by a faculty and development team.

Evaluation

Evaluation is critical to the ongoing success of any e-learning program because work is never really completed with any project or learning opportunity. As one section concludes, what has been learned must be recycled, refined, and refocused for the next opportunity. As integral parts of the evaluation stage, participants reviewed multiple evaluation processes and identified ones that will provide the most appropriate decision data for Zamorano programs.

Workshop Outcomes

Participating faculty members and staff were intensely involved and able to apply what they learned to a greater degree than expected. The participant development process was well conceived, considering their early-adopter status and difficulties carving out the necessary time while maintaining ongoing faculty and staff duties and responsibilities. Expectations were met and exceeded by the workshop participants. The university's success in applying the workshops' lessons was demonstrated in the precipitation of major funding for the e-learning effort through a significant grant and a major gift from a private donor. In the final analysis, after the 18-month workshop effort, Zamorano University demonstrated the workshops' utility as faculty began building a global online and distance learning program.

e-Learning Center Launched

In June 2007, Zamorano President Ken Hoadley announced that Zamorano embarked on the task of launching its Global e-Learning Center with nearly $1 million (USD) pledged in support of the e-learning project at Zamorano from the Inter-American Development Bank and individual donor support. Hoadley recommended — and the Zamorano Board of Trustees approved — the conversion of existing space at Zamorano as well as construction of new space to accommodate the Zamorano University Global e-Learning Center. With additional extramural support augumenting the original nearly $1-million gift and grant funding, Zamorano was able provide a workable blueprint for e-learning development throughout Latin America as information technology was applied to engage learners, create new communities of interest, and enhance the Zamorano experience.

PAC @ D: Zamorano's Distance Education (e-Learning) Program

Zamorano University faculty created an effective, size-neutral, world-class distance education (e-learning) program for serving learners throughout Latin America through digital access. The program is known as PAC @ D (Programa de Aprendizaje Continuo a Distancia). The program is administered by Zamorano's Global e-Learning Center and is an online training program. PAC @ D helps Zamorano and its corporate and individual partners develop or improve the professional and business skills of Latin American agribusiness and agro-industrial interests and also improve the competitiveness and sustainability of the agricultural and natural resource sectors within current and future economic and market models. PAC @ D is part of the overall education program offered by Zamorano. PAC @ D is open to entrepreneurs, producers, developers, technicians, and professionals as a tool for creating in them a culture of continuous life-long learning. PAC @ D uses a pedagogical model focused on capacity development and use of information technology for self learning and decision making. PAC @ D seeks to continuously improve the efficiency and effectiveness of processes, solve problems, and minimize risk. The diversity of experience and eco-geographic origin of teachers and participants contribute significantly to provide a global perspective to learning and potentially create international communities of business and long-term collaboration.

Teachers, Tutors, and Technical Support

PAC @ D program participants enjoys the ongoing support of a professional team consisting of specialist teachers, tutors, and a technical support unit.

Specialist teachers are the experts who develop the content and course activities. They generally participate as guides in the lectures, discussions, and video sessions; they advise, review, and provide feedback the learners' work, and respond to technical questions related to the course.

Tutors are experienced professionals in the study area, dedicated to assisting and guiding participants in the daily work. Tutors streamline the process of learning. Throughout the course, the tutor is the main bridge between learners and Zamorano.

The **technical support unit** answers any technical question or addresses any technical difficulties related to the management of the Blackboard© platform or any other technology-based tool used during the course. This unit ensures open access and satisfactory interaction and learning opportunities for the program. From the technological point of view, all these facilities are managed by the information technology unit at Zamorano, also known as Informatica. From an academic technology standpoint, this unit supports all activities of teaching, learning, and communication associated with both the residential program and the PAC @ D. Zamorano is continually making significant investments to improve the ability of the technology infrastructure and thus ensure it is updated constantly to help improve the quality of its offerings to learners both resident and at a distance.

Courses

Zamorano began offering distances courses through PAC @ D in September 2009. Resident learners are not permitted to enroll in the distance courses. The cost of participating in the program is $450 (USD) per learner per course. The cost includes academic and technical support, specialist teacher and tutor, access to the learning platform Blackboard©, tools and content, and a certificate of participation. During 2009-10, some 380 distance learners were enrolled in 13 courses.

Zamorano's Progress

Since the e-learning workshop series began at Zamorano in 2004, the university has made excep-

tional progress in building a sound distance learning program through PAC @ D. Utilizing gift and internal resources, PAC @ D generated program income of $171,000 through the end of 2010. From program income received, Zamorano supports a PAC @ D staff of one instructional designer, two graphic artists, two programmers, and one information technology specialist. The tutors for course offerings are compensated from PAC @ D revenues, and on-campus departments and units involved in the courses also receive nominal support. Zamorano's direct investment includes space for the distance program, general support from the Informatica unit, and salaries of the overall PAC @ D director and his assistant, who also functions as an instructional designer.

Satisfaction Survey

Zamorano's distance courses through PAC @ D's have enrolled a variety of students since 2009. For purposes of evaluating the program, the PAC @ D director provided to Poucher and King the names of 300 students who have been or currently were enrolled in the distance courses. Most of these students are those who completed Zamorano's three-year Agronomo Ingeniero certificate program prior to Zamorano's addition of the fourth-year bachelor's degree program. Their obvious goal is to complete the fourth year at a distance and obtain their bachelor's degrees.

From the list of 300, Poucher and King randomly selected a sample of 50 students to be surveyed. Of the 50, 45 had correct e-mail addresses. These 45 students were first contacted by email on November 1, 2010, and were asked to complete a satisfaction survey, which consisted of 11 questions designed to benchmark their views on the PAC @ D effort. The survey was translated to Spanish and asked if the students had previously attended Zamorano as a resident student, their present employment situation, the number of courses they had taken, if they had completed the courses, if they were now taking courses, and their attitudes toward the courses, including why they were taking the courses, if they would recommend the PAC @ D courses to friends, and if they were pleased with their course experience. They also were asked to describe their course experiences and indicate how the PAC @ D courses could be improved. Of the 45 students surveyed, 32 provided responses (69%) over a three-week period during which they were reminded twice to return their replies to the email survey. Faculty participating in PAC @ D also were surveyed. The names of 13 faculty who were teaching PAC @ D courses in October 2010 were also provided by the program's director and simultaneously with the student survey, the 13 faculty were contacted by email and asked to complete the Spanish-translated satisfaction survey from their perspective. Of the 13 faculty, 12 (92%+) completed the survey that asked for their views on the PAC @ D distance program and for them to provide data on student performance and participation.

Survey Results

In general, Zamorano learners and faculty support the distance education efforts of Zamorano University through PAC @ D. They like or strongly like the distance learning concept and believe it should be expanded. Learners registered a 94% satisfaction rate with PAC @ D; faculty expressed a lower but still high satisfaction rate of 75%. Both groups believe the PAC @ D program deserves increased support from the Zamorano administration and believe the distance education effort should be more aggressive than at present and utilize full video technologies.

Conclusions and Recommendations

Several important recommendations are evident in the comments by learners enrolled in PAC @ D and by their faculty. Faculty attention to students and feedback, learner tracking, course expecta-

tions, and expanded distance tools were mentioned as important for improving course offerings. The Zamorano experience teaches that more than a click and a key stroke is involved in building successful online and distance education programs.

As a result of the faculty, staff, and student evaluations, Poucher and King recommended that the Zamorano administration embrace the fundamental concept that pedagogy and marketing are just as important as the technology as follows:

- Guiding principles, needs assessment, planning, content adaptation, and evaluation should be initial considerations in the development of programs.
- Faculty and staff should pay close attention to the needs of learners. Course subjects, schedules, and opportunities for the access and applications of knowledge gained are important considerations, along with costs.
- Learners should receive better feedback from faculty and staff, and learners' progress should be tracked on a course-by-course basis much in the manner of campus-based learners in face-to-face instructional situations.
- Course expectations should be clearly outlined by faculty and staff and explained thoroughly to learners at the onset of each program offered.
- A wide range of technology, such as two-way video, should be more broadly incorporated into programs to improve the interactivity with learners. The use of two-way video also will improve learner feedback and the ability of tutors and faculty to track student progress.
- Faculty and staff who participate in online and distance learning programs should be rewarded with either extra compensation or reduced resident teaching assignments. It is not reasonable to expect them to accommodate an extra workload without commensurate compensation.
- Faculty should receive increased information technology support from the campus unit in course design and implementation. Faculty should make use of all available technology and need direct assistance in assessing and applying tools.
- Programs should not only consider learner needs, but also they should employ aggressive methodology and tactics in marketing courses to prospective learners.

The Zamorano University experience will be reproduced in other parts of Latin America. Currently, projects are underway with the University of Costa Rica, San José. Undoubtedly, the UCR project will demonstrate effective online and distance learning is more than a click and a keystroke.

About the Authors

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