Prepared to Teach Online?
Perspectives of Faculty in the University of North Carolina System

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Abstract

The prevalence of online distance education courses requires university faculty to face new challenges and make new decisions in the areas of course management and design, delivery method, student communication media, creation of an engaging learning environment, assessment, and use of new technologies. The purpose of this study was to ascertain if university faculty in the University of North Carolina System are receiving sufficient training and support in developing an online distance education curriculum. There was also an interest in the types and amount of training the faculty received at various institutions as well as their attitudes toward developing curriculum for online learning. An online survey was employed to solicit data from faculty of the schools and departments of education (SCDEs) within the University of North Carolina System who have previously taught online courses. The survey addressed the experience of respondents, types of on and off-campus training offered, topics offered in training, relevancy of offerings, whether or not training was required prior to course delivery, and requested ideas for staff development that were desired but unavailable. The majority of respondents indicated that there was sufficient training for faculty to support the change to online learning. Respondents also indicated that most training was offered on-campus, was predominately related to pedagogical and technical areas, was viewed as relevant and accessible, and participation was voluntary or not required. Faculty attitudes, according to results, were overall positive about the quality and quantity

of training for course development and maintenance for online learning environments.

Introduction

As new technologies continue to emerge and students require more flexibility in class scheduling, institutions of higher education are striving to accommodate students. Higher education has responded by implementing distance education (DE), more recently referred to as e-learning or online learning. There have been many differing definitions proposed for online instruction, although most include two distinct elements: a difference in space and/or time between instructor and student, and the use of some medium for communication (Keegan, 1995). More often than not, that medium is the Internet.

Online learning has increased in popularity with both universities and students for numerous reasons. Students find it more convenient to take classes online without the expense and time constraints involved with commuting to a campus facility. University administrators are seeing the online trend as a major revenue and recruitment tool. Universities can reach more students without hiring additional staff. They are also able to reach students who either cannot take time away from work to come to class or who are geographically challenged (Valentine, 2002).

Many university administrators are offering incentives such as release time or stipends to faculty who will agree to develop or teach an online class (Allison and Scott, 1998). According to The University of North Carolina Report on Expanding Access to Higher Education through State-Funded Distance Education Programs, submitted to the Board of Governors in May 2002, the

number of distance education courses offered by the University of North Carolina system increased from 412 in 1998 to 1,060 in 2001- an increase of 157%.

This increase in online learning is requiring universities to change the way information is distributed to students; therefore, administrators need to be aware of the changes that must occur in the area of faculty preparation. The faculty and departments need to be accountable for creating learning environments that are real and meaningful to all students.

> Technology wizardry, by itself won't produce desired learning outcomes. Creating and implementing successful learning systems - ones that actually enhance learning - requires a thoughtful blend of educational philosophies, new technology, and solid instructional design. (Major and Levenburg, 1997, p.97)

According to Levy (2003), faculty members are faced with a number of new situations when teaching an online learning class as opposed to a traditional class. These include: the administration or management of online courses; the course layout and design; the best delivery method for the content, such as text, graphics, audio, or video; the various communication methods that the students will use such as email, discussion boards, and chats; ways to increase and maintain student involvement; appropriate student assessments for online learning; and, a working knowledge of all the technologies being implemented in the online course.

Converting a traditional course to an online course is not simply a matter of typing lectures and posting them on the Internet. Instructors must discover new ways to engage the learners and encourage them to be active in the class instruction. For many, this is a major change from the way they were taught and trained to teach. A professor from an institution in the UNC system reports that these changes can cause “reluctance, intimidation, and frustration” (personal communication, October 2, 2003). University deans and chairs need to be aware of the major modifications involved in converting a traditional face-to-face course to online instruction. Faculty members need a solid structure of support on which to rely when implementing this curriculum change. It is vital that this support be continuous from the planning stage through implementation.

Review of Literature

The rapid development of digital communication technologies allows providers of higher education to move beyond the “brick and mortar” restrictions of place and time to serve a larger, broader, and more diverse population. Although it is not a new idea, the implementation of distance learning in higher education has increased exponentially. Ubiquitous access to the Internet and video compression technologies has taken distance instruction in new directions (Valentine, 2002). Web-based instruction, or online learning, is a popular delivery format for administrators, instructors and students. A review of the literature shows the development of a body of knowledge concerning the necessary conditions for successful delivery of online curricula.

In order to be successful as an online instructor, faculty need to have some understanding of pedagogy as it relates to distance instruction. Some best pedagogical practices that are specific to distance learning are induction, building of learning communities, construction of support networks for students and faculty, and the development of adequate security practices (Australian National Training Authority, 2003). Online instructors need to know how to convert traditional lectures into interactive lessons that encourage students to be active participants (Meyan, Lian, & Tange, 1997). Questions should become open-ended application questions that require students to apply the information to their life experiences (Gibbons and Wentworth, 2001). Other best practices include thorough planning, communication between faculty and students, student-student interactions, respect of student diversity with regard to learning styles, collegial and individual activities that ensure high levels of time on task, the importance of prompt feedback, and the maintenance of high expectations (National Education Association, 2000). Induction refers to ensuring that the students entering an online learning environment have the technological proficiency to be successful. Examples of learning communities for students include discussion boards, avenues for peer review of assignments, and chat sessions.

In addition to expertise in their content areas, faculty need to attain a level of proficiency with the computer technologies needed to develop and deliver online instruction. Online educators need to be competent in using technology as a means for effective instruction (Floyd, 2003). Staff development is essential for the successful movement from the classroom to a distance learning environment

(University of North Carolina, e-Learning Readiness Project (eRLA) Final Report, 2001). A study of online teaching faculty from the State University of West Georgia found that a majority of instructors, 62%, received one to five hours of instruction before teaching their first online course (McKenzie, Mims, Bennett, & Waugh, 2000). It is incumbent upon the individual instructor to become aware of the diverse technologies and delivery methods that are available, and know how to incorporate those technologies into online teaching and learning strategies (Rockwell, Schauer, Fritz, & Marx, 2000).

Potential online instructors are also apprehensive about the adequacy of institutional support (Bower, 2001). There is trepidation that the technology will not work (Valentine, 2002). Technology help desks, discussion arenas and emailing lists exemplify support networks. Security practices include password protection and proctoring of examinations. Masie (2000) states that a 63% of instructors would choose to teach an online learning class if a trainer were available for assistance. The following positions are suggested in order to effectively support the online instructor and best facilitate online learning: researcher, assessor, advisor/counselor, process facilitator, manager/administrator, designer, technologist, and content facilitator (Goodyear, Salmon, Spector, Steeples, & Tickner, 2001).

Compensation for online instruction is an area of concern for faculty. According to a survey conducted by the National Education Association (2000), 63% of distance learning faculty is compensated for a distance learning course as if it were a normal course even though online instruction takes more

preparation time. Sellani and Harrington (2002) note that financial differential is necessary to attract and sustain effective online instructors as successful online faculty equate one online course as the equivalent to two ground-based courses in relation to resources needed to insure high quality and meaningful learning for students.

The attitude of faculty to online instruction affects the willingness of instructors to teach online. Some instructors express concerns about the effectiveness of this form of instruction for student learning (Jones, Lindner, Murphy, & Dooley, 2002). The novelty of this medium elicits further negative attitudes from faculty (Valentine, 2002). Jones et al (2002) found that faculty members who did not believe online learning to be the educational equivalent to traditional courses were philosophically opposed to distance education. Additionally, there is a fear of feeling incompetent, as faculty members are used to being in a position of expert authority (Hutchins, 2003). Meyan et al (1997) note that teaching online makes all course content public and open to review and evaluation and that student performance can be measured as well as instructor responsiveness to student activities, questions and comments.

Related to the pressure to participate is the uneasy attitude that comes from unrealistic time requirements and poor financial compensation for development and implementation of e-learning projects (Perreault, Waldman, & Alexander, 2002). Higher education administration can be instrumental in facilitating a climate that will foster change and experimentation in the realm of

online learning by attending to issues of class size, release time for development, training and intellectual property rights (Sellani and Harrington, 2002).

According to the UNC Report on Expanding Access to Higher Education Through State-Funded Distance Education Programs submitted to the Board of Governors on May 1, 2002, distance education opportunities in the UNC system have grown tremendously in recent years. Enrollment in distance education programs between fiscal years 1999 and 2001 reflects an increase of 70%. Student credit hours generated through distance education increased by 99% during the same time frame. Online degree program options increased from six offerings in the spring of 2000 to 30 in the spring of 2002. All institutions in the system have engaged in the development of online learning courses/ programs, with some developing more than others. East Carolina University was at the top of the list generating 14,000+ student credit hours, while North Carolina State University generated 13,000+ and Fayetteville State, a little over 8,000. All other institutions in the UNC system were credited with less than 8,000 student credit hours in distance education courses in fiscal year 2001.

Statistical data from the UNC Report on Expanding Access to Higher Education (2002), also suggests that online learning in the University of North Carolina system is meeting the needs of many nontraditional students, predominantly female, either working or geographically isolated, as 79% of the students enrolled in distance education courses are 26 years of age or older and 68% are female. Of these students, 54% are enrolled in masters programs of

study while 44% are pursuing undergraduate work and 1% are enrolled in doctoral programs.

In addressing critical needs of North Carolina as identified by a state-wide analysis funded through the University of North Carolina Office of the President (UNC-OP), three primary academic areas were chosen for prominence in the development of online programs: teacher education, health professions education and information technology. In response, UNC-OP, during the fiscal year 2002, made grants to UNC institutions to address planning and development of online learning degree programs in these areas. Other E-learning strategies have also come from the UNC-OP through the UNC Technology Information initiative, such as funding for the installation of infrastructure requirements for each UNC campus to meet the baseline for functionality, development of centers for teaching and learning with technology as well as support services and activities for staff on each campus (UNC Report on Expanding Access to Higher Education, 2002).

Prior to establishment and approval, online learning programs in the UNC system are required to provide information conforming to the standards established by the Southern Association of Colleges and Schools and the Commission of Colleges. This information includes intended course outcomes, learning objectives, curriculum schedules, faculty and support staff, library and learning resources, physical resources, financial resources, evaluation and assessment (UNC Report on Expanding Access to Higher Education, 2002).

Constituent institutions in the UNC system have demonstrated a commitment to providing the same level of quality instruction to students involved in online learning programs as those involved in degree programs on campus. This commitment is demonstrated by employing duplicate processes such as student surveys regarding quality of course and instructor, analysis of student performance, as well as demographic data, service satisfaction surveys, program advisory councils, peer evaluations of teaching, and responses from employers and internships (UNC Report on Expanding Access to Higher Education, 2002).

Support for the development of online learning opportunities through the UNC system was an initiative from the General Assembly and UNC Board of Governors to improve educational access and efficient instructional delivery in the state and it is likely that other proposals and developments will continue to perpetually move this commitment forward in the future (UNC Report on Expanding Access to Higher Education, 2002).

Research Questions

The purpose of this study was to discern if university faculty were receiving sufficient training and support in developing an online curriculum. There was also interest in the types and amount of training the faculty received at various institutions as well as their attitudes towards developing curriculum for online learning. Finally, the timeliness of available training was of interest.

Methodology

Creation of the Survey

The research began with a review of the literature and requests to department chairs from the College of Education at East Carolina University to provide information about faculty concerns regarding online instruction. This information was synthesized and used to create the survey items. The survey consisted of 25 items in four major strands: demographic information; opportunity, location and types of training; online pedagogy and technical training and its timeliness; and, the overall evaluation of available training opportunities. Item types included multiple choice, checklists, short text answer and five-point Likert scale questions. For ease of distribution and collection the survey was posted to a web page. After reviewing several web-based survey tools, *CreateSurvey* was selected for its ease of use, data analysis capabilities and reasonable cost. When the survey was finished, the functionality of the tool was tested. The home page for the survey consisted of 15 links -- one for each institution in the UNC system. By using 15 separate but content-identical surveys, data could be disaggregated to determine trends system-wide.

Sample Population

Data was collected from the constituent institutions of the UNC system. To define the scope of the sample population, the survey audience was limited to online educators involved in SCDE's in the UNC system. The UNC system consists of 15 SCDE's, each of which has an instructional technology specialist funded by the state legislature. This group of instructional technologists is known

as the “Spangler” group, named for former UNC president C. D. Spangler. Each Spangler is charged with assisting faculty in the integration of technology in teacher preparation and was best able to identify faculty within their respective institutions who teach or have taught online courses. For the purpose of the survey, an online course was defined as any course in which 50% or more of the content is delivered via the Internet. There were 125 faculty members at 12 universities identified.

Collection of Data

Once the survey web site was posted and the appropriate faculty identified, each of the 125 potential respondents was notified via email, with an invitation to participate in the research study. Simultaneously, the Spangler at each school was notified of the request and asked to encourage faculty to reply. Response time was limited to one week to encourage faculty to complete the survey as quickly as possible. After the initial one-week period, a follow-up email was sent to remind participants about the survey and to request their participation once more.

During the audience identification stage, some resistance from the larger institutions was discovered. Representatives from several institutions expressed concerns about sharing faculty email addresses. In respect of these concerns, the survey information was sent to the contact person and he/she forwarded it on to faculty. In one case, the contact person was only willing to send the information out through a listserv to all faculty members. One institution reported

that they had no faculty involved in DE. One institution submitted only one faculty name. One institution did not participate.

Analysis of Data

Descriptive statistics were run to determine means and standard deviations, correlations to determine relationships between the variables, and linear regression and ANOVA to determine statistical significance of relationships. SYSTAT 10 for Windows was the data analysis tool used.

Results

Demographics

Of the 125 potential respondents, 83 participants completed the survey for a response rate of 66%. This is well above the typical email survey response rate of 31% (Sheehan, 2001). Of the 83 respondents almost three quarters were full professors, associate professors, or assistant professors. The remainders of respondents were self-classified as instructor, lecturer, or adjunct.

Professional rank of respondents

Professional rank	Percent
Professor	18
Associate Professor	24
Assistant Professor	31
Instructor, Lecturer, Adjunct, etc.	27

The respondents were experienced educators. Over half of them had greater than 10 years of experience. Nearly that many had two or more years of teaching practice.

Years of teaching experience

Years	Percent
< 2	6
2-5	15
5-10	24
10-15	12
> 15	43

There were respondents from 11 of the SCDE's. East Carolina University provided the vast majority of the respondents. Distantly following that number was UNC Greensboro. The remaining universities each contributed few respondents by comparison.

Respondents by institution

Name of institution	Percent
Appalachian State University	4
East Carolina University	43
Elizabeth City State University	10
North Carolina A&T State University	6
North Carolina Central University	1
North Carolina State University	2
UNC – Chapel Hill	5
UNC – Charlotte	4
UNC – Greensboro	16
UNC – Pembroke	6
Winston – Salem State University	4

Almost three quarters of the respondents had taught their online classes via face to face delivery before adapting them to the online environment.

Did you teach your online learning content face to face prior to teaching it online?

Face to face prior	Percent
Yes	73
No	27

Opportunity, Location, and Types of Training

The existence of the opportunity to attend training for online course development was verified by the respondents. Greater than half stated that off-campus offerings were available and almost all stated that there were offerings available on-campus. Of the off-campus training offerings, the greatest number of responses was elicited in the conference and web-based tutorial options. Nearly half of the respondents indicated that they attended training, other than conferences, on other campuses. The on-campus types of training that elicited the highest response rate was group sessions. Printed material, web-based tutorials and listservs were selected by over half of the respondents. One-on-one sessions, mentorship, regular peer discussion, and observation of other online courses were selected about by one third of the respondents.

Response to question of opportunity the opportunity to attend off-campus and/or on-campus training for online courses and the types of training offered

Training location	Type of training offered	Percent
Off-campus		69
	Conferences	85
	Training on other campuses	47
	Web-based tutorials	73
On-campus		94
	Group sessions	89
	One-on-one sessions	37
	Web-based tutorials	68
	Printed materials	71
	Listservs	66
	Mentorship	32
	Regular peer discussion	32
	Observation of other online courses	32

Online Pedagogy and Technical Training and Its Timeliness

Greater than one half of the respondents indicated that training was available pertaining to best practices for online pedagogy, while almost three fourths indicated that technical training was offered. A large number of respondents indicated that the best practices training covered interaction via discussion boards and chat setting up rules for a friendly online environment, and timely feedback and acknowledgement. Over half of the respondents who had access to pedagogical training indicated redesigning learning resources, guiding students to external online resources, student support via online communication and setting up group activities. The pedagogical inclusion of graphics video and sound was chosen by almost half of the respondents. Of those who had access to technical information and training almost all indicated that it pertained to virtual learning environments such as Blackboard and WebCT. The majority stated that they were offered training in the area of copyright. All other types of technical training were selected by less than half of the respondents.

Percent of respondents who responded that information is available for best practices and/or technology for online courses and specifics of training available

Training focus	Specifics of training	Percent
Best Practices		58
	Timely feedback and acknowledgement	76
	Student support via online communication	60
	Redesigning learning resources	66
	Setting rules for a friendly online environment	78
	Setting up group activities	60
	Interaction via discussion boards and chats	87
	Guiding students to external online resources	66
	Including graphics, sound and video	47

Technology		72
	Using a virtual learning environment	92
	HTML	45
	Using chat rooms	45
	Copyright information	62
	Using instant messenger	34
	Integrating video	42
	Integrating graphics and sound	40

The timeliness of training survey questions revealed that only almost half of respondents had pedagogical best practices training prior to teaching online. More than half were provided with technical training prior to online course development. Of all respondents, less than one third indicated that their respective institutions required any training prior to teaching online.

Percent of respondents who stated that best practices and/or technology information was available prior to teaching online and percent of respondents who stated that any training was required prior to teaching online

Item	Percent
Best practices information given prior to teaching online	45
Technology information given prior to teaching online	62
Any training required prior to teaching online	27

Overall Evaluation of Training for Online Learning –

The survey assessed general evaluation of the available offerings for training in online course creation. The vast majority of those who had training available found it to be relevant and helpful. Regarding ease of access and convenience, most found the training to be accessible and convenient.

Percent of respondents who affirmed that training available was relevant/ helpful and percent of respondents who affirmed that training available was accessible/ convenient

Evaluation	Percent
Training available was relevant/ helpful	86
Training available was accessible/ convenient	79

The final item on the survey requested respondents to list any areas of staff development for online courses that they felt their institution should provide, yet currently did not. The responses included: assessment, "Just-in-time" training, follow-up for problems, synchronized online delivery, advanced versions of current topics offered, learning environments online, and updates on current trends and techniques.

Discussion

The respondents were predominately experienced educators with professional rank. Their experience was revealed to be not only temporal but also crossed delivery methodologies from traditional to online environments. Our experienced sample population mirrored the findings of a National Education Association survey which found that, ". . . senior faculty are as likely to retool for teaching distance learning courses as recent graduates who are just joining the faculty (NEA, 2000)." The exceptional response rate may indicate the importance of the subject matter to educators.

Respondents indicated that although sufficient on-campus and off-campus training opportunities were available to them, there were substantially more options on-campus. In reaction to recent state budget cuts, universities may be

forced to bring their training in-house. The funds are simply not available for conferences and off-campus training.

The commonly designated off-campus activities were conference attendance and web-based tutorials. The dissemination of information regarding conferences and the current push towards supporting staff development make that a logical result. The ease of access of web-based tutorials legitimizes the frequency of use of that genre of training. Responses elicited in the “other” category included off-campus activities such as: books, papers, specialized workshops, and curricular course-work at other universities. The most common on-campus activity indicated by the respondents was group sessions, a way for institutions to train larger numbers of individual in the same amount of time. The next most frequent responses: printed material, web-based tutorials, and listservs, were all cost-efficient means of training staff that inherently provided unlimited temporal accessibility. Respondents who chose the category “Other” on- campus activities listed supplemental books, informal advice from peers, and one-week summer institutes as sources.

Respondents also provided information regarding the availability and content of two specific areas of professional development necessary for teaching online. These areas were pedagogical “Best Practices” for teaching online and technical information needed to teach online. The vast majority of responses for the availability of technical information, almost three-quarters of the population, were affirmative. This indicated that these instructors felt that they had received adequate training in the technical details of online instruction. Over half of the

population indicated that pedagogical “Best Practices” information was accessible. The discrepancy between technical and pedagogical offerings, as indicated by the respondents could be explained by the nature of the information and the available bodies of knowledge. There is an absolute procedural nature to technical training that is well substantiated and beyond reproach, while best-pedagogical practices for online learning, a relatively new arena, are still being created through ongoing research.

The specific content of technical training was predominately in the area of virtual learning environments such as Blackboard and WebCT. The copyright issues that have arisen with the advancement of technology support the second most stated content area: copyright. Responses in the other category included: technical information included video-conference-based whole class instruction and assessment. The most indicated Best Practice information supplied was relevant to: interaction via discussion boards and chat, setting up rules for a friendly online environment, and timely feedback and acknowledgement, followed by redesigning learning resources, guiding students to external online resources, how to support students via online communication, and setting up group activities.

There was a difference between pedagogical and technical with respect to timeliness. It was noteworthy that more participants received technical information prior to teaching online than those who received prior Best Practice information. The technical information is essential for the physical construction and placement of the courses to occur, yet the quality of that content could be

enhanced if more faculty members had access to pedagogical information related to DE. There were very few respondents indicating that training of any kind was mandatory. This may be a statement of faith on the part of the institutions that faculty will seek out what they need. The institutions are creating opportunities in acknowledgement of its importance and the voluntary nature of such opportunities is an expression of trust in the professional judgment of their faculty.

The two, essentially evaluative, questions regarding the quality of the professional development in the UNC System were overwhelmingly positive. The training was, in fact, relevant and helpful for educators teaching online. The supported relevancy of the training is consistent with the current literature, as these opportunities covered important content areas in both the technical and pedagogical arenas. Additionally, the training was accessible and easy to attend. This relates to the volunteer nature of the training and the variety of independent use media such as: tutorials, listservs and printed materials. Respondents suggested additional training in assessment, “Just-in-time” training, follow-up for problems, synchronized online delivery, advanced versions of current topics offered, learning environments online, and updates on current trends and techniques. Further study is recommended to survey other institutions and faculty outside schools and colleges of education

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