Assignment 1-All

Factors Affecting Faculty Participation in Web-Based Courses at Community Colleges

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Abstract

The purpose of this study is to determine the effectiveness of integrating universal design concepts into a web-based faculty development training module at a medium-sized community college in the southern United States. Universal design was initially developed in the 1960’s and is training that is designed for the widest possible number of learners, regardless of age or ability. The use of a module using universal design concepts in a development program for preparing faculty to teach online is partially based on the diffusion of innovation concept (Rogers & Scott, 1997).

The subjects for this project will be full-time faculty that are new to the web-based classroom and enrolled in a web-based module that introduces techniques for teaching effectively online. Two groups of faculty will be used, with one group taking the module incorporating universal design principles, and the other group taking the module without incorporating these principles. The instrument used is a questionnaire entitled Faculty Attitudes Toward Web-based Distance Education and is based partially on Guskey’s (2000) five critical levels of faculty development.

Problem Statement

The average worker in the United States can expect to change careers three to five times before retirement. Because of this it is no surprise that higher education, particularly schools offering two-year AA degrees and certificates are growing at a rate equal to their four-year and graduate counterparts. However, adult learners have difficulty in attending campus-based programs due to work, family and other commitments. Unlike the typical 18-22 year old student entering college straight out of high school, the adult learner has other obligations that make a campus-based education
impossible. This is one of the reasons that the demand for distance learning programs has increased at such a significant rate over the past several years and the primary reason that institutions of higher learning are increasing the number of courses and programs being offered at a distance.

A report from the Sloan Consortium detailing trends in online education in the United States found that 63 percent of undergraduate institutions offering traditional seat-based courses are also offering Web-based courses (Allen & Seaman, 2004). The report also found that 56 percent of schools mentioned online delivery as being of critical importance in long-term strategic planning. The largest increase came from two-year community colleges, with 72 percent agreeing that the online classroom has become part of the institution's long-term strategic planning, up from 58 percent in 2003. This emphasis on the online classroom has had double-digit percentage increases over the past several years. Demand for distance learning courses has also mirrored the demographic changes that have appeared over the last several years.

With this ever-growing demand for Web-based courses and programs comes a subsequent demand for qualified faculty to teach effectively in an online environment. Mwaura (2003) found several primary factors influencing faculty decisions on the adoption or rejection of Web-based instruction (WBI). These factors included faculty development on the development and implementation of WBI, the complexity of the WBI implementation, the compatibility of WBI with the teaching values of the faculty, the amount of time and effort required to develop and implement WBI, the relative advantages of using WBI, and the lack of any sort of incentives when adopting WBI. The findings called for institutions to encourage collaboration among faculty when
developing WBI, providing support focusing on the instructional needs of the faculty, knowing the technological skills of the faculty for proper pacing of training, providing for incentives such as course release time or monetary incentives, and encouraging faculty to embrace WBI into their philosophy and pedagogy of teaching. Mitra, Steffensmeier, & Lenzmeier (1999) concluded that a stronger emphasis on faculty development in technology will improve the adoption of such technologies. Such training must go beyond simply providing handbooks and instruction manuals and actually provide specific trainings for the technologies being adopted. Medlin (2001) found that faculty are significantly influenced by a number of social contacts such as friends, mentors, peers, and students. Contacts such as these may be the influence needed to adopt such technologies for the classroom.

It is critical that the influences that come into play for both faculty and administrators in the adoption of Web-based learning technologies be examined before a comprehensive faculty development initiative for Web-based instruction be implemented (Christi-Baker, 2004.) Faculty currently using the Web-based classroom, faculty that are considering using the Web-based classroom, and academic administrators that influence these two entities must work in tandem for the successful implementation of a faculty development program for Web-based classes to work efficiently and effectively.

Research Questions

The research questions for this study will be: 1) Does the use of a principles-based approach to faculty development promote appropriate modeling behavior? 2) Does the use of a principles-based approach to faculty development promote the use of hands-on
practice for faculty to use Web-based learning technologies? 3) Does the use of individualized Web-based training promote the desire to use instructional technologies? 4) Does the use of an association of colleagues within the training module promote the facilitation and experimentation of Web-based learning technologies? 5) Does the use of reflection that includes follow-up discussions and meta-cognitive exercises during a faculty development workshop in Web-based pedagogy promote assist in the adoption and refinement of Web-based learning technologies?

**Literature Review**

With over 1.9 million students studying online in the fall of 2003 and with that number expected to grow to over 2.6 million by the fall of 2004 (Allen et al., 2004), it is logical to assume that the number of faculty needed to teach these students will grow as well. But are faculty ready to accept the instructional technologies and pedagogical changes necessary to teach in such an environment? Gender, perceived technology skills, prior experience, and the lack of confidence in the medium all played a part in whether or not Web-based learning technologies were adopted (Christo-Baker, 2004). Adams (2002) found a correlation between attendance at faculty development activities, age, gender, teaching experience, level of integration, and faculty development attendance for the levels of integration by faculty. Factors influencing the adoption of Web-based learning technologies include the amount and quality of faculty development activities, the complexity of the Web-based instruction implementation, the compatibility of Web-based instruction with teaching values, the amount of time and effort required to develop and implement Web-based instruction, the relative advantages of using Web-based instruction, and the lack of incentives (Mwaura, 2003).
When using the diffusion of innovations theory to examine faculty adoption attitudes, academic discipline and age yielded statistically significant results in the adoption of technology, but faculty rank and gender were not significant variables (Waugh, 2002). Husain (2001), when examining the effect of diffusion of innovation on faculty, established that lack of time is a perceived barrier for female faculty more so than male faculty. In addition, faculty that received awards for development of courses were less likely to perceive inadequate technical access as a barrier than those not receiving awards, and faculty over 60 years of age were less likely to adopt classroom Internet technologies, perceiving such technologies as not fitting in with the courses they taught. Faculty attitudes towards distance education technologies became more positive as the role of such technologies became more apparent (Mitra et.al., 1999). Such awareness indicates that faculty are recognizing the importance of such technologies in their disciplines. Faculty experienced in teaching Web-based courses believed that such technologies and pedagogies allow for rapid adoption, and that faculty at community colleges are more encouraged to adopt Web-based technologies by administration (French, 2001). There was a reluctance to adopt distance education courses by faculty due to the amount of course development time and additional preparation time necessary (Eisenberg, 1998). Mitra et.al. (1999) concluded that a stronger emphasis on faculty development in technology will improve the adoption of such technologies.

It is critical for faculty and administration to be aware of the motivational factors involved in the adoption and successful implementation of Web-based technologies. Faculty are significantly influenced by social contacts such as friends, mentors, peers, and students (Medlin, 2001). The rate of technology adoption is directly related to the
availability and acceptance of innovations by faculty and teaching assistants (Groves & Zemel, 2000). Betts (1998) found a number of factors influencing the decision to adopt Web-based technologies. Supportive deans will have a larger number of participating faculty than deans that do not support such initiatives. Faculty having extensive experience in higher education and faculty outside the tenure process will have a greater tendency to adopt distance education technologies. Administrations that reduce barriers and actively stress the use of such technologies will also increase the rate of faculty adoption. Lastly, Betts found that faculty and deans understanding the potential that distance education methods are more willing to take part in seminars and other development activities focusing on Web-based technologies.

**Survey Instrument**

The instrument used for this study is entitled Faculty Attitudes Toward Web-based Distance Education (Christo-Baker, 2005). The instrument was originally created based on a review of literature dealing with Web-based distance education delivery methods and faculty attitudes regarding the perceived incentives and barriers towards the adoption of Web-based distance learning delivery methods (Iken, 2000).

*Instrument Description*

The questionnaire instrument is in five parts. The first part addresses faculty attitudes towards the use of Web-based delivery methods and contains 22 closed-ended items. The second and third parts uses 11 and 9 closed-ended questions respectively and targets the professional and personal incentives available for faculty adopting Web-based delivery methods. The forth section uses 29 questions that targets the perceived barriers that faculty face when adopting Web-based distance learning methods. The fifth section
contains eight questions and deals with faculty demographic data. The first four sections of the instrument use a five-point Likert-type scale with ratings of 1-5 where 1 is equal to Strongly Disagree, 2 is equal to Disagree, 3 is equal to Neutral, 4 is equal to Agree and five is equal to Strongly Agree. The fifth section, for collecting demographic data, uses check boxes and short-answer questions. Descriptive analysis will be used for the first four sections, with ANOVA used to compare demographic data with attitudinal data.

Population and Sample Description

The population for this study consists of full-time community college faculty and academic administrators at Texas community colleges. Academic administrators is defined as academic department chairs, academic deans, and academic vice presidents. The study sample will consist of full-time faculty and academic administrators within mid-sized schools, with mid-sized defined as institutions with enrollments of between 6,000 to 11,000 student FTEs. Sample participants will be identified using organizational charts and directory searches from each institution.

Survey Method

Survey instruments will be mailed to each sample subject with a cover letter explaining the purpose of the study, and a self-addressed stamped envelope. A second letter will be mailed within two weeks of the initial mailout requesting that the survey be completed. A final letter will be sent after four weeks to request that all surveys be returned regardless of whether the survey was completed or not.

Validity and Reliability

Content validity has been previously established by submitting the instrument to various faculty committees and panels that consisted of members who were deemed
competent in establishing the appropriateness of the instrument (Christo-Baker, 2005; Iken, 2000). Content validity will also be established using faculty and administrators from a local campus to determine the appropriateness of the survey items. A pilot test will also be done using ten sample members of a local institution to determine reliability. A Cronbach’s Alpha coefficient will be used to assess internal consistency. Pilot sample participants will be excluded from the actual study.

*Example Questions*

**Part B: Professional Incentives for Participating in Distance Education**

Using the following five-point scale, please circle the response that best describes the extent to which the following factors would be incentives to you to participate in Web-based distance education courses:


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<tr>
<th></th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
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<tbody>
<tr>
<td>24</td>
<td>Teaching grants</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>25</td>
<td>Release time for course development</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26</td>
<td>Student assisting in implementing online courses</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27</td>
<td>Reduced course load to teach the course</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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**Part E: Faculty Profile**

Please answer the following questions by marking boxes or filling in blank spaces as appropriate.

74. With what school/department or program are you affiliated? ___________________

76. Gender
   - □ (01) Male
   - □ (02) Female

78. Which of the following best describes your computer technical expertise?
   - □ (01) Novice
   - □ (02) Advanced beginner
   - □ (03) Competent
   - □ (04) Proficient
   - □ (05) Expert
References


