Impact of P3T3 on Faculty Use of Web Course Tool

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Abstract

This study explored the impact of P3T3, Purdue's PT3 implementation grant project, on faculty's use of a web course tool, WebCT. Quantitative and qualitative data were collected through online survey and in-depth interviews respectively. Results suggested that WebCT was convenient for faculty to put course materials online and conduct online communications with the students. P3T3's service was effective in training and supporting faculty in using WebCT, through providing workshops, drop-in session and one-on-one assistance.

Introduction

The rapid development of information technology has made computers and computer-related technology an integral part of teaching and learning. According to Glenn (1997), computers have advanced from simple machines with limited functions and capabilities to powerful machines with sophisticated applications and high-speed networking capabilities. Since the mid-1970's, schools and colleges have raced to keep up with the rapid growth and change of technologies. The main goal has been to prepare educators to be able to integrate technology into their classrooms effectively. The implementation of information technology has been closely linked to the evolution of faculty development (Shapiro & Cartwright, 1998). While some faculty members still hesitate, many are making efforts to improve their knowledge in technology and plunging ahead to enhance their teaching using technology.

Although educators are expected to have the knowledge and skills to be able to use technology in their instruction, the use of new technologies in the classroom for teaching and learning has been and is still limited. Brand (1998) pointed out that despite the increased access to computers and related technology, educators often experience difficulty in integrating technology into classroom teaching practice. The main reason is the issue of educators' computer competencies; teachers often are inadequately prepared to use instructional technology. To achieve effective integration of technology into teaching practice, adequate training must be provided for the faculty.

 Quick (1999) conducted a case study using personal in-depth interviews to help faculty in a community college articulate their instructional needs related to using technology. The results indicated that the faculty wanted training classes that fit their time schedule and location. Personal tutoring and technical support were suggested. Other researchers (Dusick, 1998; Dusick & Yildirim, 2000; Groves & Zemel, 2000; Matthew, Parker & Wilkinson, 1998) have also confirmed that training and support staff are significant factors in helping faculty to effectively use and integrate technology into the classroom.

Although much literature addresses the importance of helping faculty's use of technology through training or other forms of support, few studies have described in detail the impact of these supports on the development of the faculty's use of technology. This paper reports on a study that was conducted at a midwestern university to explore how a PT3 implementation grant project affected the faculty's development of the use of WebCT, a web based course development and management tool, in their teaching. This paper explores the faculty's use of WebCT and their perceptions of the impact of P3T3 program on their use of this web course tool. The study adds to our growing knowledge of faculty development in the area of classroom integration, and also provides a valuable reference for the other similar projects involving faculty professional development.

Background of the Project

P3T3, Purdue Program for Preparing Tomorrow's Teachers to use Technology, a PT3 implementation grant project, is designed to achieve two goals. One is to prepare pre-service teachers to demonstrate fundamental technology competencies, using technology as a tool for teaching/learning, personal productivity, communication, and reflection on their teaching. The second goal is to prepare teacher education faculty in Education, Science, and Liberal Arts to teach pre-service teachers in technology-rich environments, modeling approaches that future teachers should use themselves. All faculty in Purdue's school of Education as well as selected colleagues in Science and Liberal Arts are participating.

To achieve the second goal, P3T3 provides activities and extended support for faculty members. These include: 1) workshops to train faculty members on various technologies, 2) regular help sessions where faculty may consult with P3T3 graduate staff, 3) brown-bag TechieTalk sessions where faculty share their successful experiences and gain new knowledge, and 4) one-on-one personalized assistance. The workshops provide faculty development in the use of various technologies that can be incorporated into courses, such as PowerPoint, WebCT, graphic imaging, video editing, FrontPage, Dreamweaver, and Flash. The help sessions are available every week. Faculty member can

drop in anytime during the help sessions to consult with the P3T3 graduate staff about classroom technology integration. Faculty can also make appointments for one-on-one assistance with P3T3 staff at any other times.

The advantages of online learning drive more and more faculty members to deliver courses online or use the Web to support traditional courses. WebCT is a web based course development and management tool that allows faculty to construct and manage online courses, put materials online to supplement existing courses, create online communication environments, and track students' performance electronically. It is the "standard" platform for web-based courses and course support at Purdue. The easy-to-use features of WebCT make it popular with faculty. To help faculty master the tool, P3T3 offers three workshops that teach, step-by-step, how to design a course using functions available in WebCT. In addition, the P3T3 staff provides assistance for those who have difficulty.

Methodology

To investigate the impact of the P3T3 project on faculty's use of WebCT, both quantitative and qualitative data were collected from those who participated in the P3T3 project and who used WebCT in their teaching for more than one year. A faculty member and two graduate students in Educational Technology conducted the research. They worked together to design the study, develop the research instruments, and analyze the data.

Data were collected from both an online survey and in-depth interviews. To obtain information about general characteristics of the faculty's use of WebCT, an online survey was conducted on WebCT. Twenty-two faculty members from the School of Education participated in the online survey. The faculty's thoughts and experience with the tool and their viewpoints about P3T3's support were explored more extensively using in-depth interviews with 3 faculty members who had been through the WebCT workshops and who used WebCT in their courses.

The survey consisted of 9 multiple choice items concerning P3T3 participation and the use of WebCT, such as "When did you participate in a P3T3 start-up workshop?", "Which features of WebCT do you use? ", and "Have you ever sought assistance of one of the P3T3 drop-in help session?", and so on. Frequencies of responses to survey items were tallied. The interviews with the faculty members took place on campus at the convenience of each individual participant. Data from the interview included in-depth information about faculty's experiences using WebCT and their perceptions of P3T3 work. The participants were asked questions such as "How does WebCT enhance your course(s)?", "What problems have your encountered when using WebCT?", "Can you cite specifics of how P3T3 assistance helped you?" Interviews were tape-recorded and then the content was transcribed. Interview data were combined together and then analyzed by question. The results of both survey and interviews were combined together to comprehensively examine the effect of P3T3's work on the faculty's use of WebCT.

Results

General characteristics of the use of WebCT

Results showed that 77% of the participants had attended P3T3 workshops on WebCT. All participants incorporated WebCT into their teaching. Most (59%) used WebCT for basic content presentation such as putting course notes, syllabi, and assignments online. Many (41%) posted and organized students' grades and used the quizzes/survey feature. WebCT e-mail (71%) and discussion forums (82%) were among the most popular features. Few faculty members had experimented with the WebCT live chat feature. Among those who attended the workshops, 25% continued to seek help from the P3T3 drop in help sessions, and 63% had requested one-on-one assistance. Besides the help from P3T3 staff, several faculty members had sought assistance from friends and peers and from other technical support resources around the university. Overall, participants rated the services from P3T3 high: 50% great, 25% good, 6% ok, and 19% no opinion.

Experience with WebCT

As course instructors, the participants considered WebCT a convenient tool for teaching. One faculty member who had students do practicum in a high school used to visit the school often to learn about how student were going there. Using WebCT, he can get student information via the postings. WebCT cut down the number of his visits to the school, "It saves me time, because in the past, I have had to make many trips to the school. And now, I make only a few". In general, the participants liked WebCT because it helped them better organize course materials for students. One faculty member commented:

[It allows us] to extend the instruction beyond the classroom. We've been able to put up articles that students can look at and read… outside the regular class. That's been really helpful, really useful.

All three participants mentioned that, because of the features available in WebCT, they could conveniently make all course materials available in one place.

One participant felt that using WebCT took much more time than a regular class, "It does take a lot of time. It needs a lot of support if you going to be successful with it". However, she expressed the opinion that she would definitely use this web course tool again. She expected to develop an entirely online course.

Although they had a positive experience with WebCT, the participants thought that the interface was not intuitive, "Everything is there, but it is not intuitive in terms of how to navigate, how to find way around it".

Perceptions on P3T3 work

Generally speaking, the participants were satisfied with P3T3 work in introducing technology. As one faculty member stated:

I think that's an excellent program when the School of Education sent around survey to ask what we thought were the outstanding features of the whole school of Education, and I said the P3T3 was one. It has so many important aspects, number one is it insists, or certainly intends that everyone who is preparing teachers be able to use technology on at least a minimum level.

The participants reflected that the P3T3 workshops were very helpful in getting started with WebCT, as one faculty member pointed out "those workshops made me less afraid to work with WebCT". However, one felt that the workshops went too quickly.

The participants were satisfied with the accessibility of the P3T3 graduate assistants. One faculty member commented that help sessions and one-on-one assistance were very helpful and he learned more from the personal help session than from the workshops. Another one who called himself as Technophobe reflected that with the assistance of the graduate staff, he became less afraid to experiment with the use of technology. Another faculty affirmed P3T3 work, but suggested the assistants be more knowledgeable in technology: "The more they learn, the more useful they will become".

As to how to better support faculty's use of WebCT, one faculty member specifically talked about the importance of personal support in managing the materials when building a WebCT site for a class:

I think it really in some cases most helpful to help faculty is to have somebody available for them to help them (faculty) with actual materials content development, not somebody just help you with questions. I think what to do most helpful for faculty is to have an assistant like, when I am working on WebCT materials, if I could have someone whom I could give some stuff and say "Could you put this for me on WebCT?" I do a lot of things by myself, but I think if I had somebody else who could have helped me, that would be very helpful.

Overall, the participants thought P3T3 had a positive impact on their use of WebCT and expected more support from P3T3 graduate staff. They regarded P3T3 as a good resource in introducing and facilitating their use of technology.

Discussion and Implications

The results of the study indicated that WebCT was a useful tool by faculty members, though the design of the software was not perfect. The interviewed participants used WebCT to support their regular classes, but the experience with WebCT helped them to envision a fully online course delivered through WebCT. At this point, they began to think more of how to integrate technology into teaching.

For the beginners, the WebCT workshops need to be structured to accommodate their pace and progress. After the workshops and while the faculty members are learning to use WebCT to build their courses, more support, especially immediate support, should be provided. This will help to reduce the faculty's frustration with new technology. Faculty expect knowledgeable staff assistance. To better support the faculty's use of technology, the graduate staff should have enough knowledge and skills to provide quality assistance. Further, for those faculty members who need personal support in developing materials for a WebCT course, P3T3 graduate staff need to help with actual materials development instead of just answering technology questions.

This study showed that P3T3, a PT3 implementation grant project, has been helpful in facilitating faculty to use WebCT in their instruction. The results confirm that training and support are important in technology integration. In addition, faculty's technology level and individual needs should be taken into consideration when designing the training activities and providing support.

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