A Literature Review of the Perceptions of Faculty about Technology Enabled Distance Education

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Abstract: The students and the faculty are the key stakeholders in the process of education. Technology enabled education has opened up new frontiers for all the stakeholders in education. However, it appears that the perceptions of the faculty about technology enabled distance education are not studied in depth. Such a study is essential as it can reveal the reasons and the concerns that the faculty have about distance education. If properly addressed, it will help make the distance education programs gain more acceptance among the faculty. This paper conducts a literature review concerning the main motivations and drivers for the faculty to participate in distance education programs. The literature states that satisfaction of teaching and intellectual challenge is the primary intrinsic motivator for the faculty. Financial rewards and flexibility in teaching are the primary extrinsic motivators. Similarly, this paper also studies the reasons that may act as inhibitors for the faculty to participate in distance education programs. These include concerns about the quality of the learning in a distance education program and increased workload that may arise due to the teaching in the distance education programs. The faculty may also be concerned about their competency in using technology while teaching in such distance education programs. If all the needs of the faculty are properly addressed, distance education programs enabled through technology have the potential to complement traditional face to face education.

Keywords: education, distance, faculty, technology

Introduction

The faculty or the teachers are one of the key players in the process of technologically enabled distance education. If the teachers are satisfied with this mode of instruction, then they would be more motivated and enthusiastic about the whole teaching process. The faculty satisfaction depends on various parameters like effectiveness of the learning environment, course structure, technology and the student teacher interaction.

State of the Art

Gibson et al. (2001) point out that teachers play an important role in the success of distance education. Croy (1998) states that the teachers play a crucial role in distance education especially in higher education. Tao and Yeh (2006) state that there has been little research in
the area of teacher perceptions in the field of distance education. Thus there is a gap in literature.

**Literature Review**

Beaudoin (1990) suggests the need for research in the changing role of the instructor in the area of distance education. McClean (2006) states that there is a lack of research in the area of affective experience of the distance educator. She says that there is little or no research in the area of social or personal level experiences of the faculty involved in distance education. Similarly Bhushna (2006) states that there is hardly any research in the perceptions of teachers involved in the process of distance education enabled by interactive technology. Harris and Krousgill (2008) state that faculty satisfaction is a critical component of technology enabled distance education. The faculty have to deal with new demands based on the new instruction methods, technology, support, recognition, compensation, faculty support and process flexibility (Harris and Krousgill, 2008).

For the successful and effective implementation of technology in distance higher education it is important to recognize the role that faculty perspectives within the institution play in such strategy formulation and implementation (Dooley, 2000). Betts (1998) suggests that the success of the technology used in distance education depends on the enthusiasm with which the faculty embrace the new technologies. Jones et al (2002) state previous research that faculty philosophically believe that distance education courses result in lower levels of cognition. The faculty members did not believe distance education was the educational equivalent to traditional courses. However in their study, Jones et al (2002) found that the faculty were not philosophically opposed to distance education. The teachers have the perception that that distance education courses require a greater effort and time commitment (Jones et al, 2002). O’quinn (2002) states that faculty remain skeptical of the benefits provided by technology enabled distance education and that they may be overwhelmed by the technical and the knowledge expertise required to deliver courses over a distance. The faculty tend to miss the face to face contact with the students. It is difficult for most faculty to plan interactive strategies in advance of course delivery as they are accustomed to relying upon verbal cues and the spontaneity of classroom discussion to serve as a catalyst for interaction (O’Quinn, 2002). Similarly they are more likely to be trained in content areas rather than the pedagogy and course planning. Not all colleges have the required technical and administrative support necessary for the smooth planning and flow of technology enabled distance education courses. Schifter et al (2002) mentions that in distance education, the pedagogy of the faculty changes from teacher centered to learner centered. However most teachers learn how to teach in a face to face environment where there exists high interactivity and visual communication. So the lack of direct feedback and personal communication in a distance learning environment affects many teachers (Schifter et al., 2002). As a result less interaction with the students can lead to less interest among the faculty to teach in distance education.

Schifter (2002) mentions that the following issues have been noted among teachers for teaching in technology enabled distance education: insufficient training, lack of applicability
toward promotion and tenure, lack of release time, insufficient instructional and administrative support, minimal monetary compensation, and an expanded teaching load.

Mclean(2006) also found that the greatest concern for distance education faculty was the lack of interaction among the students and the teachers during the teaching-learning process. The faculty were also concerned whether the students were under prepared. The teachers also felt the lack of social events and feeling a part of the institution’s community to be a barrier in the process of distance education(Mclean, 2006).

Betts(1998) found that the following factors motivated the faculty to participate in technology enabled distance education
• Ability to reach new audiences that cannot attend classes on campus;
• Opportunity to develop new ideas;
• Personal motivation to use technology;
• Intellectual challenge; and
• Overall job satisfaction.

In case of intrinsic motivation an individual derives satisfaction from performing or being associated with a particular activity because it appeals to his or her values or fulfills a personal need or drive (i.e., motive). The individual feels that the participation in the activity is reward in itself. Extrinsic motives, are associated with benefits received from a source other than the activity. The individual is moved to action in response to the prospect of an external benefit or reward (Wolcott, 2003).

Parker (2003) states the following intrinsic and extrinsic motivators for the faculty to participate in distance education. They are as follows:

Intrinsic Motivators
• Self-satisfaction
• Flexible schedule
• Wider audience
• Intellectual challenge
• Flexible location
• Ability to use new technology
• Ability to develop new ideas
• Sense of empowerment
• Responsibility

The extrinsic motivators include:
• Monetary stipends
• Decreased workload
• Release time to develop and teach.
• New technology for personal use.

The author mentions that the primary motivators for the teachers to teach in distance education are the same as that in traditional education i.e. self satisfaction, a sense of
accomplishment and watching students succeed. In case of distance teaching there is also the presence of people who prefer the flexibility of distance teaching so that they can pursue other interests.

Clay (1999) lists the following factors as influencing the decision of the faculty to participate in technologically enabled distance education

- The opportunity to reach remote students
- Intellectual challenge and the opportunity to develop new ideas
- The opportunity to work with more motivated students
- Release time
- Financial rewards
- Opportunities for research
- Motivation to use technology
- The opportunity for recognition
- The opportunity to utilize support services
- Reduced travel
- Increased course quality
- Increased flexibility

The teachers who are resistant to distance education argue that the quality of the course may be compromised in case of distance education as a result of the lack of interaction. However it is also seen that the students who are shy and intimidated to interact in traditional classrooms may interact more through the means of technology such as e-mail.

In case of distance learning, the role of the teacher shifts from teaching to that of a facilitator or mentor (Clay, 1999). As a result there is need for lot of communication through the medium of technology. However not all faculty are comfortable with the use of technology for communication and hence may find it a barrier to conducting classes. Often, faculty perceive that additional investment of time and effort in understanding the application of technology in the classroom gives them little or no return in terms of support, recognition, or compensation (Clay, 1999). The success of any institutional distance program depends on the attitudes of faculty, understanding and addressing these issues which concern distance faculty is a significant priority for distance administrators.

Dooley (2000) mentions that the teachers do perceive technology enabled distance learning as a means to reach out to the non-traditional learner. Similarly they also see it as an opportunity to create an individualized and interactive learning experience for the student. They also see it as an opportunity to collaborate with other institutions to create more specialized courses. The prominent weaknesses of the facility as experienced by the faculty and the administrators, as identified by Dooley(2000) were

- Not knowing the different types of support available,
- Old policies being used for distance education,
- Technological glitches, and
• Overall lack of skill, expertise, and the desire to develop interactive distance education courses.

Similarly the loss of interaction between faculty and students, limited knowledge on copyright and intellectual property were some more concerns that the faculty had. Faculty also perceived a threat that the use of multimedia devices to capture their intellectual property may result in job insecurity for them.

Dooley (2000) urges to provide faculty support and training as such facilities result in development of higher quality programs.

The barriers in the mind of the faculty for use of distance education are stated by Maguire (2005) as follows:
• Resistance to change;
• Concerns about intellectual property being taken away from them;
• Concern that distance learning may replace on campus experience;
• Concern about career and job security;
• Quality of online courses;
• Lack of financial support for materials, software expenses and other needs;
• Lack of merit pay and financial stipends for teachers who teach online.

Clay (1999) identified these factors as affecting the attitudes of faculty towards distance education:
• Increased workload;
• The altered role of the instructor;
• Lack of technical and administrative support;
• Reduced course quality and
• Negative attitudes of colleagues.

Betts (1998) concluded from research that the following factors acted as inhibitors for the participation of faculty in distance education:
• Lack of technical support;
• Concern about faculty workload;
• Lack of release time;
• Lack of grants for materials/expenses; and
• Concern about quality of courses.

The research also stated that some faculty do not participate in distance education because of the following reasons:
• Time constraints - faculty do not have time to become involved in distance education;
• Faculty enjoy teaching traditional education courses;
• Concern about not having the student-faculty (face-to-face) interaction that is found in the traditional classroom;
• Lack of opportunities to become involved in distance education;
Concern about a lack of support in distance education (e.g., technical, administrative, and financial); and
Lack of skills needed to become involved in distance education.
Galusha (1997) and Clay (1999) mention that it is not enough to provide support services. It is also important to give training to the instructors on how to use the technology as well as the support services effectively during the distance education course. Similarly they need motivation, administrative support as well as formal and informal recognition along with the stipends and the financial incentives.

Badu-Nyarko (2006) states that there is a perception among faculty that distance teaching is neither rewarded by academic departments nor perceived as a scholarly activity by a significant number of colleagues. Badu-Nyarko (2006) found in a literature survey that distance education is often dismissed by the faculty on the grounds of prejudice. The author feels that increasing faculty knowledge about distance education is the key to gaining acceptability. Teachers tend to derive job satisfaction from
Quality of interaction with students;
Working with motivated students;
Satisfaction from the act of the teaching;
Feeling of personal achievement.

Betts (1998) found the following factors in their research
Faculty would like support for course development (e.g., financial, administrative, and technical support);
Faculty are interested in seminars and workshops that focus on skill development, the use of new technologies, designing courses, teaching strategies, and on the educational merit of distance education techniques (e.g., hands-on training, coaching, access to technology, tutorials, guided practices, and pilot tests); and
Faculty would like release time for training.

Wolcott (2003) states the following factors affecting the faculty who consider teaching in distance education programs. They include lack of incentives, lack of rewards, lack of administrative or technical support, lack of adequate information (Montgomery, 1999; Ndahi, 1999); lack of training (Ndahi, 1999; Schifter, 2000), lack of adequate compensation and lack of clear commitment to or policy on distance education. Similarly the faculty has fears associated with the use of technology, the fear of being displaced and the fear of losing autonomy or control over the teaching and learning process. Concerns regarding job security were also common. Sometimes a feeling of ignorance and inadequacy with respect to the distance education process also deterred the faculty from adopting the same. Similarly an element of trialability where the faculty could experience the process of distance education on a limited basis changed their perceptions of the distance education process with respect to its adoption.

Wolcott (2003) states that there were five types of intrinsic motives for the faculty to participate in the distance education process namely:
Personal or socially derived satisfactions;
• Personal or professional growth;
• Personal challenge;
• Altruistic;
• Career enhancing.

These take form as reasons like to reach new audiences, to develop new ideas, to use new technologies, intellectual challenge, overall job satisfaction, providing innovative instruction, applying new teaching techniques, self-gratification, and fulfilling a personal desire to teach. Some teachers see an opportunity to improve their teaching, provide students greater access to education, and increase enrollments.

Extrinsic motives for faculty participation in technology enabled distance education include expectation by the university that faculty would participate, a requirement by the department, and support and encouragement from individual departments as well as from the institution (Wolcott, 2003). It was also found that the participation in distance education programs allowed the faculty to make contacts in the industry and increase their visibility and reputation in their field. Such recognition can be a source of motivation to some faculty.

Some barriers as stated by Wolcott(2003) include the following factors. The faculty find that distance education is far too expensive in terms of hours required for preparation and development of the course as well as learning and mastering new technologies. As a consequence the teachers are unable to devote enough time to research and other publishing activities. Other inhibitors included concerns about workload and the quality or academic rigor of courses in which face-to-face interaction was absent. Faculty are also concerned about lack of release time, lack of merit pay, lack of monetary support for participation, lack of grants for materials or expenses, and the lack of career advancement resulting from participation in distance teaching (Wolcott, 2003).

Gunawardena (1992). states that there needs to be proper training and preparation for an instructor before teaching in an ITV course. Pugh & Siantz (1995) state that student satisfaction rises as instructors gain more experience with the technology medium. Abou-Dagga and Huba (1997) state that teachers with more positive attitude towards technology have more chances of being engaged in distance education.

Schifter (2002) mentions that one question that does not seem to have received attention is whether there are differences in faculty attitudes by gender, age, faculty rank, and tenure status. In her research, Schifter (2002) found that age or gender or faculty position did not have any significant effect on the level of participation of the faculty. Schifter (2002) also found very significant differences between faculty (participators and non-participators) on the factor of reduced teaching load and monetary support for participation. Similarly personal motivation was rated higher by participating faculty than non-participants, while other three personal needs like credit toward promotion and tenure, release time, and distance education training provided by the institution, were rated higher by non-participating faculty.
Schifter (2002) concluded that faculty participants in distance education appear to be more highly motivated by intrinsic issues like intellectual challenge, and overall job satisfaction than non-participating faculty. Non-participating faculty seem to be more motivated by external needs like release time, credit toward promotion and tenure, and merit pay, expectation by university, requirement by department, and lack of technical background.

Zhen et al (2008) state that faculty adoption of technology takes time and requires faculty to develop new skills and understandings through social communication channels. Bower (2001) explained that faculty are accustomed to being the experts. The use of technology without proper training may cause fear of appearing incompetent among the faculty. This may cause faculty to resist involvement in any activity for which they have not had the proper training, including appearing on camera or conducting class via computer. Faculty may feel they have not been provided with adequate training or experience to competently manage teaching distance learning courses.

Bhushna (2006) explored the teacher’s perceptions of the technology especially with regard to the learning objectives, appropriateness, flexibility, interactivity, ease of use, etc. in higher learning situations. She also examined how teachers use a two way audio and one way video teleconferencing technology in relation to their teaching – learning practices. She states that studies have found that majority of the teachers are positively predisposed to the use of teleconferencing for education. In her research she found that the teachers did not find the technology flexible enough to change their teaching. The teachers reported lack of learner feedback, technical staff not giving free hand to the teachers, lack of positive approach and lack of team spirit. Facelessness of the learner and lack of contact with the learner was one of the main reason that the teachers could not judge whether the students were learning or whether they were dissatisfied or confused. Similarly concerns about the quality of interaction were raised by the teachers. The teachers also reported that there were more questions about the administrative part of the teaching rather than the learning of the content. The teachers also reported that they could not give proper feedback to the students because of the impersonalized nature of the technology (Bhushna, 2006).

Bower (2001) adds that in a distance learning setting, instructors may have little or no knowledge of or contact with the audience as they prepare and deliver instructional lessons. The faculty has no way of knowing the ultimate purpose for which a given lecture will be used once it is recorded if in a pure video based mode. He also observed that teleclass instructors who teach their courses live, with or without a studio class, have limited interaction with the students and they are also restricted by the demands of the camera. Bower points out that in the traditional classroom, a skilled instructor will use her/his understanding of the audience as well as participant reactions monitored through observation of body language, verbal response, eye contact, etc. to create an effective learning experience. However such attention to minute details might not be possible in a teleconference mode. As a result the lack of direct interpersonal contact is an issue for some of the faculty. He adds that the joy of seeing a student gradually absorb the concepts and gain an understanding of the same is one treasured by most faculty. Such an experience is rarely possible in distance education enabled by interactive teleconference. Similarly faculty feel
that the quality of distance education is not up to accepted standards. In higher education, quality of instruction is measured in many ways. Quality must include access to resources such as library, labs, and faculty. Quality should also include life experiences designed for student socialization and affective development via student-to-student interaction which is not always possible in distance education settings (Bower, 2001).

Tabata et al (2008) made a study of the faculty participation in technology enabled distance education using a survey. This was done in relation to their technology use, their attitudes toward technology and distance education, and their adoption of innovations. The authors state that the factors that influence the faculty acceptance and participation in technology enabled distance education include technology use and competencies, time, workload, institutional support, rewards and incentives, promotion and tenure, and quality of instruction and learning.

Tabata et al (2006) state research findings that the more the comfort level of a faculty with the technology, the more are the chances of that person participating in technology enabled distance education. Conversely, those faculty who were intimidated by technology resisted participation in distance education. Similarly faculty who had higher levels of expertise in technology were less concerned, than those with lower levels of expertise, about issues that are barriers to participation in distance education (i.e., compensation, support services, time). Thus the authors state that teachers are concerned about the amount of time it takes to learn technology, the effect on their workload, and the lack of release time and instructional support for developing course materials and it may deter them from participating in distance education delivery. Hence, providing training, workshops, technical and other forms of institutional support may be important to encourage faculty participation in distance education (Tabata et al, 2006). As stated earlier the lack of rewards and incentives, and the omission of technology and innovative instruction as part of promotion and tenure reviews, may influence faculty decisions whether to adopt new technologies or engage in distance education (Tabata et al, 2006). They also state that the perceptions of the faculty regarding the quality of instruction and learning by distance may contribute toward determining whether to participate or not. Faculty who feel that the quality of interaction in distance education is not up to the mark, as compared to traditional education may be unwilling to participate in distance education programs.

Tabata et al (2006) found that technology competency of faculty is a strong motivator or a barrier which influences their decision to participate in distance education. Similarly faculty, who view themselves to be competent with use of technology, are more likely to participate in technology enabled distance education. Faculty, who have training in instructional methods in distance education, and access to technical support are more likely to participate in distance education. Faculty who perceive that distance education is as good in quality as face to face instruction are more likely to participate in distance education. They also managed to confirm the earlier concerns of the faculty about the time and workload increase caused by the participation in distance education. The faculty also seemed to derive positive benefits to their image and this further helped their participation in distance education. The authors speculate that this may be due to a variety of factors such as being part of the
delivery of education to disadvantaged students. The authors also found that first hand information, experience and assistance help to positively influence the participation of the faculty in distance education. They also found that sharing experiences especially negative ones among the faculty might be counterproductive to their participation in distance education.

**Summary and Conclusions**

The teacher may feel that distance learning may provide additional access to remote college students and hence may be willing to participate in it. Similarly distance learning may be a more richer experience for both the students and the teacher as the students have a diverse background and may contribute new ideas to the discussion. The faculty may base their success on the basis of how much the students have actually learned in the distance education process. The teachers may feel that the education process is incomplete if the students do not have access to facilities like the libraries, computers etc. Due to the psychological distance introduced by the physical separation between the student and the teacher, the students and the teacher may feel a sense of disconnect. Real time continuous interaction between the students and the teacher may not be as good and effective as in a traditional classroom. The teachers may also miss the opportunity to interact with the student outside the class. As a result the feedback process for the teachers may be hindered and hence they may not be able to assess the effectiveness of their teaching. Technological disturbances may further cause more disturbances in the teaching and learning process. Hence adequate technical support is necessary for the teachers to continue teaching in a smooth flow. The teachers may not have been provided with adequate training of how to use the technology that has been provided. Similarly, in absence of visual feedback from students the teaching process in a distance learning program may be completely different from the teaching experience in a traditional classroom. Hence teachers should be guided in terms of pedagogy as well as policies of how to best make use of the distance teaching experience. The teachers who participate in the distance teaching expect support from the rest of the faculty as well as the administration. As compared to the traditional classroom teaching the teachers need to spend significantly more time and effort in the preparation for the distance teaching experience. There should be close coordination among the various technicians, faculty, and designers as distance teaching is a team effort. As said earlier, proper planning of course structure and quick feedback through the means of assignments is essential for the students and the teachers should be aware of that fact. Declaring the course objectives and the assessment criteria helps the students and the teachers agree on some parameters. Experience and practice improves faculty comfort, knowledge and skills required for the technology based distance learning. Pedagogy as well as course contents have to be adapted to suit the technology enabled distance learning environment. Research says that the enthusiasm and commitment of the teachers increases the student learning. There are also chances that faculty who are provided adequate training and are more comfortable with the technology help the teaching during the lecture. The teaching skills of the teacher also contribute to the success of the course. The course has to be suited for the distance learning facility. The faculties also feel that distance learning requires more effort and hence should be rewarded with more incentives. It can also be said that distance learning adds to the
diversity of the students who enroll for a particular course. Such diversity can be in terms of age, locations and experience. The amount of satisfaction experienced by the faculty in a distance learning class is different from the one experienced in a traditional class. Similarly the teacher’s views on whether the distance learning course should have components of group work and team work, interaction, feedback etc affect the course effectiveness. Lastly, in case of technological disturbances the faculty should have backup plans to be used during the interruption of the classes.

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