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EDITORIAL

It would seem self-evident that widespread acceptance of distance education must be based on faculty support and committment. Yet, as Dillon and Walsh (1992) point out in their review of research related to faculty participation in distance education, "the dominant theme of distance education research has been the learner" (p. 5). A recent exception to the trend is Clark's (1993) study of attitudes of participating and nonparticipating higher education faculty toward distance education, in which he examined faculty members' general receptivity to distance education, the relationship between their professional characteristics and receptivity, and the connection between their experience with distance education and their receptivity to the concept.

Gregory Blanch, author of the article for this issue of DEOSNEWS, presents an intriguing and valuable perspective on the issue of faculty acceptance and support of distance education. Using a diffusion-of-innovation paradigm, he focuses on five attributes that influence the rate of adoption of an innovation. Readers will find this discussion of the factors that influence a faculty member's decision to accept or support innovative distance education programs to be a useful addition to the literature on faculty participation in distance education.

REFERENCES

Clark, T. 1993. Attitudes of higher education faculty toward distance education: A national survey. The American Journal of Distance Education 7(2):19-33.

Dillon, C. L, and S. M. Walsh. 1992. Faculty: The neglected resource in distance education. The American Journal of Distance Education 6(3):5-21.

DON'T ALL FACULTY WANT THEIR OWN TV SHOW? BARRIERS TO FACULTY PARTICIPATION IN DISTANCE EDUCATION

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INTRODUCTION

During the 1980s, many colleges and universities, including California State Polytechnic University, Pomona (Cal Poly Pomona), sought cost-effective and pedagogically sound ways to accommodate larger student enrollments and provide better access to public higher education to people in surrounding communities. Distance education was one of the alternatives discussed and ultimately adopted at Cal Poly Pomona because it seemed to present tremendous advantages to students, the institution, and faculty. For students, the distance education format promised to free them from the considerable time and effort of commuting in the congested Southern California area in which the university is located. It also would preclude the associated problems of parking on campus and other "logistical" problems. For the university, distance education seemed to offer a way to facilitate enrollment growth without concomitant capital outlay expenditures for new facilities. Benefits also seemed to loom large for faculty: the medium afforded faculty a new, high-technology stage for teaching--they would have the chance to "star" in their own television show. In addition, they could pursue a new challenge in teaching, and they would have the opportunity to reach new student populations. Finally, because participating faculty were given a small stipend for their department, distance education offered a way for faculty to augment their department's budget for travel, supplies and services, student assistants, etc.

The distance education concept engendered a contagion of enthusiasm among college administrators and students. However, from the outset faculty were largely immune to this passion for distance education. Given the substantial benefits that seemed to accrue to them, it was curious that they were not at the forefront of the distance education movement. Why this reluctance? This article describes results of research conducted at Cal Poly Pomona to identify barriers to faculty participation in distance education. A qualitative study, using the diffusion-of-innovation paradigm, focused on identifying key factors in a faculty member's acceptance or rejection of the distance education format. The diffusion of innovation paradigm offered by Rogers (1962, 1971, and 1983) identifies five attributes that directly affect the rate of adoption of an innovation and influence the decision-innovation process: relative advantage of the innovation; compatibility of the innovation with existing values, previous experiences and the needs of the adopters; complexity of the use of the innovation; trialability of the use of the innovation; and observability of the results of the innovation. Other models have been proposed to explain the diffusion and adoption of innovations (Bhola 1984; Fullan 1985), but Rogers' work offers the most comprehensive paradigm, the one that lends itself most easily to comparative study (Koontz 1989). Therefore, the major research questions for this study were derived from the five attributes identified by Rogers: (a) Do faculty see relative advantages of distance education that can be measured in economic, social-prestige, and convenience terms? (b) Is distance education compatible with existing values, norms, needs, and past experience of faculty? (c) Is distance education perceived as being complex? (d) Can faculty "try out" the distance education format without committing themselves to participate? (e) Is it relatively easy for faculty to observe the results of distance education?

The model conceptualized by Rogers (1983) for the innovation-decision process consists of several stages. In the first stage, "knowledge," an individual is exposed to the innovation's existence and begins to gain some understanding of how it functions. "Persuasion" occurs when an individual forms a favorable or unfavorable attitude toward the innovation. A "decision" is made when an individual engages in activities that lead to a choice to adopt or reject the innovation. "Implementation" occurs when an individual puts an innovation to use, and "confirmation" follows when an individual seeks reinforcement on an innovation-decision that already had been made. The possibility still exists at the confirmation stage of reversing the previous decision if the person receives conflicting information about the innovation. This model served as the basis for analyzing how the faculty included in this study embraced or rejected the distance education format. The results of this study have implications for the key components of a distance education program with regard to factors influencing faculty participation.

METHOD

The research design included two major elements: a questionnaire and a series of personal interviews. The questionnaire, which was administered before the interviews were conducted, was intended to elicit the views of Cal Poly Pomona faculty who had participated in the university's distance education program, PolyNet. The personal interviews were intended to supplement the questionnaire.

Preparation of Questionnaire

The questionnaire comprised 26 questions requiring both open-ended and forced-choice responses. Questions one through five dealt with the respondent's historical connection with PolyNet and included such items as the number of times the faculty member had taught on the system, the size of the class he/she taught, and the initial way in which the faculty member became aware of PolyNet. The questionnaire was specifically intended to gather information about the extent to which specific attributes of innovation were present in the faculty member's interaction with the PolyNet system. Questions six through 16 addressed the attributes of innovation and attempted to determine to what extent these attributes were present. The questions were written in such a way as to elicit this information while not identifying the specific attribute in the question itself. The third goal of the questionnaire was to develop a demographic profile of the respondents. Questions 17 through 26 focused on issues such as departmental affiliation, years of service as a university instructor, rank, and tenure status. This information was gathered to facilitate study of possible correlations between demographic features such as rank and tenure with specific characteristics of innovation.

Distribution of Questionnaire

The survey was sent to PolyNet faculty under a cover letter from the researcher indicating general background information on the researcher's interest in distance education, on-going research in which the respondent's participation would be

appreciated, and the confidentiality of the survey. In addition, the cover letter stated that the research project had the support of the director of the PolyNet system.

Determination of Sample and Return Rate

Thirty-five Cal Poly Pomona faculty members have taught a course on the PolyNet system since its inception. Of that number, 13 had retired or left higher education and could not be contacted to participate in this survey. The remaining 22 faculty were sent a questionnaire; a total of 15 were returned for a 68% response rate. Faculty members who responded were distributed across the following five academic areas: arts, engineering, agriculture, education, and hotel and restaurant management. The sample, like the population from which it was drawn, did not reflect the general characteristics of the Cal Poly Pomona faculty with respect to gender, age, or national origin.

Limitations of Survey

Faculty participation in the PolyNet system has been limited for several reasons: PolyNet has been in existence for only seven years and the subject matter taught over the system has been restricted to introductory and general education courses. In addition, broadcast facilities can accommodate the offering of only three courses per academic quarter. Accordingly, a maximum of nine faculty can teach on PolyNet each academic year and, as a result, the sample population for the research survey was small. Of the 22 faculty who have taught on PolyNet, many have taught on more than one occasion.

Follow-up Interviews with Respondents

Follow-up interviews were conducted with four respondents who had indicated on the questionnaire their willingness to provide additional commentary about their experience with PolyNet. These interviews were intended to generate additional data and to create a context within which the surveys could be evaluated. The interviewees were selected on the basis of their discipline, the number of times they had taught on PolyNet, and their familiarity with other innovative educational delivery systems. The interview questions attempted to elicit from each faculty member more in-depth descriptions and analyses of their involvement in PolyNet, and to establish what connections, if any, they could draw between the specific characteristics of innovation and their own, as well as their colleagues', involvement with distance education.

RESULTS

Demographic Profile of the Questionnaire Respondents

The majority of the questionnaire respondents (86.7%) were 41 years of age or older, 80% were tenured, 100% had full-time appointments and 93.4% held the rank of associate professor or professor. Almost three-quarters (73.3%) of the respondents were male; 26.7% were female. When asked to identify their ethnic affiliation, 60% said "White, non-Hispanic," 19.9% "declined to state," and 6.7% marked "American Indian," "Black, non-Hispanic," and "Chicano," respectively.

Most of the respondents (60%) taught in the arts and humanities, 20% were from the sciences, and 6.7% each reported an affiliation with business, engineering, and hotel and restaurant management, respectively. Doctoral degrees were held by 66.7% of the respondents; the balance held master's degrees or the equivalent. Almost all the respondents were experienced teachers with over 10 years of teaching at the university level.

Survey Responses

Ten questions on the questionnaire were concerned with the respondents' beliefs about PolyNet in terms of the five characteristics of diffusion: relative advantage, compatibility, complexity, trialability, and observability. In respect to relative advantage and compatibility, 46.7% of the respondents said that teaching at a distance was not a viable alternative to the traditional model. In response to the questions concerning complexity, 60% indicated that PolyNet was more complicated than anticipated. In terms of trailability, 33.3% said the chance to experiment with a new instructional model was a very important factor in influencing their decision to teach on PolyNet, while 26.7% each indicated that "compensation for the department" and "reaching a new student population" were very important factors.

Other responses from the survey with implications for the question of diffusion, or lack thereof, were as follows: the respondents were evenly split (46.6% on each side) on the question of whether teaching on PolyNet confers any positive status or prestige on the instructor; 6.7% were undecided. Almost half (46.7%) said they did not think their faculty colleagues believed that teaching on PolyNet was a viable alternative to the traditional model; 20% thought it was; and a third (33.3%) were undecided.

A majority of respondents (66.7%) thought that the courses delivered on PolyNet met the needs of students; 13.3% said they did not, and 20% were undecided. Most respondents (60%) thought teaching on PolyNet was more complicated than they had initially anticipated, and only a third (33.3%) had ever attempted to persuade someone else to teach on PolyNet. For the vast majority of respondents (80%), PolyNet was the first and only innovative educational delivery system in which they had participated.

Seven faculty members responded to an open-ended question about the most difficult barriers they had faced in teaching on the PolyNet system. This question elicited responses that could be grouped into two categories: a) technical problems (e.g., learning to look into a camera, not being able to move freely around the studio/classroom, having to use different types and sizes of overhead transparencies); and b) pedagogical concerns (e.g., lack of student interaction with the instructor or other students in different locations, inability to deviate from planned syllabus, complexity of administering tests, inability to judge immediate student reactions to the material being taught).

Interview Results

The interviews elicited expanded comments from faculty regarding the degree to which the attributes of innovation were present with respect to the educational innovation of PolyNet. Interviewees were assured confidentiality of their responses and provided with general information about the subject of diffusion of innovation and the specific diffusion attributes being studied. The interview responses were aggregated to assure anonymity and arranged under each of the five diffusion attributes that were discussed:

1. Relative Advantage. This attribute refers to the degree to which an innovation is perceived as better than the one it supersedes (Rogers 1983). As the interviewees discussed this characteristic, there was unanimity of agreement that, in this case, distance education (PolyNet) was not better than traditional forms of education. Their comments revealed a perspective that PolyNet was appropriate for delivery of lower-division and general education course work, but they did not believe that courses requiring more in-depth analysis (and greater faculty/student interaction) than the "survey type" course would work as well in the distance format It was their feeling that it was "still to be shown" whether PolyNet could have broader applications for the university's comprehensive range of course offerings. None of the respondents suggested that distance education has a relative advantage over the traditional format for education.

2. Compatibility. This attribute reflects the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters (Rogers, 1983). In discussing this attribute, one of the interviewees was particularly adamant that neither PolyNet nor any other form of distance education was going to "become a tool which would act to replace the existing values held by my colleagues." This respondent went on to say, "without a full media blitz about the benefits of distance education, PolyNet is never going to be widely accepted." To some degree this attitude was reflected in the comments of the other interviewees. Although they were not as forceful in their remarks, it was clear that they felt their faculty colleagues needed to be educated about distance learning. Some interviewees offered specific recommendations as to how their colleagues might become better informed about this topic. These suggestions pointed to things the university administration could do, e.g., hold "workshops" for faculty. None of the faculty members interviewed saw themselves as agents of change or as being in a position to influence how their colleagues regarded PolyNet.

3. Complexity: This attribute is the degree to which an innovation is perceived as relatively difficult to understand and use (Rogers, 1983). All of the faculty interviewed said they found PolyNet more complicated than they had anticipated. They emphasized, however, that once they taught on the system, they were able to discover ways to adjust their traditional teaching approach to the television format. One of the interviewees described using PolyNet as analogous to learning to use a computer: "I walked up and down the hallways of my building for quite a long time seeing people writing notes and preparing course work by hand when a computer with a word processing program was no more than two feet away."

4. Trialability. This attribute is the degree to which an innovation may be experimented with on a limited basis (Rogers, 1983). A number of the interviewees stated that finding a way to let faculty "try out" PolyNet in a meaningful way would be "revolutionary," and that if this opportunity were made available, it would result in a "tremendous lift" for the PolyNet program. Several of the interviewees suggested that their colleagues had actually asked if there were a way in which to "try out" PolyNet. In all cases, the response had been that the only "trial method" was to guest lecturer during one of the courses.

5. Observability. This characteristic is the degree to which the results of an innovation are visible to others (Rogers, 1983). Interviewees reported that they had not given much thought to the idea that increased "observability," as a result of marketing, might also increase the use and acceptance of distance education. The interviewees considered observability something that might take place within their own discipline; none thought of PolyNet or their work in distance education as a way to increase their "observability" to others.

DISCUSSION

Within each social system, innovations will diffuse at varying rates from the time of their introduction to their general use. This study looked at the degree to which Rogers' five characteristics of innovation--relative advantage, compatibility, complexity, trialability, and observability--have influenced the decision-innovation process with respect to faculty participation in the PolyNet distance education program at Cal Poly Pomona.

Based on the data compiled through the questionnaire study and interviews, the following conclusions are drawn:

Relative Advantage/Compatibility: Is distance learning a viable alternative to the traditional model and does it meet student needs?

Faculty surveyed did not believe that distance education is a viable alternative to the traditional teaching format. In taking this position, faculty indicated that they view PolyNet as having no "relative advantage" over traditional teaching, even though they believe that student needs are being met by the current lower-division courses delivered on PolyNet. Faculty asserted that student needs would not be met if the courses offered went beyond the introductory level. "Compatibility," the belief that the needs of the adopters (students) are being met, is present at the level of course instruction now being offered.

Observability: Are PolyNet faculty accorded special status within the university?

Instructors do not perceive that high status is conferred upon those who teach on the PolyNet system. On the survey, faculty members responded either "no" or "undecided" to the question of whether prestige accrued to instructors who taught Poly-Net courses. Based on the interview comments, status and prestige seem to be more important to university faculty than are monetary rewards, a critical issue in structuring a distance education program

that is attractive to faculty. The diffusion trait "observability" is not evident in either the survey or interview responses. Teaching a course on PolyNet is not recognized by the faculty-at-large, a sentiment expressed clearly and unambiguously in the research.

Trialability/Complexity: Is PolyNet perceived as complicated to use? Should faculty have an opportunity to "try out" the distance education format?

The faculty responded in similar ways to the issue of "trialability" and "complexity." The majority of faculty stated that a method to "try out" the system would be beneficial and increase interest. Their resounding affirmation that PolyNet is more complicated to use than they had anticipated seems to underscore the need to provide faculty with a way to "try out" the format in advance of committing to teach a course over the system.

General Faculty Comments

The interviews, in particular, pointed out that teaching over television presents several additional challenges for teachers. The interviewees' comments were remarkably homogeneous and easily sorted into two categories: administrative/technical problems and academic concerns. In both these areas the interviewees emphasized what they thought should be done in order to increase faculty awareness and utilization of PolyNet. Under the aegis of "administrative/technical" problems, they indicated that PolyNet needs a higher profile within the campus community and commented that not enough status is conferred upon those who teach on the system. In terms of "academic" concerns, the most urgent comment had to do with the lack of face-to-face student interaction. Instructors are accustomed to relying on students' facial expressions to judge responses to the material being presented, and the lack of those responses was disconcerting to them. In addition, questions lingered about the efficacy of distance education in the teaching/learning process.

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this research was to identify the critical barriers to faculty adoption of a distance education format. Those aspects which faculty identified as presenting the greatest obstacles for the increased use of the Cal Poly's PolyNet were a lack of awareness on the part of the university community to the general benefits of distance education, lack of faculty incentives for involvement with PolyNet, an unrealistic requirement to commit, without any trial period, to teaching a course using a technology that requires a very different teaching approach, and the faculty's sense that distance education is not integrated within the university's programs and plans.

As previously stated, the relative newness of Cal Poly Pomona's program has limited both the total course offerings and the number of opportunities to teach a distance education course. This restriction, in turn, has limited the sample size. Thus, further research is necessary to determine whether these findings can be generalized to other settings. However, based on the current research, four general recommendations emerged which, if followed, would increase the likelihood of faculty participation in

distance learning programs:

1. Campus Visibility. It is critical that the university community becomes aware of distance learning. Increasing the general awareness of this educational delivery system would result in several subsidiary benefits. Foremost, there would be a greater chance of identifying those persons who could be categorized as "change agents," people who are venturesome and eager to try new innovations, a requirement for any innovation to move through the innovation-decision process. Additionally, a greater awareness of the distance education system and its accomplishments could serve to enhance the status of those who teach on the system. As part of the effort to educate faculty about distance education, faculty concerns about the efficacy of distance education could be addressed and dispelled.

2. Faculty "Introduction" to Distance Education. Faculty should be able to learn more about distance learning and to "try out" the technology before they are required to make a commitment to teach a course in this format. This trial period would allow faculty to learn first-hand how much adaptation is required in a course taught over television.

3. Enhanced Faculty Incentives. Incentives for those who teach over television must be part of a distance education program. While emphasis could be placed on non-monetary rewards, one possible incentive could be increased support for instructors who wish to do research and write about their experiences using a distance education format.

4. Integration of Distance Learning with Major University Initiatives. Distance learning should be used as a vehicle to enhance existing university initiatives, programs, and plans. Instructors should be encouraged to look at new ways in which distance learning can benefit their teaching, scholarship, and service activities, as well as benefit the entire university community by integrating teaching over television with major university initiatives.

As Cal Poly Pomona's distance education program evolves from "pilot" status to a program that is fully integrated into the organizational fabric, the university must develop a distance education schema that meets the needs of students and, at the same time, addresses the concerns of faculty.

REFERENCES

Bhola, H.S. 1985. Planned Educational Change: A Model and Critiques Thereof. Viewpoints in Teaching and Learning, 58, 4.

Fullan, M. 1985. Change Processes and Strategies at the Local Level. The Elementary School Journal, 85.

Koontz, F.R. 1989. Critical Barriers to the Adoption of Instructional Television in Education. Educational Technology, April.

Rogers, E.M. 1962. Diffusion of Innovations. New York:

Free Press of Glencoe.

Rogers, E. M. 1983. Diffusion of Innovations. New York:
The Free Press.

Rogers, E. M., and F. F. Shoemaker. 1971. Communication
of Innovations. New York: The Free Press.

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