Barriers to Distance Education as Perceived by Managers and Administrators: Results of a Survey

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It is becoming increasingly unusual to pick up a professional training or education journal without seeing articles concerning alternatives to in-person teaching and learning. Distance education is not new, but the new technologies used for delivery in recent decades have fueled different perspectives, methods, and debates than had been the case starting a century ago.

The technologies used to deliver education at a distance have changed, and have also allowed a broader range of teaching methods to be used. Still, no one believes now, if ever they did, that this is a panacea. There are many barriers to successful distance education—some are new but many have plagued distance education since it was first conceived.

A survey was conducted to help better understand and more systematically study these barriers. From a review of the literature, experience in various distance education settings, and discussions with distance educators, I hypothesized that several factors might affect the barriers that an individual perceives. This survey addressed six such factors: 1) work place (e.g., community college, government); 2) job function (e.g., support staff; manager, researcher, student); 3) type of delivery system used (e.g., audio-tape, computer conferencing, ITV); 4) expertise of the individual regarding distance education; 5) the stage of the respondent's organization with regard to capabilities in delivering distance education; and 6) the area in which the respondent primarily works (e.g., fine arts, engineering, education).

Hypotheses for each demographic characteristic were made, but due to space limitation here, notes on only two of these six factors are mentioned. With regard to individual expertise, I had hoped to have a wide

range of individuals respond, including many with no experience in distance education. My hypothesis is that the perceived barriers preventing persons from becoming involved in distance education are significantly different at different stages of individual expertise, from novice through expert.. Separately, I suspect different content areas are more or less suitable for distance education delivery. For instance, using current technologies, my hypothesis is that it is so difficult to use mathematical or chemical symbols, that courses relying on same will not be delivered at a distance.

Methodology

When conducting a probabilistic sample, it is necessary to first identify the population. This is a very difficult task when studying persons perceiving barriers to distance education, especially when including those not currently involved with education or training at a distance. To announce this survey, I sent individual email to personal acquaintances in my electronic and off-line address books; to many thousands of individuals collected from participation lists and membership lists gathered over the years from educational technology, distance education, and training conferences, workshops, seminars, and professional organizations; and to a wide variety of electronic mailing lists in which the topic of discussion was believed to be related to education, distance education, and technology-enhanced learning. This announcement included background regarding the survey, provided my perspective, and asked for volunteers to complete the online survey regarding barriers to distance education. Given this selection process, it is impossible to accurately estimate rate of return.

I developed the survey items, sixty-four (64) barriers to distance education, from a review of literature, from previous survey work (Berge, 1998), and from content analyses of selected case studies (Berge and Mrozowski, 1999). Two rounds of beta-testing were conducted using paper and pencil versions of the instrument which were administered to selected members of the target population (n>50). Revisions were made before the final version of the survey was released on the web. The survey was programmed to be accessible using standard web browsers (see http://cgi.umbc.edu/cgi-bin/dharley/misc/barrier_survey.pl). It was designed so that as each respondent completed the survey and submitted it, the response was captured in an output file that was easily readable to SPSS. Respondents were asked to rate each of the sixty-four barriers on a 1-5 scale, from no barrier to very strong barrier, respectively.

Data was collected between June 1999 and the end of January 2000. Subgroups that were found to be under-represented in the early stages of data collection (June-December, 1999) were specifically targeted in the latter stage of data collection (mid-December, 1999 to January, 2000). As of February 1, 2000, 2530 surveys were collected. The 2504 valid surveys which remained after data cleaning were analyzed using SPSS as follows:

Frequencies and descriptive statistics were applied to the entire data set. Subsequently, the cases were sorted by the demographic variable "job function" into the following categories: 1) support staff (graphics/computer support/curriculum development), 2) teaching faculty/trainer, 3) manager/ director/department chair/principal, 4) higher administration (VP/Provost/Dean/Superintendent), 5) researcher, 6) undergraduate student, and 7) graduate student. For each of the seven job functions, means for each of the sixty-four barriers were listed in descending order and evaluated to determine the strongest and weakest barriers as perceived by the various groups.

Because the focus of this article is on barriers to distance education as perceived by managers and administrators those two sets of cases were selected, combined and further analyzed. Frequencies and bar charts were produced for this data for each of the five remaining demographic variables (other than

job-function): 1) work place, 2) type of delivery system used, 3) expertise of the individual regarding distance education, 4) the stage of the respondent's organization with regard to capabilities in delivering distance education, and 5) the area in which the respondent primarily works.

Findings

Of the 2504 survey respondents the following information was self-reported for each the job-function category: 346 are support staff, 1150 are teaching faculty/trainers, 648 are managers, 167 are higher administrators, 102 are researchers, 8 are undergraduates, and 83 are graduate students. Due to low numbers, the undergraduate and graduate student categories have been combined to form a new category "students" (n=91). In keeping with the focus of this study, managers and administrators were also combined. Consequently, a total of five "job functions" were used for analyses: managers/administrators, support staff, teaching faculty/trainer, researcher, and student.

Means for each of the sixty-four barriers to distance education were calculated and placed in descending order for each of the five job function categories. The eleven strongest barriers to distance education, as identified by managers/administrators, appear in the first column of Table 1. The eleven weakest barriers appear in the first column of Table 2. Subsequent columns in each of these tables show how these same barriers were rated by respondents from the four remaining job functions (both as a combined group and individually).

Table 1: Strongest Barriers to Distance Education Sorted by Job Function

Rankings of the 11 Strongest Barriers for Managers and Administrators n = 815	Combined Rankings for the four Job Functions listed at right n= 1689	Support Staff n = 346	Teaching Faculty/ Trainers n = 1150	Researchers n = 102	Graduate & Undergraduate Students n = 91
1 Increased time commitment	1	1	1	1	1
2 Lack of money to implement distance education programs	2	4	3	4	7
3 Organizational resistance to change	5	3	7	2	2
4 Lack of shared vision for distance education in organization	3	2	4	3	4
5 Lack of support staff to help course development	6	8	5	9	18
6 Lack of strategic planning for distance education	7	5	8	6	6
7 Lack of technical support	8	7	6	13	20

8 Slow pace of implementation	**9**	**6**	12	**7**	**5**
9 Faculty compensation, incentives, etc.	**4**	**9**	**2**	**5**	**3**
10 Difficulty keeping up with technological changes	**11**	12	**10**	29	16
11 Lack of technology-enhanced classrooms, labs or infrastructure	**10**	**10**	**9**	**8**	**9**

Table 2: Weakest Barriers to Distance Education Sorted by Job Function

Rankings of the 11 Weakest arriers for Managers and Administrators n = 815	Combined Rankings for the four Job Functions listed at right n = 1689	Support Staff n = 346	Teaching Faculty/ Trainers n = 1150	Researchers n = 102	Graduate & Undergraduate Students n = 91
54 Competition with on-campus courses	**55**	**55**	**55**	**58**	**57**
55 Lack of personal technological expertise	**54**	**56**	47	**61**	**60**
56 Lack of Acceptable Use Policy (AUP)	**56**	**60**	**56**	**55**	**54**
57 Lack of transferability of credits	**57**	**58**	**57**	40	43
58 Problems with vast distances and time zones	**59**	**54**	**59**	**59**	**62**
59 Technology fee	**60**	**59**	**58**	**56**	**58**
60 Tuition rate	**58**	**57**	**60**	**57**	52
61 Local, state or federal regulations	**62**	**62**	**62**	**62**	**61**
62 Ethical issues	**61**	**61**	**61**	**60**	**59**
63 Existing union contracts	**63**	**63**	**63**	**63**	**63**
64 Lack of parental involvement	**64**	**64**	**64**	**64**	**64**

Conclusion

Perhaps the most startling aspect of the barriers perceived by managers and administrators is that they appear to be nearly identical to those identified by respondents from the other four job functions. Although the order is slightly different, the same set of barriers were identified by both managers/administrators and non-managers/administrators (the combined job function group in column two). To sum it up, it seems that all survey respondents clearly recognize the need for cultural change throughout the very organizations involved in distance education and training. Half of the top ten barriers as perceived by managers and administrators included:

- Organizational resistance to change
- Lack of shared vision for distance education in the organization
- Lack of strategic planning for distance education
- Slow pace of implementation
- Difficulty keeping up with technological changes

The five barriers listed above signal obstacles directly related to rapid changes in organizational culture, and challenge managers/administrators to weave those changes into the operations of the organization. Still, further analysis of the data is needed to more clearly understand and describe the perceived barriers to distance education.

References

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