FACTORS INFLUENCING THE INSTITUTIONALIZATION OF DISTANCE EDUCATION IN HIGHER EDUCATION

Anthony A. Piña
Sullivan University System

The purpose of this study was to determine actions that colleges and universities can take to institutionalize their distance education programs. Thirty factors found to influence the institutionalization of innovations were identified from the literature. These were rated by distance education faculty and leaders as to their importance for influencing the institutionalization of distance education. Data were analyzed according to institutional role, institutional academic level, and institutional locale. All 30 factors were validated as indicators of institutionalization of distance education. Distance education faculty and leaders demonstrated a high level of agreement as to the importance of the various institutionalization factors.

Less than 2 decades ago, the authors of an influential text had this to say about the state of distance education in the United States: "Distance education, although a popular and effective concept in other countries, is still something of an unknown quantity in the United States and, with the possible exception of correspondence courses and telecourses, has until now had little impact here" (Verduin & Clark, 1991, p. 9). This sentiment was also echoed in the educational technology journals of the time. Clark (1989), for example, acknowledged that colleges and universities in the United States were "not leading practitioners of distance education at the adult learning level" (p. 7).

As the first decade of the new millennium draws to a close, it appears obvious that this situation has changed considerably. The advent of the public Internet has facilitated a meteoric rise of online instruction (Simonson, Smaldino, Albright, & Zvacek, 2006). According to research conducted by the Sloan Consortium, 83% of colleges and universities now offer courses at a distance (Allen & Seaman, 2007). However, far fewer of these have established institutionwide distance education programs that include centralized coordination

• **Anthony A. Piña**, Dean of Online Studies, Sullivan University System, 2100 Gardiner Lane, Louisville, KY 40205. E-mail: apina@sullivan.edu

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and complete degree or certificate programs available at a distance (Bear & Nixon, 2006; Boyd-Barrett, 2000).

FROM ONLINE COURSES TO ONLINE PROGRAMS

Individuals and groups critical of online and distance learning have often characterized it as a scheme foisted upon faculty by money conscious administrators (e.g. Carnevale, 2000; Noble, 2003). Although some higher education institutions engage in systematic planning by administration prior to offering online courses (Gersten & Evans, 2004), it is common for distance learning programs to evolve from an initial group of online courses developed independently by faculty—"the result of random acts of innovation initiated by risk-taking individual academics" (Taylor, 2001, p. 7).

Once a college or university begins to increase its online course offerings, it can either remain in the mode of decentralized course delivery or it may take the journey from online courses to the establishment of an institution-wide distance education program (Hunt & Piña, 2004). This "tipping point" can be brought about by a number of factors, including declining student enrollment (Oakley, 2004), pressure from students or faculty, or competition from competing institutions (Olson, 2002; Picciano, 2001). Unfortunately, many higher education institutions take a reactive, rather than a proactive stance toward distance education. In a study commissioned by the nation's largest teachers' union and a large online learning management system provider, Phipps and Merisotis (2000) found that many institutions were struggling to come to grips with the demand for distance education:

> Because of increasing student interest in Internet-based distance education at some of the institutions in the case study, administrators revealed that policies are being developed to catch up with practice. One administrator said simply that the institution is moving ahead without all of the answers. While some institutions were farther ahead in their planning than others, some institutions that are struggling to keep up with the demand for Internet-based courses have made a conscious decision to serve students immediately and plan later. (p. 7)

ADOPTION VERSUS INSTITUTIONALIZATION

The situation described above tends to occur when the institutional focus is upon the adoption or implementation of an innovation, rather than its institutionalization (Curry, 1992). When an organization institutionalizes a program or procedure, it becomes an integral and permanent part of the organization (Fullan & Stiegelbauer, 1991). Kanter (1983) describes an innovation as being institutionalized when it becomes "part of legitimate and ongoing practice, infused with value and supported by other aspects of the system" (p. 299). Surrey & Ely (2002), point out that once an innovation becomes institutionalized, it is no longer considered to be an innovation—it is now looked upon as a normal and vital part of the organization.

Models of organizational change, though systemic in nature, tend to identify adoption as the final step in the change process (e.g. Kotter, 1996; Rogers 2003). The problem, as Surry and Brennan (1998) observe, is that the research based on these models tends to demonstrate "a deterministic bias—it assumes that once an innovation has been adopted, it will continue to be used" (p. 2).

INSTITUTIONALIZATION OF A DISTANCE EDUCATION PROGRAM

It is common in the literature to find descriptions of distance education as a "normal," "integral," or even "essential" part of higher education (e.g., Gunawardena & McIsaac, 2004; Jones, 2002). Such language gives the impression that the institutionalization of distance education programs at colleges and uni-

versities is commonplace. However, findings from several researchers (e.g. Levy, 2003; Taylor, 2001) report that planning, development, and implementation of distance education is often haphazard and nonsystematic. According to Boyd-Barrett (2000), "Decisions about distance education are made too often without adequately considering the broader institutional context" (p. 1). Interviews conducted with online faculty as part of this study revealed that several felt that pessimistic about the current and future state of distance education at their institutions. The following is representative: "The campus as a whole has developed a dozen courses for on-line delivery as part of some grant money that was made available a couple of years ago. Now that this money has dried up, the on-line courses are starting to dry up as well. There is no one to push it and no funding to keep it going."

Perhaps the principal challenge in determining the institutionalization of distance education and other innovations is that "the successful transition from implementation to institutionalization is rarely mentioned in the literature" (Ellsworth, 2000 p. 43). Summarizing their review of theory and research on institutional structures, Tolbert & Zucker (1994) came to this conclusion:

> Probably the most important implication, from our perspective, is the need to develop more direct measures and better documentation of claims of the institutionalization of structures, since outcomes associated with a given structure are likely to depend on the stage or level of institutionalization.… For example, analyses examining the level of institutionalization of contemporary structures could use survey research, in which respondents were asked directly about the degree to which they perceived a given structure to be necessary for efficient organizational functioning. (p. 26)

Colbeck (2002) recommended that research in this area should include multiple indicators of institutionalization:

> By itself, a single indicator may signify true change—or simply a signal that a school is putting on a show of doing the fashionably "right" thing, while actually continuing business as usual.… Since institutionalization requires changes in rules, values, norms, beliefs, and behaviors, other schools or coalitions who wish to assess institutionalization of curricular reforms are encouraged to use multiple indicators in order to provide evidence of lasting change. (p. 6)

PURPOSE OF THE STUDY

- To determine actions that colleges and universities can take to institutionalize or strengthen their distance education programs.
- To identify factors influencing the institutionalization of distance education programs.
- To validate these factors by data collected from those who oversee distance education programs and from those who teach in them.
- To determine which factors are of greatest importance.
- To determine whether institutional role (leader or faculty), institutional level (undergraduate or graduate), or institutional locale (rural, suburban or urban) influences the importance of institutionalization factors.

METHOD

Participants

The sample consisted of 170 respondents representing two primary groups: *Distance Learning Faculty* teach courses via distance education at higher education institutions in the United States. *Distance Learning Leaders* are responsible for the administration or coordination of the distance education program at an institution of higher education. Respondents were further classified according to the academic level of the institution in which they

TABLE 1
Institutional Classification of Respondents

Classification	*Respondents*
Institutional role	
Faculty	111
Leader	59
Institutional academic level	
Associate	50
Bachelor	3*
Master/specialist	59
Doctor	55
Unknown	3*
Institutional locale	
Urban	60
Suburban	52
Rural	55
Unknown	3*

Note: *Excluded from the data analysis for this classification.

were employed (associate, master's, or doctorate) and institutional locale (urban, suburban, or rural). Table 1 shows the breakdown of respondents by institutional classification:

Development of the Instrument

By expanding the scope of the literature review on institutionalization to include the disciplines of organizational behavior (Tolbert & Zucker, 1994), library science (Oldford, 2002), health care (Goodman & Steckler, 1989; Public Education Network, 2004), engineering (Colbeck, 2002), educational leadership (Aronsen & Horowitz, 2000), service learning (Furco, 1999; Kramer, 2000), and distance education (Levin, 2005; Phipps & Merisotis, 2000; WCET, 2000a), a fairly consistent list of factors began to emerge. After eliminating those items that were specific to disciplines other than distance education and re-wording others to be relevant to distance education, a total of 30 institutionalization factors were identified (Piña, 2008). These factors were organized into five general topic areas: Planning, Organization, Resources, Personnel and Student Services.

The survey instrument was constructed to cover the five topic areas, with six items per area, for a total of 30 items. Following the example of Furco's (1999) and Kramer's (2000) rubrics on institutionalizing service learning, each factor was given a description of how it could be applied in an institutional setting. Table 2 illustrates the relationship between the five topic areas, 30 factors and 30 application items.

Each item was accompanied by a Likert-type scale. Respondents indicated the level of importance of that factor to the institutionalization of distance education: Critical = 1, Important but not critical = 2, Not important = 3, and Not a consideration at all = 4. The middle or neutral response was eliminated to address "neutral bias," the tendency for responses to be biased toward the middle (WebSurveyor, 2007). A preliminary paper-based draft of the survey instrument was pilot-tested at a technology conference with 12 professionals representative of the target audience. Results of the pilot test were that the 30 items were deemed appropriate; however, some of the wording of specific items was modified to be more concise.

TABLE 2
Topic Areas, Institutionalization Factors and Application Items

Topic Area	*Factor*	*Item*	*Factor*	*Item*
Planning	Institutional mission	Distance learning is compatible with institution mission/vision statements	Master plan	There is a specific master plan for distance learning
	Policies and procedures	Formal policies and procedures for distance learning have been adopted	Marketing	There is an aggressive marketing plan to promote distance learning
	Needs assessment	There is periodic assessment of faculty, student and institutional distance learning needs	Evaluation	There is a formal plan for ongoing evaluation of distance learning
Organization	Campuswide function	Distance learning is a campuswide function, not a dependent unit of a particular school, department or discipline	Centralized	Distance learning is coordinated by a single central entity, rather than run from many different departments.
	Collaboration	Distance learning staff collaborates regularly with other entities on campus to insure broad base support.	DL leadership authority	Distance learning director/ coordinator has decision making authority
	Visibility	Distance learning is visibly recognized on the institution's web site, catalogue, bulletins or organizational chart	Communication	There is a formal mechanism for informing the campus community about distance learning activities
Resources	Instructional design support	Instructional design help to assist faculty to develop distance learning courses is available	Faculty tech support	The institution provides technical support for distance learning faculty
	Staff development	Comprehensive and on-going staff development in distance education is provided	Funding	The distance learning program and staff are permanent budget items funded by hard money
	Infrastructure	The campus hardware and software infrastructure can support distance learning systems	Course Management System	Distance learning utilizes a course management system such as Blackboard
Personnel	DL director	There is a director/ coordinator whose primary responsibility is distance learning	Permanent staffing	Distance learning staff consists of permanent, rather than temporary, employees
	Full-time staff	Distance learning staff are assigned full-time to distance learning	Faculty participation	Faculty (especially faculty leaders) are actively recruited to teach distance learning courses
	Professional incentives	Professional incentives for teaching distance learning courses (e.g. positive evaluation for promotion/ tenure) available	Financial incentives	Financial incentives for teaching distance learning courses (e.g. course development fees, royalties) are available

(Table continues on next page)

TABLE 2
(Cont.)

Topic Area	*Factor*	*Item*	*Factor*	*Item*
Student Services	Online registration	Students can register for, add and drop courses on line	Online Library/ research	Students can access a full range of library/research services on line
	Advising & counseling	Students have access to counselors and advisors without having to come to campus	Student tech support	The institution provides technical support for distance learning students
	Online degree	Students can complete an entire degree program via distance learning	Multiple disciplines	Distance learning courses are available in multiple disciplines

TABLE 3
Mean Scores for Importance Across Five Topic Areas

Topic Area	*Factors Per Topic*	*Faculty*	*Leaders*	*Total*
Resources	6	1.28	1.32	1.30
Planning	6	1.51	1.45	1.50
Student Services	6	1.54	1.50	1.52
Organization	6	1.71	1.58	1.68
Personnel	6	1.79	1.71	1.76
Total	30	1.57	1.51	1.55

An HTML version of the instrument was developed using SurveyMonkey software to be made available to respondents via a Web site. IP address information from respondents' computers was collected to prevent multiple submissions by the same user; however the information was aggregated to insure respondent confidentiality. Cronbach's alpha reliability testing across the 30 items yielded a coefficient of .87.

Data Analysis

Mean scores, standard deviations and item ranking were calculated for each of the 30 institutionalization factors for importance and implementation. Analysis of variance (ANOVA) was used to test for statistically significant differences between faculty and leaders, between associate, masters and doctoral institutions, and between urban, suburban and rural institutions. Alpha level for significance was set at $P < .05$. When significant differences among three different groups were discovered, ANOVA was followed by a Scheffé posthoc test for multiple comparisons.

RESULTS

Institutional Role

All respondents ($n = 170$) identified themselves as either distance education faculty or distance education leaders. Table 3, which shows mean scores for faculty and leaders across the five topic areas, reveals a high level of agreement by both groups as to the importance of each of the topic areas and their order of importance. ANOVA revealed no signifi-

TABLE 4
Mean Scores for Importance for 30 Institutionalization Factors-Faculty & Leaders

	Faculty (n = 111)			*Leaders (n = 59)*			*Total (n = 170)*		
Factor	*Mean*	*SD*	*Rank*	*Mean*	*SD*	*Rank*	*Mean*	*SD*	*Rank*
Infrastructure	1.04	0.187	1	1.17	0.530	1	1.08	0.351	1
Faculty tech support	1.10	0.380	2	1.22	0.494	2	1.14	0.426	2
Online library/research	1.23	0.485	3	1.37	0.584	9	1.28	0.524	3
Instructional design support	1.32	0.559	5	1.27	0.582	5	1.31	0.566	4
Student tech support	1.32	0.504	5	1.34	0.512	6	1.32	0.506	5
Online registration	1.31	0.569	4	1.37	0.584	9	1.33	0.573	6
Institutional mission	1.38	0.557	9	1.24	0.536	4	1.33	0.552	6
Policies and procedures	1.32	0.489	5	1.36	0.550	8	1.34	0.510	8
Visibility	1.39	0.559	10	1.34	0.545	6	1.37	0.553	9
Budget	1.46	0.711	12	1.22	0.418	2	1.38	0.634	10
Course management system	1.34	0.625	8	1.59	0.812	19	1.43	0.704	11
Staff development	1.44	0.628	11	1.44	0.565	15	1.44	0.605	12
DL director	1.48	0.672	13	1.41	0.646	12	1.45	0.662	13
Master plan	1.50	0.645	15	1.41	0.561	12	1.47	0.617	14
Evaluation	1.49	0.601	14	1.46	0.625	17	1.48	0.608	15
Needs assessment	1.57	0.655	17	1.42	0.532	14	1.52	0.618	16
Permanent staffing	1.53	0.644	16	1.51	0.679	18	1.52	0.655	16
Collaboration	1.59	0.653	18	1.44	0.676	15	1.54	0.663	18
Advisement & counseling	1.69	0.685	20	1.37	0.522	9	1.58	0.650	19
Multiple disciplines	1.66	0.610	19	1.73	0.715	24	1.68	0.647	20
DL leadership authority	1.70	0.880	21	1.66	0.779	20	1.69	0.844	21
Communication	1.81	0.733	22	1.69	0.623	21	1.77	0.697	22
Campuswide function	1.85	0.844	25	1.69	0.793	21	1.79	0.828	23
Marketing	1.82	0.741	23	1.83	0.813	28	1.82	0.764	24
Professional incentives	1.82	0.765	23	1.85	0.847	29	1.83	0.792	25
Centralized	1.93	0.922	26	1.69	0.856	21	1.85	0.904	26
Faculty participation	1.94	0.766	27	1.78	0.696	25	1.88	0.744	27
Full-time staff	1.99	0.869	28	1.80	0.783	27	1.92	0.843	28
Online degrees	2.04	0.830	30	1.78	0.832	25	1.95	0.837	29
Financial incentives	1.99	0.847	28	1.88	0.853	30	1.95	0.848	29

cant differences between faculty and leaders in any of the topic areas.

Table 4 reports mean scores, standard deviations, and rank orders for distance education faculty and leaders for all 30 factors. Both distance education faculty and leaders rated Infrastructure and Faculty Technology Support as the two most important factors. Faculty and leaders also ranked Online Library, Instructional Design Support, Student Technology Support, Online Registration, Institutional Mission, and Distance Learning Policy/Proce-

dures as among their top ten factors of importance. All 30 factors fell into the range of "critical" or "important" in both groups. None of these factors was found to be "of minor importance" or "not important."

ANOVA revealed significant differences between faculty and leaders in four of the 30 factors. Although Infrastructure was the highest rated factor for importance by both groups, the rating by faculty was significantly higher F (1, 169) = 5.717, p = .018. Faculty also rated Course Management System as significantly higher in importance than did leaders, F (1, 169) =5.015, p = .026. Leaders rated Budget F (1, 169) = 5.632, p = .019 and Advisement F (1, 169) = 9.885, p = .002 significantly higher in importance.

Institutional Academic Level

Of the 167 respondents who listed the highest degree awarded by their institutions, 50 were at the associate degree level, 59 at the master's or specialist degree level, and 55 at the doctoral degree level (n = 164). Only three respondents reported that their institutions awarded the bachelor's as the highest degree, so they were excluded from this analysis.

ANOVA resulted in significant differences for Planning F (2,163) = 3.869, p = .023, Marketing F (2,163) = 5.133, p = .007, Recruiting Faculty F (2,163) = 3.286, p = .040, Professional Incentives F (2,163) = 8.982, p <.001, and Online Advisement F (2,163) = 3.887, p = .022. Scheffé posthoc test for multiple comparisons revealed that doctoral level institutions rated Planning (p = .033), Marketing (p = .031), Recruiting Faculty (p = .040), and Professional Incentives (p < .001) significantly higher than did associate level institutions. Master's level institutions rated Marketing (p = .15), Professional Incentives (p = .009), and Online Advisement (p = .033) as significantly more important than did associate level institutions. Significant effects were especially pronounced for the factor of professional incentives.

Institutional Locale

Of the 170 respondents, 167 identified their institutions as being located in either an urban (n = 60), suburban (n = 52), or rural (n = 55) setting. Significant differences were found for Advisement F(2, 166) = 9.524, p < .001 and Degree F(2, 166) = 6.617, p = .002. Scheffé posthoc analysis, reveals a large effect for online advisement, rural institutions ranking it significantly higher in importance than urban (p < .001) and suburban (p = .004). The importance of offering degrees via distance education was also shown to be significantly more important for rural institutions than for urban (p = .003) or suburban (p = .039).

CONCLUSIONS

The purpose of this study was to determine actions that colleges and universities can take to institutionalize their distance education programs. To accomplish this goal, 30 factors found to influence the institutionalization of innovations were identified from the literature of educational technology, distance education, and educational change. These factors were rated by distance education faculty and distance education leaders (directors and coordinators) as to their importance for influencing the institutionalization of distance education.

Results were analyzed and compared according to institutional role (distance education faculty or distance education leaders), academic level of the institution (associate, master's, or doctorate), and institutional locale (rural suburban or urban). All 30 factors were validated as indicators of institutionalization of distance education, rated at either the "critical" or "important" level. None of the factors was found to be at the level of "minor importance" or "not important." Validation of the factors held true across institutional role, academic level, and locale. This finding supports the literature identifying each of the factors as influencing institutionalization.

Although each of the 30 factors was validated, it is clear that not all factors were con-

sidered to be of equal importance. Having an adequate hardware and software infrastructure to support the distance education program was seen as paramount by all groups. A working system to deliver distance education, described by Boettcher and Kumar (2000) as "distance education's digital plant," finds broad support from the literature (e.g., Levin, 2005; WCET, 2000b). Rated nearly as highly overall as infrastructure, was the availability of technology support for distance education faculty and availability of online library resources for distance education students.

While there was not universal agreement among all groups with regards to the level of importance among all 30 factors, some trends did emerge within the study. The most consistently high-rated factors dealt with establishing technological capacity (technology infrastructure, online library access, and online registration access), support (faculty technology support, instructional design support, and student technology support), and policy (integration with the institution's mission, establishment of policies, and procedures for distance education, making distance education a permanent "hard money" budget item and maintaining a high level of visibility for the distance education program). These three categories closely resemble those identified by Boettcher and Kumar (2000) as required for programs that deliver online education: technology, organization, and support. This finding can provide guidance for those who wish to know where to start in the establishment, improvement, or institutionalization of their distance education programs.

At the other end of the spectrum, offering financial incentives for faculty to teach distance education courses was consistently rated at the bottom of the list of factors for both importance and implementation. This result must not be interpreted as meaning that financial incentives were deemed to be unimportant to institutionalizing distance education. Rather, it supports previous findings by Parker (2003) and Giannoni and Tesone (2003) that faculty value professional advancement and teaching resources higher than financial incentives.

Institutional Role

Although faculty and leaders are often seen as having very different views regarding innovations at their institutions (Smart, Kuh, & Tierney, 1997), results of this study indicate that distance education faculty and leaders showed a high level of agreement as to the importance of the various institutionalization factors and the ranking of importance of the factors. When the factors were grouped into the five categories of planning, organization, resources, personnel, and student services, faculty and leaders ranked them in identical order. Of the top 10 rated factors for both groups, 9 were found in common.

The few differences that existed between faculty and leaders can be explained by Selani and Harrington's research (2002), which found that faculty and leaders attach more importance to those areas in which they have regular contact. Since the course management system is used to deliver the course and is the primary interface that faculty have with the distance education program, it is not surprising that faculty rate it higher in importance than leaders. Faculty seldom deal with the management of the distance education budget or the registration and advisement of students. It is understandable, therefore, that leaders rated budget and online advisement higher in importance than faculty.

Academic Level

Institutions of higher education that award graduate degrees (master's, specialist, or doctorate) tended to show more similarities than differences with each other. However, distance education professionals at associate degree granting institutions demonstrated a number of differences from their graduate school peers. Those at associate-level institutions rated the factors of master planning for distance education, marketing the program, recruiting faculty

to teach, providing professional incentives for faculty, and providing advisement via distance education for students, significantly lower in importance than those who worked for graduate level institutions.

A look at the two areas for which associate level colleges scored higher for implementation may provide clues as to their scores for importance. The successful implementation of visibility of distance education at associate institutions may contribute to less emphasis on marketing. The successful implementation of a centralized distance education program (as opposed to doctoral institutions, which tend to be divided into schools, colleges, and departments that provide their own independent services), may affect the perceived need for master planning at associate-level colleges.

Differences in the roles and expectations of faculty at associate-level colleges and graduate universities can account for the significant differences in the factors of faculty recruitment and professional incentives. At universities, promotion and tenure tends to be influenced greatly by the familiar "publish or perish" expectations of performing research, conference presentations, grant writing, advisement of master's theses and doctoral dissertations, and other professional and scholarly achievements. As indicated in this study, faculty are, by and large, not rewarded or credited professionally for engaging in distance education activities. This supports Schell's research, which finds that faculty at graduate institutions, whose promotion and tenure—if not employment—can be negatively influenced by developing distance education that pulls them away from scholarly activities (Schell, 2004). Faculty who teach at associate-level colleges tend to have a more exclusive teaching role and their promotion and tenure would be less likely to be affected negatively by distance education activities.

Institutional Locale

Distance education professionals at rural colleges and universities rated several of the factors differently than their peers at suburban and urban institutions. Being able to offer advisement and a full degree via distance education was seen as far more important for rural institutions than for suburban or urban. This can be understood in context of the nature of the rural college or university, which would normally have a much wider service area, with a much longer student commute than a typical suburban or urban campus. The more guidance and advisement students can get via online and other distance technologies, the less students would have to travel. The same holds true for distance degree programs. If students can complete their degrees online, by videoconference or other distance education methods, the more likely that they will be able to pursue higher education.

RECOMMENDATIONS

The findings of this study can be used to (a) determine how new distance education programs should be established; (b) evaluate existing distance education programs to determine strengths, weaknesses, and areas for improvement and focus; (c) assess the level of institutionalization of distance education in their organizations; and (d) make decisions that will lead to improvement and institutionalization of their distance education programs. This will enable institutions to avoid making decisions about distance education "without adequately considering the broader institutional context" (Boyd-Barrett, 2000, p. 1).

The findings of this study also indicate that distance education faculty and distance education leaders are concerned about similar things. This has positive implications for institutions seeking to institutionalize distance education. If distance education is established with attention given to the institutionalization factors, there is good potential for cooperation between those who direct the distance education program and those who teach in it. Both faculty and leadership input should be solicited

in the development of distance education programs.

This study can also provide guidance for establishing priorities in the development or redevelopment of distance education programs. Attention should be given initially to technological capacity (technology infrastructure, online library access, and online registration access), support (faculty technology support, instructional design support, and student technology support) and policy (integration with the institution's mission, establishment of policies and procedures for distance education, making distance education a permanent "hard money" budget item, and maintaining a high level of visibility for the distance education program). All institutions should work toward establishing relevant professional incentives for faculty who teach at a distance, particularly at graduate level universities.

REFERENCES

Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning.* Needham, MA: The Sloan Consortium.

Aronsen, J., & Horowitz, J. (2000). *How intersegmental collaborative projects become institutionalized: A portrait of the evolution and lasting effects of five California academic partnership projects.* Long Beach, CA: California State University Chancellor's Office.

Bear, M. P., & Nixon, T. (2006). *Bear's guide to earning degrees by distance learning* (16th ed.). Berkeley, CA: Ten Speed Press.

Boettcher, J. V., & Kumar, M. S. V. (2000). The other infrastructure: Distance education's digital plant. *Syllabus, 13*(10), 14-22.

Boyd-Barrett, O. (2000). Distance education provision by universities: How institutional contexts affect choices. *Information, Communication & Society, 3*(4), 474-493.

Carnevale, D. (2000). Faculty union opposes undergraduate degrees earned entirely through distance learning. *Chronicle of Higher Education, 46*(46), A32.

Clark, G. C. (1989). Distance education in United States schools. *Computing Teacher, 16*(6), 7-11.

Colbeck, C. L. (2002). Assessing institutionalization of curricular and pedagogical reform. *Research in Higher Education, 43*(4), 397-421.

Curry, B. K. (1992). Instituting enduring innovations: Achieving continuity of change in higher education. *ASHE-ERIC Higher Education Report No. 7*. Washington, DC: The George Washington University.

Ellsworth, J. B. (2000). *Surviving change: A survey of educational change models*. Syracuse, NY: ERIC Clearinghouse on Information and Technology.

Fullan, M., & Stiegelbauer, S. (1991). *The new meaning of educational change*. New York: Teachers College Press.

Furco, A. (1999). *Self-assessment rubric for the institutionalization of service learning in higher education*. Berkeley: Service Learning Research and Development Center, University of California, Berkeley.

Gersten, K., & Evans, L. (2004, July). *Online pedagogy: Catalyst for transforming the teaching-learning enterprise.* Paper presented at Syllabus 2004 Conference, San Francisco.

Giannoni, D. L., & Tesone, D. V. (2003). What academic administrators should know to attract senior level faculty members to online learning environments. *Online Journal of Distance Learning Administration*, *6*(1).

Goodman, R., & Steckler, A. (1989). A model for the institutionalization of health promotion programs. *Family and Community Health, 11*(4), 63-78.

Gunawardena, C. N., & McIsaac, M. S. (2004). Distance education. In D. Jonassen (Ed.), *Handbook of research on educational communications and technology* (2nd ed., pp. 355-395). New York: Simon & Schuster/Macmillan.

Hunt, D. W., & Piña, A. A. (2004, March). *A journey from online courses to online degrees*. Paper presented at the Technology in Education (TechEd) Conference, Ontario, CA.

Jones, G. R. (2002). *Cyberschools: An education renaissance* (2nd ed.). Englewood, CO: IBooks.

Kanter, R. M. (1983). *The change masters: Innovation and entrepreneurship in the American corporation*. New York: Simon & Schuster.

Kotter, J. P. (1996). *Leading change*. Cambridge, MA: Harvard Business Press.

Kramer, M (2000). *Make it last forever: The institutionalization of service learning in America*. Washington, DC: Corporation for National and Community Service.

Levin, T. L. (2005). *Going the distance: A handbook for developing distance degree programs using television courses and telecommunications technologies*. Washington, DC: Annenberg/CPB Project and PBS Adult Learning Service. Retrieved January 26, 2005 from http://www.pbs.org/als/gtd/handbook/index.html

Levy, S. (2003). Six factors to consider when planning online distance learning. *Online Journal of Distance Learning Administration, 6*(1).

Noble, D. F. (2003). *Digital diploma mills: The automation of higher education*. New York: Monthly Review Press.

Oakley, B. (2004). The value of online learning: Perspectives from the University of Illinois at Springfield. In J.C. Moore (Ed.) *Elements of quality online education into the mainstream: Wisdom from the Sloan Consortium*. Needham, MA: The Sloan Consortium.

Oldford, R. (2002). Why institutionalization has failed. *Teacher Librarian, 29*(3), 8-15.

Olson, C. A. (2002). Leadership in online education: Strategies for effective online administration and governance. In K. E. Rudestam & J. Schoenholtz-Read (Eds.), *Handbook of online learning: Innovations in higher education and corporate training*. Thousand Oaks, CA: Sage.

Parker, A. (2003). Motivation and incentives for distance faculty. *Online Journal of Distance Learning Administration, 6*(3).

Phipps, R., & Merisotis, J. (2000). *Quality on the line: Benchmarks for success in Internet-based distance education*. Washington, DC: The Institute for Higher Education Policy.

Picciano, A. G. (2001). *Distance learning: Making connections across virtual time and space*. Upper Saddle River, NJ: Merrill/Prentice Hall.

Piña, A. A. (2008). Making e-learning permanent: What can institutions do? *Midwest Journal of Educational Communications and Technology 2*(1), 2-14.

Public Education Network. (2004). *Evaluation framework of institutionalization for school health programs*. Retrieved October 20, 2004, from http://www.publiceducation.org/sc-tools-survival-evalframe.asp

Rogers, E. M. (1995). *Diffusion of innovations* (5th ed.). New York: The Free Press.

Schell, G. P. (2004). Universities marginalize online courses. *Communications of the Association of Computer Machinery, 47*(7), 53-56.

Sellani, R. J., & Harrington, W. (2002). Addressing administrator/faculty conflict in an academic online environment. *Internet & Higher Education, 5*(2), 131-145.

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2006). *Teaching and learning at a distance: Foundations of distance education* (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.

Smart, J. C., Kuh, G. D., & Tierney, G. (1997). The role of institutional cultures and decision approaches in promoting organizational effectiveness in two-year colleges. *The Journal of Higher Education, 68*(3), 256-281.

Surry, D W., & Brennan, J. P. (1998, February). *Diffusion of instructional innovations: Five important, unexplored questions*. Paper presented at the annual conference of the Association for Educational Communications & Technology. St. Louis, MO.

Surry, D. W., & Ely, D. P. (2002). Adoption, diffusion, implementation, and institutionalization of educational technology. In R. A. Reiser & J. V. Dempsey (Eds.), *Trends and issues in instructional design and technology* (pp. 104-111). Upper Saddle River, NJ: Merrill/Prentice Hall.

Taylor, J. C. (2001). Fifth generation distance education. *Higher Education Series Report No. 40*. Canberra, Australia: Australia Commonwealth Department of Education, Science and Training, Higher Education Division.

Tolbert, P. S., & Zucker, L. G. (1994). Institutional analyses of organizations: Legitimate but not institutionalized. *ISSR Working Papers in the Social Sciences, 6*(5). Los Angeles, CA: UCLA Institute for Social Science Research.

Verduin, J. R, & Clark, T. A. (1991). *Distance education: The foundations of effective practice*. San Francisco: Jossey-Bass.

WebSurveyor. (2007). *Survey design considerations: Recommendations for writing effective questionnaires*. Retrieved October 11, 2007, from http://www.websurveyor.com/pdf/designtips.pdf.

Western Cooperative for Educational Telecommunications. (2000a). *Statement of commitment by the regional accrediting commissions for the evaluation of electronically offered degree and certificate programs*. Boulder, CO: Author.

Western Cooperative for Educational Telecommunications. (2000b). *Best practices for electronically offered degree and certificate programs*. Boulder, CO: Author.