

## What's Driving Faculty Participation in Distance Education?

Ruth Gannon Cook  
DePaul University School for New Learning

Kathryn Ley  
University of Houston-Clear Lake

### Abstract

*The presentation reviews more than a decade of investigations undertaken to determine what motivates and what discourages faculty participation in distance education. The presenters describe the evidence that faculty extrinsic and intrinsic conditions both influence willingness to participate. The researchers will also compare the findings of this study with three other studies conducted on faculty motivation. The analysis reveals that more recent studies indicate extrinsic motivators are playing an increasingly important role in DE. The presentation will summarize the policy implications for this body of research.*

*If distance education coursework continues to expand, as predicted (Hannafin, Hannafin, Hooper, Rieber & Kini, 1996; Texas Higher Education Coordinating Board, 2000; Twigg, & Oblinger, 1996; Van Patten, 2000), faculty would be crucial elements in the creation and maintenance of distance education courses. Higher education administration must support their most important asset, faculty, so that faculty maintain both their academic positions and their positions within their communities (Chronicle of Higher Education, 2001a; Chronicle of Higher Education, 2001b; Kezar, 2002). Policies that create motivating conditions for faculty participation and that mitigate or remove inhibitors could sustain and stimulate faculty participation in DE. The purpose of this analysis is to identify what conditions have the greatest influence and which can be manipulated by faculty. A comparison of the top five motivator items in three other university studies using a similar survey, a private eastern university, a public eastern university, and a southeastern university, indicated there were similarities to some of the findings of the southwestern public university study, all reflecting faculty perceptions that the strongest forces influencing their participation were intrinsic, although not always in the same order of priorities. Other findings of this study reveal a growing trend towards extrinsic motivation having a stronger influence on participation in DE.*

### Background

Studies prior to 2001 reported that intrinsic motivation, a person's willingness to perform acts based on the internal rewards of emotional satisfaction, was a strong influence on participation or nonparticipation in innovation (Betts, 1998; Dillon & Walsh, 1992; Ellis, 1984; Herzberg, 1964; Lepper, Keavney & Drake, 1996; Iyengar & Lepper, 1999; Lewis, 2001; Stephenson, 1997; Vroom, 1964; Wolcott, 1997; Wolcott, 2002a; Wolcott, 2002b; Wolcott & Betts, 1999; Wolcott & Haderlie, 1995). Faculty have reported participating in DE for intrinsic rewards over extrinsic rewards, such as promotion and tenure, grant money, increased salary, additional training, or course releases (Bebko, 1998; Betts, 1998; Brown & Floyd, 1998; Dillon and Walsh, 1992; Johnston, Alexander, Olcott & Wright, 1995; Schifter, 2000; Wolcott, 1999; Wolcott, 1997). However, more recent studies (Arnone, 2002; Bower, 2002; Culp, Riffiee, Starrett, Sarin, & Abrahamsen, 2001; Gannon-Cook, 2003; Twigg, 2000; Weber, 1999) revealed extrinsic rewards were also motivating DE participation.

Faculty teaching DE courses (as of the end of 2002) in the field of education in the United States earn an average salary of \$42,000.00 for a nine-month contract for non-tenure track faculty, and \$45,000.00 for new tenure-track faculty (Chronicle of Higher Education, 2003; Johnston, Alexander, Conrad, & Fieser, 2000; Sloan Center for Asynchronous Learning Environments [SCALE], 1998). Average starting salaries for persons with undergraduate degrees in business are about the same salary range, \$40,000.00-\$42,000.00 (Wall Street Journal, 2002). Teachers with undergraduate degrees and teaching certificates also earn salaries in the same range, \$40,000-42,000 (Chronicle of Higher Education, 2002; Houston Independent School District, 2002). Starting Ph.D. graduates in Computer Science, however, average around \$70,000.00 and in Business, around \$60,000.00 (American Association for Higher Education, 2001; National Center for Education Statistics, 2001; United States Department of Education, National Center for Education Statistics, 1999). This disparity in higher education, with salaries for doctorates in education averaging about \$20,000 per year less than Computer Science and Business, is reflected in many universities throughout the United States (American Association for

Higher Education, 2001; Chronicle of Higher Education, 2003; National Center for Education Statistics, 2001; United States Department of Education, 1997). The lower salaries for faculty in Education could shed light on why lack of compensation incentives could be de-motivating to faculty, and why compensation incentives could make a difference in motivating faculty members to participate in DE.

## Methodology

To determine which factors influence faculty participation in distance education, we identified the survey most often used in published studies to measure faculty distance education attitudes. At least eight institutional research studies investigating faculty attitudes toward distance education collected data with parts of the Betts (1998) survey (Bebko, 1998; Berge & Milenburg, 2001; Crawford & Hunt, 1999; Halfhill, 1998; Kambutu, 1998; Montgomery, 1999; Wolcott & Betts, 1999); seven other studies had similar items but did not replicate the survey items (Bonk, 2001; Bower, 2002; Byun, 2000; Ellis, 2000; Groves & Zemel, 1999; Johnston, 2000; Mitchell, 1999). Only four of the studies (Beggs, 2000; Betts, 1998; Gannon-Cook, 2003; Schifter, 2000) published comparable data for the same Likert items to measure faculty motivators and inhibitors for distance education participation; two of the four had the exact same 53 items, with a third study combining several intrinsic and extrinsic motivating factors (Beggs, 2000). The fourth survey (Schifter, 2000) included fifty items and excluded three extrinsic motivator items measuring attitudes toward salary increases, course releases or other workload credit for distance education participation, and royalties associated with course design.

Table one displays the five highest ranked Likert items on each of the four studies (Beggs, 2000; Betts, 1998; Gannon-Cook, 2003; Schifter, 2000). The same five items had the highest means on the two studies conducted in the Southern United States. All four of the studies included three of the same items: personal motivation to use technology; ability to reach new audiences; greater course flexibility for students. These items, while of some interest, reveal little about the underlying factors that support motivation and reflected faculty motivation as a function of their own internal values and were consistent with earlier studies. Only the Gannon-Cook study (2003) validated the survey with a Principal Components Analysis that revealed the underlying motivational factors affecting DE participation. Table two displays the five highest ranked inhibitors or de-motivators. Table three displays the PCA results sustain intrinsic motivators belong to the strongest factor but the next four factors were extrinsic rewards.

In the Principal Components Analysis (PCA), intrinsic motivators comprised the twelve of the first 15 (and uppermost ranking) items in the first factor, entitled "Traditional Staff Service" and representing internal drivers to participate in DE. On the other hand, the second factor and third factor represented conditions in which the university has considerable control, were extrinsic motivators, titled "Monetary Rewards" and "Insufficient Rewards." (Factor two was the presence of rewards and factor three, the lack of rewards). The third factor, Insufficient Rewards, contained eight extrinsic inhibitor items. The fourth factor, Technical and Administrative Support, represented six extrinsic inhibitors, as did the fifth factor, Job Enhancement Requirements, with three extrinsic motivators. The first (intrinsic) factor comprised 19%, the next four (extrinsic) factors comprised 40%, with the remaining four (extrinsic) factors accounting for 10% of the variance, a total of 70% of the variance accounted for by the PCA.

Table Three reveals the items with highest means, items with highest item correlations for each factor, and the five factors explaining the most variance (Gannon-Cook, 2003). The five highest means were: Personal Motivation to Use Technology (Factor one); Ability to reach new audiences (1); Greater Course Flexibility for Students (1); Intellectual Challenge (1); and, Opportunity to develop new ideas (1). The five items with the highest item correlations for each factor were: Opportunity to develop new ideas (Factor one); salary increase (Factor two); lack of salary increase (Factor three); lack of technical support (Factor four); and, required by the department (Factor five). The five factors derived from the 53 items on the survey that explained 70% of the variance were: Traditional staff service (Factor one), explained 18.62% of the variance; monetary rewards (Factor two), explained 15.34% of the variance; insufficient rewards (Factor three), explained 12% of the variance, but note that this factor was the extrinsic inhibitor counterpart to the Factor Two extrinsic motivator, monetary rewards; technical-administrative support (Factor four), explained 7.35% of the variance; and job advancement requirements (Factor five), explained 5.42% of the variance. Factors six (Professional Quality) and seven (Professional and personal prestige) combined accounted for the next 6% of the variance, and Factors eight (Bad Press) and nine (Personal Benefits) accounted for the remaining 5% of the variance. All totaled, intrinsic motivators, Traditional staff Service (1) and Professional Quality (6) combined, accounted for 22% of the variance; extrinsic motivators accounted for the remaining 48%, with Factors two and three accounting for 27% of the variance.

### **DE Survey Response Patterns**

The DE survey patterns indicated that university faculty perceived the strongest forces that would influence their participation were intrinsic (19% of variance) and extrinsic motivators (35%), not inhibitors (15%), yet the responses to the DE survey inhibitor-item questions contained higher means. There were some research findings that indicated inhibiting or negative survey items can receive stronger participant responses (Cuban, 1999; Culp, 2001; Johnston, Alexander, Conrad, & Fieser, 2000; Kaufman, 1992; Lepper & Keavney, 1996; Noble 1996; Postman, 1997; Robinson, 1995). Apparently, faculty may feel strongly about some of the topics, but not have conscious knowledge of those feelings. Faculty also may feel strongly about not being included in important institutional decisions, and because of this, may be inclined to respond negatively, or not at all, to inhibiting questions that ask about what is lacking or not being done at the institution. The inhibiting questions act as double-negatives, demonstrating respondents' assent that the absence of certain items will deter or prevent participation in DE. So, factor items, such as, lack of salary increase, credit and promotion, recognition and awards, release time, and increased faculty workload, could all have more decision-making weight in the minds of the respondents, than indicated by the survey responses. Yet, the inhibitor factor items do rank third, fourth, sixth, and eighth in the nine PCA factor scale, giving some consideration to the items in these factors.

### **Discussion**

Lack of incentives has become an increasing barrier to institutional growth in DE. Studies, such as those conducted at higher educational institutions in Pennsylvania (Broskoske & Harvey, 2000; Distance Education Report, 2001; Pennsylvania State University, 2002), found that issues related to faculty were far more significant for the success of DE than technological issues for the success of DE. Extrinsic motivators, while reported in many studies as non-motivating (Betts, 1998; Lepper, 1998; Schifter, 2000; Wolcott & Betts, 1995; Wolcott & Haderlie, 1995), are hard to ignore when basic physiological needs must be met. For example, hunger, a basic biological need, makes it necessary to earn money to buy food, and then money becomes a specific drive. The other sets of ascending needs relate to achievement and, through achievement, to the experience of psychological growth. For example, rewards for successful academic job performance usually include more money, promotions, or course releases for research (Bonk, 2001), so faculty who teach DE would expect to be rewarded similarly, through salary, promotion/tenure, or adjusted workload. However, to date, this has not been the case in most academic institutions (American Association for Higher Education, 2001; Beggs, 2002; Longmate & Cosco, 2002; National Education Association, 2000; Pennsylvania State University, 2002; Rockwell, Schauer, Fritz, & Marx, 1999). The National Education Association reports that 63% of the faculty who teach DE courses are compensated for a DE course as if it were a traditional, face-to-face course (2000).

Several other studies, such as one conducted by the United States Department of Education (1997), support that incentives do appear to play a major role in faculty decisions regarding participation (American Association of Higher Education, 2001; American Distance Education Consortium, 2001; National Education Association, 2000; Task Force on Development of the Technology Workforce, 2000; Texas Higher Education Coordinating Board, 2000). Wolcott and Betts (1999) examined the concept of equity in relation to the faculty's perceived return on investment. And, when the exchange was not equitable, for time, etc., the DE became a disincentive to participation. Faculty who doubted they would be adequately rewarded cited the following reasons: concern for inadequate financial rewards, workload concerns, concerns relating to research and publication, and distrust of administrators (Wolcott, 1997). Lack of adequate rewards has been shown to be a personal disincentive as well as a barrier to institutional development in DE (United States Department of Education, 1997). To date, faculty participation in DE has not been formally rewarded through advancement in rank, tenure, or merit pay in most academic settings (Beggs, 2002; Betts, 1998; Bonk, 2001; Compensation Project Research in Education, 2000; Culp, 2001; Johnston, Alexander, Conrad & Fieser, 2000; Schifter, 2000b; United States Department of Education, 1997; Wolcott, 1997; Wolcott 2002).

The review of the literature on faculty motivation suggested that potential DE adopters need to have enough time to become more comfortable with the use of technology, that peer mentoring should be offered by the institution, and that both training and follow-up training should be provided, especially during the initial personal concerns stages of adoption (Bandura, 1982; Beggs, 2002; Fullan, 1991; Fullan, 1994; Hall & Hord, 1987; Lick & Kaufman, 2000; Murphy, Walker, & Webb, 2001; National Council for Educational Technology, 1995; Robinson, 1995; Rogers, 1995; Sherry, 1998; Smithers M & Spratt, C, 1999; Stribak & Paul, 1998; Wilson, 1999). While questions about peer mentoring were not posed in this study, the faculty survey responses referenced the need for ongoing training, and for administrative and peer support. If the investment of monies

for the implementation of DE are sufficient, then the investment of time to reinforce faculty adoption of DE would be minimal compared to the emotional security of faculty new to DE.

The DE survey results supported other studies' research recommendations to provide ongoing scaffolding of training for faculty (Bonk, 2001; Fullan, 1991; Johnston, Alexander, Conrad & Fieser, 2000; National Council for Educational Technology, 1995, Robinson, 1995; Wolcott, 2002). Training should be provided more than once, and should be particularly important at the management-concerns stage of adoption, when "how to do it" workshops provide crucial reinforcement to faculty still unsure about their decision to buy into DE participation (Bandura, 1982; Hall & Hord, 1987, Lick & Kaufman, 2000; Robinson, 1996).

In Hall and Hord's (1987) Concerns Based Adoption Model (CBAM), it was recommended that facilitators visit more often with potential adopters on a face-to-face basis to offer assistance and encouragement. In their study, 25% of the respondents ranked personal support and training as most important to adoption of an innovation. In that study, the findings revealed faculty often were not aware of training offered by the institution (1987). It was recommended that more training sessions be held and that more advertising be done to make faculty aware of available training and that the institution supported their efforts. Faculty placed a high priority on technical training and support in this survey too, similar to the Hall and Hord's survey (1987). It appears that DE can be successful and can become integrated into the university culture when implementations, such as enough time to become more comfortable using technology, peer mentoring, follow-up and ongoing training, are offered consistently to faculty and incorporated into university DE plans (Bandura, 1982; Beggs, 2002; Fullan, 1991; Fullan, 1994; Hall & Hord, 1987; Lick & Kaufman, 2000; Murphy, Walker, & Webb, 2001; National Council for Educational Technology, 1995; Robinson, 1995; Rogers, 1995; Schott & GannonCook, 2002; Sherry, 1998; Smithers & Spratt, 1999; Stribak & Paul, 1998; Wilson, 1999).

### **This Survey's Findings Compared to Three Other University Survey Findings**

A comparison of the top five motivator items in the four university studies, the private eastern university survey, the public eastern university, the southern university, and the southwestern university, indicated there were similarities, all reflecting faculty perceptions that the strongest forces influencing their participation were intrinsic, although not always in the same order of priorities. For example, personal motivation ranked first for the eastern public, southeastern and southwestern public universities, but third for the private eastern university. Opportunity to develop new ideas ranked second for the private eastern and public eastern universities, but fifth for the southeastern and southwestern public universities. Ability to reach new audiences ranked first for the private eastern university and second for the southeastern and southwestern public universities, but did not make the top five rankings for the eastern public university. (See Table1).

What these findings reflected was a validation that faculty do care for their students and are personally motivated, intrinsically, to teach. They also care about having opportunities to develop new ideas, to improve their teaching, and to be intellectually challenged. In addition, they care about having the ability to reach new audiences who might, otherwise, not be able to attend college, and having greater course flexibility for students. But these motivations would be present, whether these faculty taught via DE or not, because intrinsic motivators are the key reasons why teachers inherently choose the profession of teaching.

The findings of the southwestern survey differed from the earlier three surveys, however after first intrinsic factor of traditional service (which included those factors shown in Table 2). All of the remaining factors, save Factor 6 (Professional Quality) were extrinsic. Interestingly, the earlier three studies also cited extrinsic factors too, but these were rated lower as influential to faculty motivation (See Table 2). While the extrinsic inhibiting factors' sequence varied among the four studies, there were a number of similarities, such as lack of technical support, which ranked first by the Southeastern private and public universities, and second for the southeastern public university (it ranked ninth for the southwestern university). Concern over faculty workload ranked first for the southeastern university, with the eastern public and private universities ranking it second (it ranked eighth for the southwestern university). Lack of release time ranked third for the eastern public university, but fourth for the eastern private and southeastern universities (it ranked seventh for the southwestern university). The highest inhibiting factor mean in the southwestern public university study was the lack of salary increase; second, lack of merit pay; third, no credit for work or promotion; fourth, lack of monetary support; and, fifth, lack of recognition. Ranked sixth was the desire for royalties, and the seven through ten mean rankings were lack of recognition, lack of release time, concern over faculty workload, and lack of technical support. Despite the findings of the earlier studies indicating the highest means for intrinsic motivators, those studies revealed there were indicators cited in those studies that did cite some of the extrinsic factors in their studies. Those extrinsic factors surfaced again in the later, southwestern public university study, but this time indicating a growing trend by faculty to choose extrinsic over intrinsic factors to motivate their

participation (or nonparticipation) in DE.

### **Reading in-between the Lines of the Survey Results**

Research indicated that early adopters of DE, particularly computer and Internet-based DE, were intrinsically motivated to participate in DE (Betts, 1998; Dillon & Walsh, 1992; Olcott & Wright, 1995; Rogers, 1995; Wolcott, 1995; Wolcott & Haderlie, 1995). Feelings of accomplishment and satisfaction were enough reward for leading the way into innovation for these electronic pioneers. However, the growth of DE and the pace to which it has accelerated so rapidly have put tremendous pressures on universities and the pioneers in DE delivery. Today's DE faculty slump under the burden of too many e-mails and little or no help from teacher assistants or office staff. Surprisingly, many faculty still seem willing to consider taking on such a burden if they perceive their university is interested in supporting their efforts (Beggs, 2001; Bonk, Kirkley, Hara & Dennen, 2001; Bower, 2002; Byun, Hoseung, Paul, Hallett, Karen, & Essex, 2000; Johnston, Alexander, Conrad & Fieser, 2000; Mitchell, 1999; Stevenson, 2001). But these faculty also understand that time is a very precious commodity for them, so time spent on DE will likely take time away from some other priority, such as research. Extrinsic motivation has been claimed to be ineffective as a motivator, but a number of the research studies that reported those results either had small numbers of responses (Herzberg, 1964; Lepper, 1988), or were conducted more than two years ago (Betz, 1998; Lepper, 1988, 1992, 1996, 1997; Maslow, 1970; Schifter, 2000; Wolcott, 1999). The newer research studies indicate a strong trend towards extrinsic motivators as being crucial to faculty decisions to participate (or not) in DE (Bonk, 2001; Bower, 2003; Culp, 2001; Gannon Cook, 2003; Johnston, 2001; O'Quinn, 2001; Wolcott, 2002b).

### **Implications for Practice and Policy for Institutions of Higher Education**

The most important influences remain intrinsic motivators, factors that the university cannot control. On the other hand, university policies can be crafted to enhance the extrinsic motivational factors of monetary rewards, insufficient rewards, technical-administrative support, and mandating participation. Mandating participation is a poor policy choice since job satisfaction and job stress are directly related to faculty control over the job and job tasks, the latter could lead to a corresponding drop in job satisfaction and costly increased faculty turnover.

The southwestern university study provided a better understanding of faculty needs and concerns with respect to distance education; and provided information that can be used for distance education faculty development programs and distance education policy revisions at the university studied in the survey. Universities that are encouraging voluntary participation in DE and are valuing their faculty with extrinsic motivators along with administrative support, are faring better with employee retention and ongoing DE participation.

If faculty see the commitment to DE is there, evidenced by multiple examples of what the administration is willing to do to support their commitment, such as technical assistance, course releases, and salary increases, then faculty members might be more willing to participate in DE. The support of the administration could demonstrate that authentic participation is actually occurring within the university and is not mere rhetoric (Anderson, 1998; Beggs, 2002; Bonk, 2001; ). Authentic participation by administrative role-modeling lets the faculty know there is "buy-in"; but, more importantly, it conveys the message that the innovation is beneficial to both the university and to the faculty (Anderson, 1998; Clark & Kaufman, 2000; Herzberg, 1987; Striabiak & Paul, 1998; John-Steiner, Weber, 1999). The university administration must be an integral part of the faculty DE team, leading to success, not just presiding over DE in a top-down mode. Authentic participation by administration creates an environment conducive to team building, nurturing and collaboration that extends throughout the university (Anderson, 1998). "The culture and obligation of the university rewards system must reflect (administrative support), not in rhetoric, but in reality"(Hardi, 2000, available on-line). Faculty need to feel valued.

Value is intrinsic, but society places a value on value by assigning price tags to even the most modest of living accommodations. Therefore, extrinsic motivators, such as stipends, merit pay, and grants could help reinforce the university's acknowledgement of value to faculty who participate in DE.

It would be interesting to follow surveys on DE participation over the next several years to see if this trend continues, but judging from the more recent findings of the last two years (Beggs, 2002; Bonk, 2001; Culp, Riffée, Starrett, Sarin, Abrahamsen, 2001; Distance Education Report, 2001; Hunt & Crawford, 2001; Johnston, Alexander, Conrad & Fieser, 2000; Kirk & Shoemaker, 1999; McKenzie, Mims, Bennett, Waugh, 2000; Rockwell, Schauer, Fritz & Marx, 1999; Schott, 2002; Southeast Missouri State University, 2002; Southern Utah University, 2002; Wilson, 1999; Wolcott, 2002), and it is likely that it will, institutions will need

to accommodate these extrinsic motivation needs or face the risk of faculty attrition and challenges to the delivery DE programs.

The growing need for academe to adapt to electronic delivery is immediate, “not just to avoid extinction, but to actively cultivate opportunity” (Kiernan, 2002, p.54). Studies, such as this one, could help with assessments of which factors could motivate faculty to deliver these e-courses. “Academe must adapt its approaches to governance, too, to react more nimbly to technological changes...consultation and consensus-building are important in shared governance, in part to make sure that decisions are made thoughtfully...It’s important that all members of the (academic) community are involved” (2002, p.54).

## References:

- Anderson, G. L. (1998, Winter). Toward authentic participation: Deconstructing the discourses of participatory reforms in education. *American Educational Research Journal*, 35(4), 571-603.
- Arnone, M. (2002). Many students’ favorite professors shun DE. In *The Chronicle of Higher Education*. Retrieved December 10, 2002, from <http://chronicle.com/>
- Bebko, P.R. (1998). *Influences upon higher education faculty use of distance education technology* (Doctoral dissertation, Florida Atlantic University). Dissertation Abstracts International, 59 (02A), 0427.
- Beggs, T. A. (2002). Influences and barriers to the adoption of instructional technology. Carrollton, GA: State University of West Georgia. Retrieved December 14, 2002, from [www.mtsu.edu/~itconf/proceed00/beggs/beggs.htm](http://www.mtsu.edu/~itconf/proceed00/beggs/beggs.htm)
- Berge, Z. & Muilenburg, L. (2001). Obstacles faced at various stages of capability regarding DE in Institutions of Higher Education: Survey results. *Tech Trends*, 45(4), 40-44.
- Betts, K. S. (1998). Factors influencing faculty participation in distance education in postsecondary education in the United States: An institutional study. Unpublished doctoral dissertation, George Washington University, Washington, DC.
- Bonk, C. J., Kirkley, J.R., Hara, N., & Dennen, V. (2001). Finding the instructor in post-secondary online learning: Pedagogical, social, managerial, and technological locations. J. Stephenson (Ed.), *Teaching and learning online: Pedagogies for new technologies* (pp.76-97). London: Kogan Page.
- Bower, Beverly. 2002. Distance education: Facing the faculty challenge. Retrieved November 23, 2003, from [www.westga.edu/~distance/ojdl/summer42/bower42.html](http://www.westga.edu/~distance/ojdl/summer42/bower42.html)
- Brown, D. G. & Floyd, E. S. (1998). Faculty development: Building university programs that capture faculty enthusiasm for computers and learning at Wake Forest University. *Multiversity*, 17-22.
- Byun, H. P., Hallett, K., & Essex, C. (2000, September/October). Supporting instructors in the creation of online distance education courses: Lessons learned. *Educational Technology*, 40(5), 57-60.
- Chronicle of Higher Education, The. (2001a, January 25). Changing federal policy to promote distance education. In *The Chronicle of Higher Education*. Retrieved November 24, 2002, from <http://chronicle.com/colloquy/live/chat2/>
- Chronicle of Higher Education, The. (2001b, April 12). Adjuncts and equity. In *The Chronicle of Higher Education*. Retrieved November 24, 2002 from <http://chronicle.com/>
- Clark, R. & Kaufman, R. (Eds.). (2000, April). *Performance Improvement Issue*, 39(4).
- Crawford, C. & Hunt, M. (1999). Qualitative study conducted at the University of Houston-Clear Lake to assess faculty motivation in distance education. Paper presented at the Society for International Technology in Education, Orlando FL.
- Culp, G., Riffée, W., Starrett, D, Sarin, S., & Abrahamsen, H. (2001, January). Faculty rewards in digital instructional environments. *Syllabus Institute Report*, 11-14.
- Dillon, A. (1996). Myths, misconceptions and an alternative view of information usage and the electronic medium. In J. Ruet et al. (Eds.), *Hypertext and cognition*. Mahwah, NJ: Erlbaum.
- Dillon, C. L., & Walsh, S. M. (1992). Faculty: The neglected resource in distance education. *American Journal of Distance Education* 6 (3), 5-21.
- Ellis, T. I. (1984). *Motivating teachers for excellence*. ERIC Digest, Number Six, Washington, DC: ERIC Clearinghouse on Education Management.
- Ellis, E. M. (2000, November). Faculty participation in the Pennsylvania State University World Campus: Identifying barriers to success. *Open Learning*, 15(3), 233-242.
- Gannon-Cook, R. (2003). Factors that Can Motivate or Deter Faculty Participation in Distance Education: A Case Study. Unpublished dissertation. The University of Houston.
- Groves, M. M., Zemel, P. C. (1999). Instructional technology adoption in higher education: An action research

- case study. *International Journal of Instructional Media*, 27, 56-64.
- Halfhill, C. S. (1998). *An investigation into factors influencing faculty behavior concerning distance learning instruction using the theory of planned behavior* (Doctoral dissertation, University of Central Florida, 1998). Dissertation Abstracts International, 59(11A), 4113.
- Hannafin, M. J., Hannafin, K., M., Hooper, S. R., Rieber, L. P., & Kini, A. S. (1996). Research on and research with emerging technologies. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 378-402). New York: Simon & Schuster.
- Hardi, J. (2000, March 31). Land-grant presidents call for new 'covenant' with state and U. S. Governments. In *The Chronicle of Higher Education*. Retrieved January 23, 2003, from <http://www.chronicle.com/weekly/v46/i30/30a04101.htm>
- Herzberg, Frederick. (1964, January/February). The Motivation-Hygiene Concept and Problems of Manpower. *Personnel Administration*, 27, 3-7.
- Herzberg, F. (1987, September/October). One more time: How do you motivate employees: A kick in the seat of the pants. *Harvard Business Review*. Retrieved October 4, 2002, from
- Iyengar, S. S. & Lepper, M. R. (1999). Rethinking the role of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology*, 76, 349-366.
- John-Steiner, V., Weber, R. J., & Minnis, M. (1998, Winter). The challenge of studying collaboration. *American Educational Research Journal*, 35(4), 773-783
- Johnston, T.C., Alexander, L., Conrad, C. & Fieser, J. (2000). Faculty compensation models for online/distance education. Retrieved June 8, 2002, from <http://www.mtsu.edu/~itconf/proceed00/johnston.html>
- Johnstone, S.M. (2001, February). Perception versus reality: Differences in faculty at virtual and traditional institutions. *Syllabus*, 16.
- Kambutu, J. N. (1998). *A study of selected administrators' self-perceptions concerning the available support services and extrinsic rewards for distance education at the 67 land-grant institutions in the United States* (Doctoral dissertation, University of Wyoming, 1998). Dissertation Abstracts International, 59(09A), 3318.
- Kezar, A. (2000). *Higher education trends* (1997-1999). ERIC Clearinghouse on Higher Education. Retrieved December 29, 2001, from <http://www.eric.org/trends/instruction.html>
- Kiernan, V. (2002 November). Technology reshapes universities, report says. *The Chronicle of Higher Education*, p. A54.
- Lepper, M. R., Keavney, M. & Drake, M. (1996). Intrinsic motivation and extrinsic rewards: A commentary on Cameron and Pearce's meta-analysis. *Review of Educational Research*, 66, 5-32.
- Lewis, Mike. (2001). *Pay, An Ineffective Motivator*. Unpublished paper on Motivation. Retrieved June 14, 2002, from <http://www.emporia.edu/ibed/jour/jou21shr/mlewis.htm>
- Mitchell, M. R. (1999, February 10-14). The effects of faculty motivation in distributive education environments at institutions of higher education. In *Proceedings of Selected Research and Development Papers* presented at the National Convention of the Association for Educational Communications and Technology, Houston, TX.
- Montgomery, C. J. (1999). *Faculty attitudes toward technology-based distance education at the University of Nevada, Las Vegas* (Doctoral dissertation, University of Nevada, Las Vegas, 1999). Dissertation Abstracts International, 60(09A), 3222.
- Olcott, D. J., & Wright, S. J. (1995). An institutional support framework for increasing faculty participation in postsecondary education. *The American Journal of Distance Education*, 9(3), 5-17.
- O'Quinn, L. (2002 Winter). *Factors that Deter Faculty from Participating in Distance Education*. Online Journal of Distance Learning Administration, Volume V, Number IV, Winter 2002 State University of West Georgia, Distance Education Center.
- Schifter, C. (2000, March/April) Faculty Motivators and Inhibitors for Participation in Distance Education. A study conducted at Temple University by the Director of Distance Education, a doctoral dissertation. *Educational Technology*, 40(2), 43-46.
- Stephenson, S. (1997, September 24). Incentive Programs: Is holding out a fistful of dollars enough? *Restaurant & Institutions*. June 1, 1995, 110. Retrieved, June 3, 2002, from <http://sbweb2.med.iacnet.com/infotrac/session/256/105/6072351/50/ismap4/27/27&80.18>
- Stribiak, C. A., & Paul, J. (1998). *The team development fieldbook: A step-by-step approach for student teams*. NY: McGraw Hill.
- Texas Higher Education Coordinating Board. (2000, August/September). *Report on a Study of Access to Higher Education through Distance Education*. Austin, TX: Texas Higher Education Coordinating

- Board. Retrieved, March 21, 2002, from <http://www.thecb.state.tx.us>
- Twigg, C. A. (2000). *Who owns online courses and course materials? Intellectual property policies for a new learning environment*. Retrieved May 7, 2002, from <http://www.center.rpi.edu/PewSym/mono2.html>
- Twigg, C.A., & Oblinger, D G. (1996, November). *The virtual university. A report from a Joint Educom/IBM Roundtable*. Washington, DC: Educause. Retrieved May 7, 2002, from <http://www.educause.edu/nlii/VU.html>
- Van Patten, J. J. (2000). *Higher education culture: Case studies for a new century. Forces affecting the culture of higher education*. Lanham, MD: University Press of America, Inc.
- Vroom, V. ,Vroom, V. H. (1964). *Work and motivation*. New York: John Wiley & Sons.
- Weber, C. (1999, October). *Taking the time to teach online: Faculty concerns and family attitudes*. Proceedings of the fifth annual ALN virtual Conference. Retrieved, January 15, 2002, from <http://www.aln.org/alnconf99/presentations/convertedfiles/103>
- Wolcott, L. L. (1996). Tenure, promotion, and distance education: Examining the culture of faculty rewards. *American Journal of Distance Education, 11*(2), 3-18.
- Wolcott, L. L. (2002a). *Tenure, promotion, and distance education: Examining the culture of faculty reward*. Logan, UT: Utah State University.
- Wolcott, L. L. (2002b). Dynamics of Faculty Participation in Distance Education: Motivation, Incentives and Rewards. In Michael G. Moore (Ed.). *Handbook of Distance Education*. Mahwah, NJ: Lawrence Erlbaum.
- Wolcott, L. L. & Betts, K. (1999). What's in it for me? Incentives for faculty participation in distance education. *Journal of Distance Education, 14*(2), 34-49.
- Wolcott, L. L., & Haderlie, S. (1995, August). *The myth of dangling carrots: Incentives and rewards for teaching at a distance*. 11<sup>th</sup> Annual Conference on Teaching and Learning at a Distance, Madison, WI: University of Wisconsin - Madison, 307-312.

Table 1. *Highest Item Means Motivator-Inhibitors from Urban Universities*

	<b>Eastern Private (Betts, 1998)</b>	<b>Eastern Public (Schifter, 2000)*</b>	<b>Southeastern Public (Beggs, 2000)</b>	<b>Southwestern Public (SP; Gannon-Cook, 2003)</b>
1	Ability to reach new audiences (1)	Personal motivation to use technology (1)	Personal motivation to use technology (1)	Personal Motivation to Use Technology (1)
2	Opportunity to develop new ideas (1)	Opportunity to develop new ideas (1)	Ability to reach new audiences (1)	Ability to reach new audiences (1)
3	Personal motivation to use technology (1)	Opportunity to improve my teaching (1)	Greater course flexibility for students (1)	Greater Course Flexibility for Students (1)
4	Intellectual challenge (1)	Opportunity to diversify program offerings (1)	Intellectual challenge (1)	Intellectual Challenge (1)
5	<i>Overall job satisfaction (1)</i>	Greater course flexibility for students (1)	Opportunity to develop new ideas (1)	Opportunity to develop new ideas (1)

\*Three items excluded: Salary increase, course release, and royalties

Table 2. *Comparison of Four Universities' Top Inhibitors*

	<b>Private Urban Eastern</b>	<b>Public Urban Eastern</b>	<b>Southeastern Public</b>	<b>Southwestern Public*</b>
1	Lack of tech support by inst.	Lack of tech support by inst	Concern over Faculty workload	Lack of Salary Increase (Factor 3)
2	Concern about faculty workload	Lack of Release Time	Lack of Tech Support	Lack of merit pay (3)
3	Lack of release time	Concern about faculty workload	Lack of release time	No credit for work or promotion (3)
4	Lack of grants for materials/ expenses	Lack of grants for materials/ expenses	Concern over quality of courses	lack of monetary support (3)
5	Concern over quality of courses	Concern over quality of courses	Lack of DE Training	Lack of recognition (3)

\*Gannon-Cook, 2003, p.193.

Table 3. *Items with highest means, items with highest item correlations for each factor, and five factors explaining the most variance (Gannon-Cook, 2003)*

Items by highest means of fifty items	Five items with highest item correlations for each (factor)	Five factors derived from 53 items explaining 70% of the variance
Personal Motivation to Use Technology (1)	Opportunity to develop new ideas (1)	Traditional staff service
Ability to reach new audiences (1)	Salary increase (2)	Monetary rewards
Greater Course Flexibility for Students (1)	Lack of salary increase (3)	Insufficient rewards
Intellectual Challenge (1)	Lack of technical support (4)	Technical-administrative support

Opportunity to develop new ideas (1)	Required by dept (5)	Job advancement requirements
--------------------------------------	----------------------	------------------------------