Addressing Faculty Concerns About Distance Learning

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Abstract

Despite the rapid growth of distance learning programs, faculty are often resistant to moving their courses into a distance learning format. This article synthesizes the common sources of concern among resistant faculty as identified in the literature, the mechanisms to bridge those concerns, and evaluates the effectiveness of the administrative solutions for faculty support that have sought to address them.

Introduction

Universities around the world have made significant investments in educational technologies. Though the number of faculty adopting these technologies has been increasing, there remains a large number who express reluctance to adopt them (Jacobsen, 1998). Universities are currently in a position where there is inconsistent adoption of educational technology, and many are searching for ways to promote its use for instruction. Technology holds great potential for enhancing teaching, but faculty must be willing and prepared to use it.

This paper proposes an approach to faculty development for technology integration, relying upon conceptual frameworks provided by:

- Rogers (1995) theory on the diffusion of innovations,
- Hall and Hord's (1987) concerns theory, and
- Kotter's (1996) theory of barriers to empowerment.

The effective application of these models holds exciting possibilities for faculty developers and faculty alike. The integration of these theories into faculty development activities provides a holistic framework for technology integration.

What Limits Technology Integration

Many studies have been conducted examining the reasons for faculty resistance to technology integration, and many solutions have been offered. Though reasons vary, certain themes emerge including factors as fundamental as the necessity of practical scheduling for training, to successfully negotiating more pervasive cultural and administrative support issues.

Failure to Address Practical Considerations

As a practical matter, the perceived lack of technical support and training is one of the primary reasons faculty elect not to engage in technology initiatives (Olcott & Wright, 1995). The lack of training at available times is another (Betts, 1998). For faculty to accept and participate in technology integration initiatives, their perception of both the availability and quality of training opportunities must be perceived as positive, and faculty must feel that the training alternatives being offered meet their specific needs and interests (Olcott & Wright, 1995). Timing, relevance and source all influence faculty perceptions of the support offered and their receptivity to it (Irani & Telg, 2002).

The perceived quality of the content and its value to instruction are also of concern to faculty (Olcott & Wright, 1995). Regardless of how innovative the faculty may be, and regardless of what concerns they bring, all faculty development must begin and end with emphasis upon the enhancement of teaching effectiveness. Professional development programs must offer faculty tangible benefits before they will embrace new approaches (Harrsch, 2000).

Faculty and staff development programs must target not only individual skill and knowledge, but must also address contextual factors such as organizational policies and institutional support structures if technology integration is to be a success (Edmonds , 1999). Perhaps most importantly, faculty must understand that the use of technologies will serve to enhance their effectiveness as teachers, not induce obsolescence. Faculty must understand that the integration of technologies is not a pathway to the elimination of human instructors, but rather an opportunity to enhance instruction.

Replacement Fears

It is the perception of threat that is often cited as one of the reasons faculty resist participation in technology initiatives (Talb & Newhouse, 1993). Talb and Newhouse (1993) found that many teachers avoid technology based on the fear that technology integration will reduce them to workers rather than instructional leaders. “When an old technology is assaulted by a new one, institutions are threatened. When institutions are threatened, a culture finds itself in crisis” (Postman, 1992, p. 18).

Conquering this crisis is requisite to the success of any and all technology integration efforts. Leadership and support at all levels must be centered firmly upon the enhancement of the teaching and learning process, making the student the centerpiece of instruction, not the technology. In many cases, an innovation does have specific and measurable impact on the institutional culture, and it's important to recognize that not all users may view this as positive. Identifying areas that can be perceived as threatening and providing the necessary information to address those concerns will promote a clear institutional vision that will be reassuring to faculty (Dooley, 1999).

Lack of Institutional Vision

Faculty are often hesitant to undertake technology integration because the attitude of their institution toward such integration is unknown. (Foa, 1993). If technology integration is truly a prized institutional goal, administration must recognize that to drive change, the investment in human capital and potential is at least as important as their investment in technological infrastructure (Foa, 1993). This investment in human capital can send a positive message to those contemplating technology integration, providing assurance that their efforts will be recognized by

the administration. Institutional support, professional recognition and personal rewards are all necessary to gain faculty support. However, “[E]qually important is effective institutional management of the entire change process” (Thompson, 2003, p. 2). Faculty and administration have both a mutual goal and a mutual dependence. Recognizing this dependence and creating an institutional vision that accounts for the needs of both parties is critical to successful integration of educational technology.

For developers operating in a “top-down” program, effective leadership can mean producing effective exemplars to justify technology investments. For developers operating within a “bottom-up” institution, effective leadership often means providing a well-conceived and reliable working environment for the diffusion of innovative concepts and technologies (Noblitt, 1997). Without such vision, faculty will find themselves hesitant to pursue innovation regardless of their level of personal interest.

No matter what the administrative structure is, the key to technology integration lies effective training and support that addresses the varied needs and motivations of faculty (Cravener, 1999). Rogers ' (1995) provides a framework around which faculty developers can analyze their own faculty and identify the needs of their population. Hall and Hord (1987) provide a blueprint by which faculty developers can map predictable concerns and preoccupations suffered at differing levels of integration. Kotter (1996) underscored the importance of a faculty development model that is systematic and holistic. These three theories will be discussed next.

Theories for Promoting Technology Integration

Each of the theorists explored in this paper come from a unique professional vantage point. The emphasis of each theory, however, lies in identifying pathways of change within an organization, and this process is easily applied to faculty development initiatives in higher education. This section provides an introduction to each of the theories, and these principles will serve as the foundation for an integrative approach to faculty development that supports the adoption of educational technologies.

Roger's Diffusion of Innovations

Rogers (1995) defined innovation as "anything perceived as new by an individual or group" (p. 11). In this instance, the use of the term *innovation* applies to any educational technology designed to enhance the teaching and learning process. Rogers defined diffusion as “the process by which an innovation is communicated…among members of a social system (p. 10). "Innovativeness" is used to describe the degree to which an individual shows an affinity for a particular innovation in comparison to other members of their social system.

Rogers outlined five adopter categories of innovativeness, created as ideal types. These categories offer points of comparison and contrast, and offer an anticipated breakdown of proportionality of any given population (Figure 1). The categorical breakdown is as follows:

Innovators constitute a small minority who tend to be risk-takers, willing to invest time and energy to learn and adapt to new technologies,

Early Adopters are often respected leaders who are often quick to recognize the potential of an innovation,

Early majority individuals are careful, deliberate and pragmatic, often willing to adopt but only after others have taken the initial risk,

Late majority individuals are skeptical of change and guarded in their interests, often adopting innovations only when pressured, and *Laggards* are those who consistently resist innovations and may not comply even under pressure or necessity.

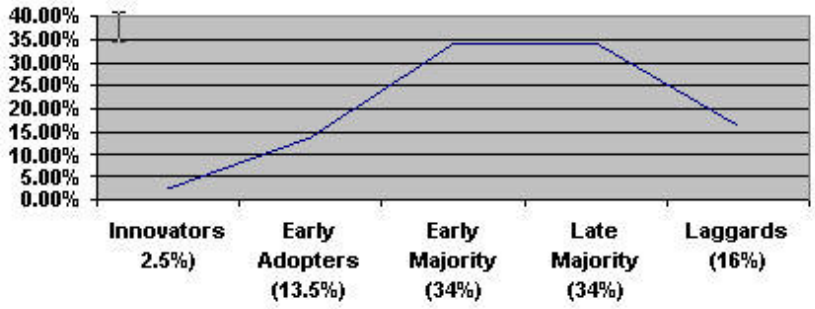

Figure 1 : Adopter Categorization Based on Degree of Innovativeness (Rogers , 1995)

Each innovator group has distinct characteristics, motivations, needs, and concerns. Therefore each group will respond differently to professional development initiatives in the area of technology integration (Jacobsen, 1998).

Where Rogers (1995) emphasizes categorizable stages, Hall and Hord (1987) operate on a process-driven model of change. Their concerns theory works to address the misgivings and worries at each level of integration. Their process-driven model offers insight into support structures that can aid individuals in their innovativeness.

Hall and Hord's Concerns Theory

Hall and Hord (1987) ground their theory in the earlier research of Fuller (Dooley, 1999), using the tenets of concerns research to address factors that inhibit change management. The concept of "concerns" is described as

[T]he composite representation of feelings, preoccupation, thought and consideration given to a particular issue or task. Depending on the personal make-up, knowledge and experience, each person perceives and mentally contends with a given issue differently; thus there are different kinds of concerns. (Hall & Hord, 1987, p. 59)

In concerns theory, change is viewed as a process—not an event—and is negotiated based on the motivations, perceptions and attitudes of the group in question. Change entails a gradual unfolding of experience and a development of skill and sophistication in the use of an innovation or new idea (Dooley, 1999).

Hall and Hord (1987) noted that there are predictable concerns within a group undergoing change, and these concerns can be planned for. The concerns move through three levels:

Self concerns – typical "non-user" concerns, driven by the need for awareness and information.

Task concerns –characterized by a preoccupation with questions of management, centering around effective use and learning to effectively "work" the innovation

Impact concerns – as users become more experienced, emphasis on questioning the broad and long-term impact of integrating the innovation.

Pairing the levels of concern to Roger's (1995) diffusion model reveals the points at which faculty may be most receptive to specific messages. Laggards and late adopters, for example, pair neatly with Hall and Hord's (1987) self-concerns, thus providing cues to the astute faculty developer about the types of concerns that might be inhibiting adoption. Thus, the models can function both independently and interdependently. The inclusion of Kotter's (1996) examination of barriers provides the final element to our integrative approach.

Kotter's Barriers to Empowerment

Kotter's (1996) theory presents the final element to this integrative model for the support of technology integration. Kotter (1996) found that faculty resistance was based on barriers at the organizational level. These barriers were identified as:

- Lack of skills or knowledge (i.e. Individuals are not instructed on how to perform)
- Organizational structures within the institution make change difficult (i.e. Units fail to communicate or exchange information)
- Personnel and information systems make it difficult to act (i.e. Systemic change is not implemented, support is inconsistent)
- Actions related to innovation are discouraged or blocked (i.e. lack of "top-down" administrative support)

Kotter's (1996) theory merges neatly into our earlier models, as organizational concerns relate directly to the impact concerns identified by Hall and Hord (1987). Further, these organizational concerns can potentially paralyze all but the most innovative along Rogers (1995) continuum. Lack of collective vision and consistent support across the institution will likely limit the integration of educational technology.

With the theories outlined, the shift now turns to integrating the tenets of the individual frameworks into a model that can be applied to faculty development. Though institutional context and faculty audience may vary, the identified stages offer a framework on which a model for the promotion of technology integration can be built.

Integrating Theories to Promote Technology Integration

With the established need for training and ongoing support, the question of how comprehensive faculty development programs can be practically implemented must be addressed next. How can one realistically practice all the "best practices" with regard to faculty leadership, and how can one realistically meet the varied needs of each target population identified by each of the theorists?

The central challenge is to design “educational systems…that are informed by our growing understanding of the complexity and interconnectedness of faculty social systems, communication channels, and patterns of diffusion,” (Jacobsen, 1998). Faculty development

initiatives must be built around this goal, centered on the awareness that faculty development is a matter of supporting individuals through their own decision making processes.

Integrating the Theories

Rogers (1995) noted that the process of moving from one stage of innovation to the next consists of a series of actions and decisions. The stages include:

Knowledge: The individual becomes aware of the innovation

Persuasion: The individual forms an attitude about the innovation through interaction with others,

Decision: The individual seeks further information that determines whether or not he/she will accept or reject the innovation,

Implementation: The individual gains additional information to put the innovation to regular, more personalized use,

Confirmation: Use is either made routine and promoted, or use is discontinued. Reinforcement for prior decision making is also sought at this stage (p. 20)

These stages can be matched to both Kotter's (1996) barriers to empowerment and to Hall and Hord's (1987) task concerns. Figure 2 outlines the parallel nature of these stages as decisions are made at each level of integration.

Though the progression is displayed as a linear process, Wilson , Sherry, Dobrovonly, Batty & Rider (2000) asserted that it is more likely that an individual will move back and forth between stages before eventually committing to a change and becoming ready to address the next

Resistance

Rogers Kotter Hall and Hord		
Knowledge	Lack of Knowledge	Task Concerns
Persuasion		Self Concerns
Decision	Formal Structure	
Implementation	Consistent Support	Impact Concerns
Confirmation	Administrative Support	

Integration

Figure 2: **Progression of Integration across the Theories of Rogers, Kotter and Hall & Hord**

stage. Over time, the integration of the innovation becomes second nature without further contemplation of its place or purpose. The move from acquisition to integration is not necessarily immediate, however, and this latency must be considered by the faculty developer.

Each of these stages has what Geoghegan (1994) defined as the “saturation point”. This is point at which the category is considered effectively diffused with regard to the innovation. Successful diffusion appears to happen at the point at which the early majority outnumber the early adopters (Geoghegan, 1994). Thus, it is here that faculty development must be most directly focused, with particular recognition that early adopters are often natural leaders themselves and could provide invaluable peer-level support to the process.

Hitting the saturation point can be enabled through effective faculty support. Roger's (1995) contributed a model for faculty development and support that places stage-specific emphasis on each of the levels of integration.

Using the STORC Model to Support Technology Integration

Rogers (1995) identified features of technology that will largely determine its acceptance and ultimate diffusion. Though individual faculty may opt not to integrate, it is the collective social structure that will determine the final degree of diffusion, so the social influences of each individual's decision should not be underestimated. These are the key questions that faculty ask as they move through the adoption process. The acronym STORC provides a device for recalling this tool:

S – Simplicity , How easy is it to use and learn?

T – Trialability, Can it be tried on a limited basis?

O – Observability – Can I see the results/benefits/consequences?

R – Relative Advantage – Is the innovation better than the status quo?

C – Compatibility – Is the innovation consistent with the values, motivations and experiences of the adopters?

These characteristics serve as benchmarks, and each question should be addressed within the faculty development process. Maximizing these characteristics creates fewer concerns for the faculty audience, thus moving them with greater ease through Hall and Hord's (1987) tasks. The more features presented through the faculty development process, the more likely an innovation is to be adopted, and the greater the likelihood of its eventual diffusion into instruction.

The application of this model to faculty development initiatives can support successful diffusion by addressing the needs of faculty at their respective locations. Figure 3 augments the earlier visual summary of the interaction of our models by adding the stages of STORC at their appropriate locations.

Resistance

Rogers Kotter Hall and Hord STORC			
Knowledge	Lack of Knowledge	Task Concern	Simplicity
Persuasion		Self Concern	Trialability
Decision	Formal Structure		Observability
Implementation	Consistent Support	Impact Concern	Advantage
Confirmation	Administrative Support		Compatibility

Integration

Figure 3 : Applying STORC to the Progression of Integration

Wilson, Sherry, Dobrovonly, Batty & Rider (2000) recommended the addition of Support to the STORC model, recognizing that if there is not administrative and peer support to use the innovation, it may not be employed even if all of the other factors are present and influential. The central premise of faculty development is the provision of comprehensive support, and so this factor should be viewed as an umbrella under which all stages progress.

Action , interaction and reflection are conditions of optimal learning (Payne, 2002), and faculty development must provide all three conditions. Identifying the stages of integration among faculty and addressing motivations at each level of Roger's (1995) diffusion model, managing the concerns identified by Hall and Hord (1987), and promoting a consistent institutional vision (Kotter, 1996) must all be integrated into faculty development initiatives.

An example of one such initiative is taking place at The SUNY Learning Network (Pickett, 2002). SLN has built a four step faculty development model that mirrors this integrated theory. Faculty gain knowledge about online instruction through their “Get Connected and Get Online” training module, “Conceptualize” in module two where they begin considering what online teaching might mean for their course, “Develop” during module three within a supportive environment, and finally “Pilot” as they assess advantages and compatibility with their own

needs and instructional goals. The Sloan Consortium database of effective practices (available through http://www.sloan-c.org) features several other faculty support models built on a similar premise, thus providing support for the integration of these theories in current practice.

The faculty developer's success at promoting integration of educational technologies will likely be measured by the number of faculty adopting technology. While this is one measure, it may not be sufficient to provide a full basis for defining success.

Accurately Defining Integration

With the STORC model applied, faculty developers must next identify the point at which technology integration can be deemed successful. Geoghegan (1994) placed primary emphasis on the early majority when defining successful diffusion. While this is one way to measure success, additional benchmarks and intermediate objectives may have to be established.

Institutions often measure the success of their technology integration initiatives according to how well the early adopters make it work rather than examining overall diffusion of the technology (Jacobsen, 1998) and the skill with which it is employed. Measuring success in this way is misleading, as the early adopters would likely have integrated the technology regardless of whether or not specific incentives were in place. Multiple measures must be established by the program administration in advance so that planning and be driven by desired outcomes.

Setting a specific saturation point is one way to benchmark institutional success. This summative evaluation might also be augmented with process evaluations throughout the stages of integration. Recognizing that not all faculty will move through every stage of innovation, intermediate benchmarks that identify such discrete successes as the bridging of task and self concerns, shifting perceptions of institutional barriers, etc. can also provide valuable insight for future development activities.

Special Concerns for the Faculty Developer

With these theories in play, the faculty developer can integrate the theories according to their institutional context and the individualized needs of their faculty. In transitioning from the theoretical to the practical, there are many issues that need to be addressed.

Integrating these theories into practice requires consideration of everything from the more mundane decisions about where to hold the training sessions, to the more consequential choices regarding instructional approach and how best to provide ongoing support. The creation of a comprehensive faculty development plan that addresses both the theoretical foundations of the activity as well as the more practical considerations will provide insight into areas of strength and weakness, and perhaps indicate areas for improvement.

Balancing Mechanics and Pedagogy

Beyond simply having the technology used, it is also vital that the technology be used effectively and in ways that are pedagogically sound. Emphasis on how to "work" the technology on a mechanical level rather than on how to integrate the technology to enhance the teaching and learning process is a common mistake in faculty development. While the mechanical emphasis may address the task concerns of those early on the journey toward innovation, it is only one step

along a rather complex journey. Program administrators must be cognizant of this pitfall and approach it mindfully in faculty development planning.

The value technology integration depends more on pedagogical paradigm shifts than on the technology itself (Baker, 1999). This is a fact often overlooked in faculty development. It is

argued that discussion of technology in college teaching commonly focuses on how to use it, while the truly critical issues are when and why it is appropriate. This shortcoming results in what Gillespie (1998) terms "using new technology in old ways" (p. 45) as faculty attempt to superficially attach technology to their instruction with no pedagogical or design consideration. The superficial integration of educational technology is self-limiting, but common in the early stages of integration. This can be managed through careful analysis of both the level of innovation and the solutions appropriate to that level.

By meeting the perceived needs of faculty at the various stages of adoption, faculty developers can seize the greatest opportunity for moving faculty through all stages of adoption. Faculty development initiatives cannot localize themselves to the those that are most receptive, but must work to assist all faculty. To do this requires an organizational commitment to the process, and it is faculty developers who implement the overall vision.

Supporting an Organizational Vision

Kotter's (1996) theory hinges on the vision of the institution. "Vision [is] a picture of the future with some commentary on why people should strive to create that future" (p. 68). Well-defined institutional vision provides "general direction for change…motivates…[and] helps coordinate the actions of different people" (p. 68). The success of an innovation is dependent not only on the nature of the change itself, but also on how the change is introduced and implemented (Thompson, 2003). Effective vision should be imaginable, desirable, feasible, focused and communicable. Without a vision that is concise and clear, faculty and staff have no point of reference for why development initiatives are important or even necessary (Edmonds, 1999). Without the point of reference, educational technology can be viewed as having questionable value.

Although it may be argued that managing and influencing organizational structures is beyond the focus of the faculty developer, a skilled faculty developer must recognize the possibility for these barriers to exist and must either work to remove them or accept the otherwise inevitably limited success of their programming. "Faculty and staff development is a change process with many layers. The nature of change mandates that developers deal with vision…or deal with the consequences" (Edmonds , 1999). Thus, faculty developers and program administrators must be prepared to liaison between faculty and administration as they negotiate the new world of technology integration.

Conclusion

The theories of Rogers (1995), Hall and Hord (1973) and Kotter (1987) offer strong possibilities for informing the practice of faculty developers working to promote technology integration on their campuses. Each model contributes unique features, and their synthesis and measured application to development Both faculty and administrators face the significant challenge of retooling their minds to fit the varied media involved in technology integration. “To remain at the

forefront of higher education, faculty development initiatives need to broaden their focus, utilize more diverse methods and formats, focus on providing more learner-centered instruction, and consider positive cultural impact that electronic technologies make possible" (Kolbo & Turnage, 2002). Regardless of whether one is at the height of innovation or a stubborn laggard, technology integration cannot be performed unconsciously, but must be planned, designed, constructed, tested and evaluated with full awareness of our goals and means. Faculty need to believe that they are respected, knowledgeable professionals with expertise and values they express in their professional roles (Thompson, 2003). The ability to manage the transition and embrace this approach determines the success of technology integration for both the individual and the institution.

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