Perspectives from a Social Work Educator on Embracing Technological Change

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The following narrative describes the author's perspectives on embracing technological change in a university setting. The application of Rogers' Diffusion of Innovation Theory is used to understand faculty responses to technological innovations in teaching and learning.

Introduction

As I sit down to write this narrative, I look out my office window on a college campus and am amazed by how much technology is embraced by the students I teach. Many students now carry cell phones with attachments in their ears, personal digital assistants (PDA), notebook computers with compact disc players (CD), and digital video recorders (DVD) as a regular part of their backpack. This is the net generation of students who are "growing up digital" (Tapscott, 1999). Although I am not a product of this generation, I am not that old and often wonder how I completed school without all these technology tools. However, as an educator of this digital generation, I am excited about the possibilities for teaching and learning that these new technology tools provide.

I often think about how to teach these new digital age students as well as help them understand the role technology will play in their lives as a helping professional. Students who choose a helping profession want to work with people and issues that affect them. In the classes I teach, many students state that they are often not interested in computers and other technology tools since the skills they want to learn involve interactions with people, not machines. However, I have observed that most of these students embrace technological change despite these feelings. In a course called "Computers in Social Work," many students express initial trepidation at the thought of using computers in a lab setting on a weekly basis. However, they easily overcome that trepidation and often amaze me with their understanding and use of technology in ways that enhance both their personal and professional life.

The university is often thought of as a dynamic place that embraces new ideas and technological change. It seems to be the ideal place to utilize technology tools and motivate students. As faculty members, we should lead the way for our students to embrace technology in their learning and professional work.

My University Experience

I completed my graduate education in the late 90s and relied heavily on the personal computer, word processing, and statistical software for my coursework. This would be considered an advanced use of technology when I compare my experience to colleagues who completed their education in previous

decades. None of my courses used any other form of technology beyond these tools. With the advances in technology, it is not uncommon for courses to have web-based teaching and learning activities and to deliver course instruction entirely over the Internet. I cannot believe how rapidly things have changed since transitioning from student to educator, and I am amazed at the impact these technology tools are having on my teaching and learning. With my interest in the use of technology, I was hired in my first teaching position to help faculty use technological innovations in their teaching and learning. As a new faculty member, I found this to be a difficult challenge as many of my colleagues were not interested in any use of technology. Clearly, others must embrace these technological tools for technological advances to occur. Rogers' (1962) Diffusion of Innovation Theory helped me to understand the faculty response to embracing technological change and how to best support them in using it.

Application of Diffusion of Innovation Theory Research to Faculty Responses

Diffusion theory research is helpful in understanding the roles that characteristics of adopters have in the diffusion of a new innovation. Rogers (1962; 1983) classified five categories of adopters in diffusion research: 1) innovators, 2) early adopters, 3) early majority adopters, 4) late majority adopters, and 5) laggards. These five categories apply to my experiences of faculty responses to embracing technological change in teaching and learning in a university environment.

Innovators

Rogers (1962; 1983) described innovators as venturesome, daring, and risk takers. They tend to understand and apply complex technical knowledge and are often self-taught. In terms of technology use in education, many of them taught themselves to write code for web pages and to use a variety of software programs. Many of the individuals I worked with developed online courses and used web-based teaching and learning activities long before the technology and software made it easier to do so. They tended to be challenged by newness and forged ahead on their own, with or without institutional support. Many of the faculty that fit in this category love technology and were motivated by the intrinsic challenge of something new and different rather than by extrinsic rewards such as tenure and promotion. Often, they are considered the computer or technology experts of the department. Innovators are important to the start of any change in a social system. I have found them to be the forerunners in getting students and other faculty involved in thinking about technology and how it can be used. I was fortunate to be mentored and influenced by individuals in this category during my graduate education. In graduate school, various faculty mentors encouraged me to become interested in technology, which has influenced my work in using technology tools with students now. Interestingly, as influential as these innovators were, they were not responsible for helping other faculty members and students embrace technological change because they were often seen as different from others and possessing a knowledge and skill not needed by everyone.

Early Adopters

According to Rogers (1962; 1983), early adopters have many of the same characteristics as innovators but with an important difference. They often have a larger

degree of concern for social acceptance. Early adopters are certainly influenced by innovators but tend to have a greater degree of opinion leadership than innovators, and they are often role models within a social system and respected by their peers. Early adopters are motivated to change if they see an advantage over other methods. For example, faculty members' support of and interest in a technology tool such as *Blackboard* (course management software that supports a web-based learning environment) depend upon the extent to which they perceive it as offering a relative advantage over current teaching methods. If they do not see an advantage or if they see the software as too complex, they will not use the software. For example, a couple of faculty (whom I consider early adopters) began to use the *Blackboard* software regularly and found it useful. They began to tell other colleagues and gradually more acceptance and use of the technology tool began. In helping faculty to embrace the use of technology in their teaching and learning, I have begun to see the influence these individuals have on embracing technological change. I have spent a great deal of time with these early adopters, helping them learn and use *Blackboard,* as many of them possess interest in technology but not expertise. This type of specialized support is useful in the long run as these individuals were often the ones who would help get the change process started. Although early adopters are considered important to the beginnings of any change in a social system, Rogers (1962) found that the long-term success of any innovation depends on the active participation of both early and late majority adopters.

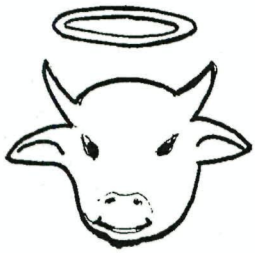
Early and Late Majority Adopters

Rogers (1962) described early and late majority adopters as interacting frequently with peers, seldom holding positions of opinion leadership, and deliberating carefully before adopting a new idea or innovation. These two groups differ from innovators and early adopters because they are generally the majority in a social system. Rogers (1962) described early and late majority adopters as ones who respond to pressure from peers but are skeptical and cautious when approaching change or innovation. Thus, this group of adopters tends to be more risk adverse and proceeds with caution.

According to Rogers (1983), if the members in these two categories have adopted an innovation, diffusion has reached a saturation point. Therefore, widespread adoption of an innovation occurs when it reaches early and late majority adopters. I have found Rogers' description of early and late majority adopters as characteristic of many of the faculty with whom I have worked. Most faculty need to connect the use of technology to the traditional system that they view as already working well. Hence, it has been difficult to get support for technology-based teaching and learning because many do not see how to integrate some of the technological innovations in a system they perceive as going well. For example, I recently presented to a group of colleagues information about the use of *Blackboard* in teaching. Most of the group responded fairly critically as they could not see how technology could enhance what they are currently doing. Since this group of adopters is a large group, it is important that they get group support and training and influence from innovators and early adopters rather than from laggards, or the diffusion of an innovation will not succeed.

Laggards

The most interesting group in any social system are what Rogers (1962) described as laggards. Laggards are people with no opinion leadership and a point of reference in the past. These individuals tend to be suspicious of innovations and can make the innovation-decision process lengthy. The term "laggards" has a negative connotation, and indeed I have



found these people to be the most resistant to change. Their resistance can take many forms. For example, some individuals responded to the introduction of e-mail with "Do not want it, do not have it, do not need it, and will not use it even if I have to." Others have many sacred cows that they consider important to the profession and their values: I have heard some people state, "Social work is a profession about people and no technology will ever replace that." Others have questioned whether the use of technology in education and social work is academic scholarly work in which social workers should be involved. Yet, uses of technology for databases, communication tools such as e-mail, virtual support groups, online courses, and counseling all have a place in the helping professions today. Laggards can be very opinionated as well as opposed to any technological changes in teaching and learning. These faculty have been the most difficult to work with in terms of embracing technological changes for teaching and learning because they see no value in the innovation. Naturally, if they do not value the innovation, they will be resistant to trying it and using it. Rogers (1962) stated that this group often never accepts the innovation until peer or social system pressure forces them to.

Lessons Learned

Many technological changes in education are a result of innovators by whom I was fortunate to be mentored during my graduate education. These mentors help me to see the advantages of using technology in my teaching and learning. They also helped me envision how technology could be used in practice by exposing me to skills and training as a part of my education. Their enthusiasm and skill helped me to learn new skills about technology that I did not possess. Now, due to their influence, I am an early adopter of these technological changes and am excited to share the possibilities with my colleagues, many of whom are laggards. I realize that I have some unique technology skills that I gained from these innovators that I can share with my colleagues. Skeptical faculty help me keep a critical perspective about the use of any innovation and not get carried away with enthusiasm for technological change. They have helped me to make sure that I do not let these technological changes drive good teaching practice. These colleagues remind me of important social work issues, such as the digital divide and the value of face-to-face interactions that technology cannot replace.

At the same time, I remind these skeptics that technology can provide something new and exciting along with advantages over previous methods of teaching and learning. For example, distance education courses via interactive television are now considered a fundamental aspect of our social work program, as well as many others across the country. When educators recognized that delivering education via television was compatible with their own values and philosophies about teaching, they were more likely to adopt it. When they discovered that teaching over interactive television was not as difficult as they feared, they were able to experiment and eventually adopt and support.

In my experience of working with educators and trying to get them to embrace technological change, I have found it helpful if they recognize which category of adopter they are and verbalize it. It is much easier to deal with resistance to change when it is verbalized. I often have exchanges with colleagues who gladly tell me they are laggards and cannot give up some sacred cows. It is a relief to faculty when I acknowledge these feelings are acceptable as change often brings resistance in some form. I have learned that this type of exchange is much more productive in getting support, interest, and involvement in a new technological innovation.

Summary

I have learned that change is a process that involves people, ideas, and innovation. In my own involvement in faculty development in a university environment, I am not too concerned if the innovation fails or is not accepted by adopters as it may mean that it was not useful in the first place. I do know that it is important that we recognize technological change and innovation as a part of the helping professions. It is up to people in all adopter categories to figure out the best way to use it. I am challenged by all the innovations and look forward to how I can embrace technological change in the 21st century.

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