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Key Issues in Web-Based Education in the Human Services: A Review of the Literature

Brenda Moore

SUMMARY. The literature on Web-based education reflects a paradigm shift as hundreds of colleges and universities are offering online courses. This paper provides an overview of the current literature on Web-based education, including frameworks for analysis. Key publications on Web-based education in social work and human services are presented. Attention is given to the theoretical perspectives relevant to Web-based education such as adult learning theories and the shift to a constructivist approach. This paper concludes with a discussion on related issues such as evaluation, leadership, emotional aspects of Web-based instruction, and teaching practice skills through Web-based technology. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2005 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Web-based instruction, online learning, social work education, technology in higher education

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Higher education for human services is undergoing a transformation as “technology-assisted instruction has proliferated and changed the way teachers and students interact, as well as the manner in which educational entities must now do business to meet the demands of a digitized society” (Beaudoin, 2003, p. 1). In fact, Twigg (2001) refers to this change as a paradigm shift, a change in the way we view our world and the assumptions that help us understand or predict behavior. Currently, hundreds of colleges and universities are offering online courses, altering centuries-old methods of traditional teaching and learning methods. The research literature is increasingly reflecting various aspects of this “paradigm shift.”

This paper provides an overview of the current literature on Web-based education, including frameworks for analysis. Key publications on Web-based education in social work and human services will be presented. Attention will be given to the theoretical perspectives relevant to Web-based education such as adult learning theories and the shift to a constructivist approach. This paper concludes with a discussion on related issues such as evaluation, leadership, emotional aspects of Web-based instruction, and teaching practices skills through Web-based technology. While there are some subtle differences, the terms *distance learning*, *distance education*, *Web-based education*, *distributed learning*, and *online learning* will be used interchangeably throughout this paper (Twigg, 2001; Bates, 2003).

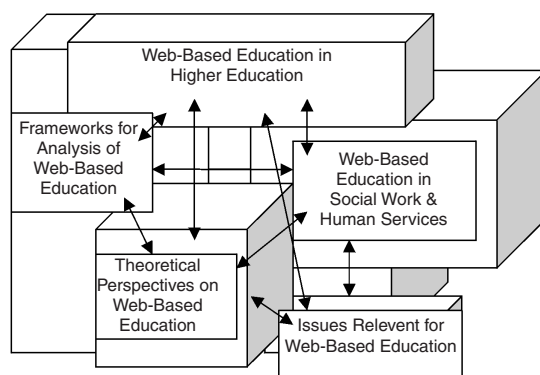
Web-based education is a complex phenomenon. Figure 1 provides a conceptual model for analyzing various interrelated aspects of Web-based education.

This model reflects the juxtaposition of information relevant to the application of Web-based education in higher education, social work and human services, theoretical perspectives, frameworks for Web-based instruction, and other related issues to Web-based education. As one reviews the literature, all of these aspects are important in understanding the transformation of our educational process.

WEB-BASED EDUCATION IN HIGHER EDUCATION

Changes occurring in work and educational environments have resulted in a demand for distance education as a “widely accepted means for higher education to provide broader access and achieve cost-efficiencies while maintaining quality programs” (Eastmond, 1998, p. 33).

FIGURE 1. Schematic Representation of Key Issues in Web-Based Education



Web-based instruction reflects current efforts in the use of technology to enhance education.

The earliest generation of higher education, lasting for centuries and based on bricks and mortar, provided education in a specific place utilizing traditional methods of teaching. The following generation involved various forms of universities that used a range of distance delivery tools and technologies. The British Open University, founded in 1969, marked the beginning for degree-giving distance education universities with full degree programs, often referred to as “mega universities” (Holmberg, 1995; Moore, 1993, Bates, 2000; Green, 2003).

Moore (1993) describes the changes in the current generation of higher education as “. . . the development of the communications technologies of the 1990s—the electronic highways to our homes and workplaces—we are rapidly approaching technical readiness for the Virtual University” (p. 4). The rapid development of technology made it increasingly possible for learners to become independent from educational institutions in their acquisition of information and the Virtual University has become reality.

There is no denying the impact of technology on higher education. The role and availability of web-based and web-enhanced classes continues to expand. Moore (1999) compares the use of distance education to the retailing business, from the “Distance Education Superstore” such as the mega-universities with thousands of students purchasing classes online to the “Distance Education Boutique,” where suppliers struggle to define their market, provide a specialized product and bal-

ance the costs and benefits of such endeavors. Related to market demands and driving economic factors, many higher education institutions have embraced online learning (Green, 2003). Eighty-one percent of all higher education institutions offer at least one fully online or blended course; complete online degree programs are offered at 34% of higher education institutions (Sloan-C Online Learning Survey Report, 2003).

FRAMEWORKS FOR ANALYSIS OF WEB-BASED EDUCATION

A number of studies have been published that provide frameworks for understanding Web-based education (American Distance Education Consortium, 2001; Chickering & Ehrmann, 1996; Li-Ling, 1997; Kearsley, 1998; Kahn, 2000, 2002, 2003). One model is based on a study from the State University of New York Learning Network (SUNY), an online instructional program developed for sixty-four colleges (with 3200 online courses with 50,000 students enrolled) that are a part of the SUNY system (Shea, 2003). This report integrates pedagogical research with principles of good practice in higher education and recent research on learning in asynchronous learning networks in higher education. This framework is based on modified guidelines from *How People Learn* (Bransford, Brown, Cocking, Donovan, & Pellegrino, 2000).

Another example of a comprehensive effort to analyze Web-based education is provided by Howell, Williams, and Lindsay (2003). Based on the study of more than 70 books, journal articles, reports, and web-sites published in the past three years, the authors identify thirty-two trends affecting distance education. These trends are organized into categories pertaining to students and enrollment, faculty, academics, technology, the economy, and distance learning.

A useful framework for effective Web-based education is the delineation of best practices for electronically offered programs proposed by the Western Cooperative for Educational Telecommunications (www.wiche.edu), an organization with substantial expertise in this area. These best practice principles, organized around the components of (1) institutional context and commitment; (2) curriculum and instruction; (3) faculty support; (4) student support; and evaluation and assessment, were developed by eight regional accrediting commissions. These standards reflect regional accreditation standards that are applicable to electronic learning environments.

Understanding the relationship of Web-based education as compared with traditional face-to-face education has been important as technology has evolved. Russell (1997) published a compendium of more than 355 research studies on “no significant difference” between face-to-face courses and technologically-based courses. While frequently cited as a rationale for support of online education, other research questions the “across the board” acceptance and application (Moore, 2003; Twigg, 2001; Shearer, 2002). What is now emerging in the literature is an effort to move beyond a comparison of “what used to be” with “what is” to understanding “what can be.”

Perhaps the real question should be how and through what technology we use to accomplish our educational mission. “If we value human interactions and the aspects of social presence which exist in a class, then the real question is how and through what technology can we strive to achieve this for our students” (Shearer, 2002). Numerous efforts are underway to examine ways to improve the design and implementation of Web-based courses.

Twigg (2001) asserts that the majority of online courses are organized and offered in the same way as on-campus courses, resulting in “applying old solutions to new problems.” The Center for Academic Transformation convened a symposium in 2000 of faculty and administrators to consider how to move online learning *beyond* being “as good” as traditional education. Their work is summarized in five areas: (1) Individualization of students (with an emphasis on the importance of students’ learning styles); (2) Improving the quality of student learning (technology allows for customized courses like “pieces of a puzzle”); (3) Increasing access to higher education (the more virtual the delivery model, the more accessible); (4) Reducing costs of teaching and learning (restructuring how courses are developed and offered); and (5) Sustaining innovation (the need for a new kind of institutional research to “determine the most efficient and effective paths for different kinds of learners in particular curricula or courses”) (Twigg, 2001).

WEB-BASED EDUCATION IN SOCIAL WORK

Distance education has developed more slowly in social work than in other degree programs (Blakely & Shoenherr, 1995). However, social work educators have begun to integrate technology as a part of the educational experience (McFall & Freddolino, 2000; Biner, Dean, & Mellinger, 1994; Ashery, 2001; Coe & Elliott, 1999; Schoech & Helton,

2001; Finn, 2002; Randolph & Krause, 2002; Frey, Faul, & Yankelov, 2003). Most traditional social work courses integrate computer technology to some extent, at least through e-mail or Web-based research resources. Some courses use Web-enhanced or Web-assisted instruction while some classes are offered totally online (Pollof & Pratt, 2001). The availability of electronic media is increasing and the costs associated with distance education using online and Web-based courses is decreasing, especially when compared with the spiraling costs of traditional on-campus programs (Schoech, 2000; Stocks & Freddolino, 2000).

Macy, Rooney, Hollister, and Freddolino (2001) summarize a number of studies on the use of technology in social work, listed in Table 1.

Other articles in the literature propose an organizing framework for considering various features of technology in social work education, including variables such as learner, instructor, presentation, course content, outcomes, and the instructional environment (Schoech, 2000). Forster and Washington (2000) suggest a model that includes accreditation standards compliance, resource requirements, curriculum adaptation, faculty development and program evaluation as a way to develop

TABLE 1. Overview of Distance Education Studies in Social Work

Studies comparing student learning from grades and/or performance on assignments in the following areas:	Hollister & McGee, 2000; Petracchi & Morgenbesser, 1995; Petracchi & Patchner, 2000
• Policy	Huff, 2000; Freddolino & Sutherland, 2000; Wong & Law, 1999
• Research	Petracchi & Patchner, 2000; Freddolino & Sutherland, 2000; Stocks & Freddolino, 2000; Wernet, Olliges, & Delieath, 2000; Dalton, 2002
• Statistics	Harrington, 1999; Henley & Dunlap, 1998; Wong & Law, 1998
• Human Behavior & the Social Environment (HBSE)	Barnett-Queen, 1998; Barnett-Queen & Zhu, 1999; Haslet, Lehmann, & McLaughlin, 1998; Freddolino & Sutherland, 2000
• Human Diversity & Social Justice	Huff, 2000; Johnson, 1999; Van Soest, Canon, & Grant, 2000
• Introduction to Social Welfare History	Faux & Black-Hughes, 2000; Hick, 1999
• Practice Methods	Coe & Elliott, 1999; Cumins, 1998; Hagan, 1998; Oullette, Sells, & Rittner, 1999; Sells & Rittner, 1998; Freddolino & Sutherland, 2000; Glezakos & Lee, 2002
• Field Instruction	Burke & Macy, 1998; McFall & Freddolino, 2000
• Substance Abuse	Hollister & McGee, 2000; Petracchi & Morgenbesser, 1995
• Child Welfare	Thyer, Polk, & Gaudin, 1997; Cauble & Thurston, 2000
• Values & Professional Identity	Cascio, 2001
• Mental Health	Knowles, 2001; Patterson & Yaffe, 1993
• Technology	Schoech, 2000
• Administration	Schoech & Helton, 2001

and manage distance education programs. Friedman, Ward, and Biagiante (1998) suggest adapting the classic educational theory proposed by Bloom's Taxonomy of Educational Objectives as a tool for integrating technology into the educational process.

Social work educators are encouraged to use electronic media to enhance both education and practice (Freddolino, 2002; Schoech, 2002; Sandell & Hayes, 2002). However, Kreuger and Stretch (2000a; 2000b) provide a more critical perspective on the use of technology in social work. The authors define "hypertechnology" as "an entire interconnected assemblage of various technologies operating worldwide which interact electronically. This includes personal and networked computers, the Internet and other webbed connections, telecommunications, satellite hookups, cellular communications, and synchronous and asynchronous capacities" (p. 103). They speculate that social work educators have been pressured to participate in the hypertechnology movement without fully considering the pedagogical implications. In a subsequent publication, they encourage an understanding of technology (or hypertechnology) as a tool to support the development of knowledge, skills, and values of the profession. They recommend better data to assess how students and practitioners "adapt to temporal and spatial distance, how they relate to the emerging physical and special aspects of learning or delivering services off site. . . . Gadgets and mechanical objects should not substitute for humanistic pedagogy" (Stretch & Kreuger, 2002, p. 13).

In spite of the opportunities afforded by technology, there is a limited number of social work faculty engaging in "cutting-edge" initiatives using the full range of Web-based tools available (Moore, 2003). Instead, the social work literature tends to reflect research on Web-enhanced or blended approaches (Frey, Faul, & Yankelov, 2003; Randolph & Kraus, 2002). Studies such as those offered in this publication provide much-needed insights for future social work and human service education.

THEORETICAL PERSPECTIVES FOR WEB-BASED EDUCATION

There is a risk that educators will assume that if they are familiar with various technology tools, they will be effective. Educators are encouraged to consider what teaching strategies can be enhanced by technology rather than looking at what strategies can be used to enhance the available technology (Erhmann, 1995; Friedman, Ward, & Biagiante, 1998). A particular technology may be either well or poorly

suited to support a particular teaching-learning method. The analogy used is that many tools can be used to turn a screw, but some can do the job better than others. "Better to turn a screw with a screwdriver than a hammer—a dime might do the trick, but a screwdriver is usually better!" (Chickering & Ehrmann, 1996, p. 1).

Technology has influenced the way educators view the process of education. The challenge for distant educators is that current pedagogy or adult learning theories are based on print, audio, and video distance delivery systems. Distance educators cannot consider distance delivery systems, including the Internet, in isolation from other modes of delivery. When distance separates the teacher from the learners, and technology mediates the learning experience, the assumption that learners must become more independent and autonomous follows (Wagner & McCombs, 1995). Web-based education provides a unique opportunity to shift from teacher or education-centered to learner-centeredness.

Theoretical shifts in adult learning perspectives have occurred concurrently with technological advances, changing from behavioral to cognitive to constructivist learning perspectives (Herrington & Standen, 2000; Dalgarno, 2001). Constructivists believe that the world is constructed in the mind and personal constructions define personal realities (Jonassen, Davidson, Collins, Campbell, & Haag, 1995). The constructivist view of learning is not listening and then mirroring, but rather participating and interacting with the environment in order to create personal meaning. Constructivists emphasize the design of the learning environment rather than instructional sequences. Emphasis is placed on the context of learning rather than the content (Jonassen, 1994, Jonassen, Davidson, Collins, Campbell, & Haag, 1995).

Constructivist environments involve learners in knowledge construction through collaboration that allows for learning through interaction with other learners and reflection upon what has been learned through the process. A constructivist learning environment is facilitated by the use of technology and distance education. The paradox is that many distance education programs are using traditional, objectivist approaches when constructivism can more effectively support the benefits of new technologies (Jonassen, Davidson, Collins, Campbell, & Haag, 1995, Twigg, 2001; Blocher, Echols, Sujo de Montes, Willis, & Tucker, 2003; Shutkin, 2004).

The Internet allows for the development of knowledge-building communities in which participants can share information, reflect on the knowledge they construct, and learn from the processes they used (Huang, 2002). New technologies have contributed to a movement

away from traditional instructional methods, both in the classroom and at a distance, towards an approach that minimizes the role and focus on the teacher as the main source of knowledge (Jonassen, 1994). In a traditional classroom, the teacher contributes up to 80% of the verbal exchange; in online classes, the instructor contributes only 10-15% of the messages (Jonassen, Davidson, Collins, Campbell, & Haag, 1995).

A constructivist view of the learner taking responsibility for constructing meaning can help maintain focus on the benefits available through technology. Such theoretical perspectives are contributing to an evolving Web-based pedagogy. Online courses have characteristics that are unique to the technology being used and therefore, allows for consideration of new pedagogical models (Institute for Higher Education Policy, 2000).

ISSUES RELATED TO WEB-BASED EDUCATION

Evaluation of Web-Based Education

There are many ancillary issues related to Web-based education. Researchers and scholars of distance education programs are striving to develop effective means to evaluate the new technologies (Achtemeier, Morris, & Finnegan, 2003; Phipps & Merisotis, 1999; Reeves & Reeves, 1996; Reeves, 2000; Berge & Meyers, 2000; Brown, 1997; Roblyer & Knerzek, 2003). Evaluation efforts have broadened beyond course evaluation to looking at how to improve implementation methods, monitor technology's impact on societal goals, and report on current technology uses that help shape desired directions (Roblyer & Knerzek, 2003). Ideally, evaluation efforts are moving beyond simple comparisons with more traditional classroom teaching to consideration of cutting-edge technology in determining "what can be" rather than "what has been" (Twigg, 2001).

Leadership in Web-Based Education

Educators and administrators are beginning to consider the role and impact of leadership in Web-based education. "Thus, as the boundaries and distinctions between traditional and so-called non-traditional education are blurring, there is a need for leaders to be able to function effectively in both contexts" (Beaudoin, 2003). Some of the venues that new leaders may find themselves in distance education include collaborative partnerships, such as alliance building with for-profit companies,

meta-university configurations, expansive global markets, more free-standing virtual entities, and more exclusively online delivery systems rather than mixed-media approaches (Beaudoin, 2003). These not-so-future changes require creative leadership of both “groundbreakers” and “pace setters” (Twigg, 2001).

Bates (2000) differentiates between “single-mode” universities, such as the British Open University, and “dual-mode” institutions that offer regular programs on campus as well as distance education. These dual-mode institutions, which historically have been the old land-grant universities in the United States, are facing challenges as a result of “changing markets, developments in technology, reduced government spending, privatization of higher education, globalization, and increased competition” (Bates, 2000). As a result, there is a need for “transformative leadership” to help organizations reshape traditional approaches to education. This new style of leadership moves beyond Hershey and Blanchard’s (1977) situational leadership to a call for educational leaders who are capable of helping stakeholders (administrators, faculty and students) accept the benefits of teaching and learning in new ways (Beaudoin, 2003).

Emotional Aspects of Web-Based Education

One of the least researched areas intrinsic to Web-based education is the emotional aspects of online teaching and learning. While traditional education literature is replete with research which structures, categorizes, and describes human interaction in the classroom (Baumgartner, 2001; Brookfield, 1995a & 1995b; Bruner, 2002; Caffarella & Caffarella, 1986; Donaldson & Graham, 1999; Galbraith, 1994; Kasworm & Marienau, 1997; Knowles, 1980; Mezirow, 1978; Merriam, 2001), research is needed to understand the role of emotions in Web-based education.

Despite the importance of emotions in daily life, the focus for years in instructional design and technology was the learner’s cognitive and motivational processes, with little or no attention to human emotions (Astleitner & Leutner, 2000; Reigeluth, 1997). MacFadden, Herie, Maiter, and Dumbrill (in press) describe a model, based on a constructivistic approach, which emphasizes the emotional dimensions in online learning. This model was developed in response to research on teaching cultural competence through Web-based instruction (MacFadden, Maiter, & Dumbrill, 2002). As more educators critically evaluate their Web-based courses, the aspect of emotionality should not be ignored.

Another framework to ensure that Web-based instructional strategies are emotionally sound is called a “FEASP” approach. This model includes attention to elements associated with: fear reduction, envy reduction, anger reduction, sympathy increase, and pleasure increase (Astleitner & Leutner, 2000). While many studies consider student attitudes and perceptions to their Web-based learning experiences (Clawson, Deen & Oxley, 2002; Coulter, Konold, & Feldman, 2000; Ferdig & Roehler, 2003/2004), the experiences and emotions of the Web-based *teaching experience* of instructors should not be ignored (Smith, Ferguson, & Caris, 2002; MacFadden, Herie, Maiter, & Dumbrill, in press).

Teaching Practice Skills Through Web-Based Technology

The number of counselors and clinicians offering services over the Internet is growing significantly (Wilson, Jencius, & Duncan, 1997; Abney & Maddux, 2004; Clinical Social Work Federation, 2001; Freeny, 2001; Ainsworth, 2001). Providing mental health and therapeutic services online has raised many questions and issues, but most research in this area has been exploratory or descriptive (Helton, 2003; Ainsworth, 2001). It seems evident that professional helpers would (or should) have training or education on providing Web-based services, but Suler (2000) indicates that online therapy is very different than face-to-face approaches. The Clinical Case Study Group of the International Society for Mental Health Online recommends that professionals who are using Internet-based applications should have specific training to provide services online (Fenichel et al., 2002).

Finn (2002) suggests that social work students may not be taught about e-therapy in practice classes; therefore, their beliefs about the effectiveness of this modality of treatment may be negatively influenced. Moore (2003) found that practice courses were reported as using Web-based instruction more frequently than other curriculum areas (such as policy, HBSE, or research) but that faculty perceived Web-based instruction in teaching practice classes to be less effective than face-to-face instruction. This contradiction reflects the challenges facing human services professionals and educators as to the best way to prepare practitioners to use technology effectively.

CONCLUSION

Distance education technologies are viable media for teaching social work content and they allow educators to prepare students for the increas-

ing use of technology in practice. Some components of social work programs may be more appropriate for traditional approaches. There may be some groups of students for who distance education technologies may be the best, or only, viable alternative. Distant education technologies need to be viewed as tools that can help social work educators, students, practitioners, and clients in accessing resources, delivering services, networking efficiently, teaching, and learning (Freddolino, 2002).

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