Refereed Article

Distance Education Environments, Higher Education, and the Concern for Community

Nicola P. Gram
Heather Kanuka
Stephen P. Norris

Abstract

The purpose of this paper is to make the case that aspects that are community important to higher education may be difficult to realize in text-based, asynchronous, computer-mediated distance education environments. We begin this paper by defining distance education and community. We then discuss why communities, particularly communities of discourse, are important. Three educational discourse communities are described and discussed in terms of how they can be affected by distance education environments. Finally, the issue is examined concerning which, if any, of these effects should matter to higher education. We conclude with the position that both instructors and learners should understand the ways in which text-based, asynchronous, computer-mediated distance education may be reshaping the social structure of their learning communities. We suggest areas for further study into this important issue.

Introduction

There is accumulating evidence that higher education is undergoing significant change, especially with respect to the adult learner population (those older than 25). For example, according to McClenney (1998), the proportion of college students who are adult learners has been increasing

Nicola P. Gram is Lecturer at the City University of Hong Kong. Heather Kanuka is Assistant Professor at the University of Calgary. Stephen P. Norris is Professor and Chair of Educational Policy Studies at the University of Alberta.

steadily from 30% in 1970 to 40% in 1980 to almost 50% in 1990. McClenney projects that the proportion will be greater than 50% in the near future. A similar study by Levine and Cureton (1998) revealed that only one in six undergraduate students is now a traditional student (attending college full time, between 18 and 22 years old, and living on campus). If educational institutions serving the adult population are to succeed, then they must make efforts to meet such adult's demands and needs. To achieve success, according to Daniel (2000), educational institutions need to offer adult learners readily accessible learning services that are tailored to their needs without having to deal with time-consuming bureaucratic procedures. Not finding such service, adult learners will seek alternative educational institutions (Frank, 2000). The result will be a loss of status in the education market for those institutions left behind (Griffiths & Gatien, 1999). Inspired by such arguments, many higher education providers have begun to view technology-mediated distance education as a way to meet the demands and needs of the increasing adult learner population. Evidence in much of the current literature supports the conclusion that text-based, asynchronous, computer-mediated communication technologies remove many barriers to learning opportunities. For example, these technologies can expand access to education and training, improve the quality of learning, and reduce instructional costs, as well as garner popularity, have platform independence, be easily accessible, remove time and situational barriers, and remove the biggest barrier to learning—distance between places (Bates, 1997, 2000; Ben-Jacob, Levin, & Ben-Jacob, 2000; Daniel, 1997; Haughey, 2000).

Clearly, there are many promises, prospects, and possibilities that text-based, asynchronous, computer-mediated distance learning can provide, yet if we take a moment to examine the literature, we find that it comprises mostly forecasts by authors who are biased in favor of the technologies through either an affiliation with a technological-based organization or a vested interest in the techniques, courses, or programs being evaluated (Kanuka, 2001). We are left with an insufficient corpus of critical literature on the impacts that text-based, asynchronous, computer-mediated distance education may have on adult learning communities in higher education settings. Although we do not deny that there are benefits to technology-mediated distance learning, there are also shortcomings that tend not to be voiced in public discussions on the merits of technology-mediated distance learning. According to Comstock and Fox (1995), for example, this relatively new teaching phenomenon gives rise to questions about how this kind of delivery may be reshaping the social structure of

higher education communities. Likewise, Kanuka (2001) has raised concerns with respect to the impact on undergraduate social life, mentoring of graduate students, increasing consumerist approaches to higher education, deprofessionalization of faculty, industrialization of curriculum, and compromising academic freedom. Sumner (1999; see also Welton, 1997) asserts that adult learning communities (including those within higher education) are being eroded by "technocratic ideology, market driven logic, and rampant individualism" (p. 73).

The lack of responses to these concerns indicates that there is a crucial question that remains unanswered: *In what ways does text-based, asynchronous, computer-mediated distance education reshape the social structure of learning communities?* By text-based, asynchronous, computer-mediated distance education we are referring to those contexts in which both the learning activities and the content are communicated to the learners through the use of text-based, asynchronous, computer-mediated communication software and learners are required to use the software to access and complete successfully the learning activities (e.g., receive course credit). Interactions between the instructor and learners also require use of the technology. Examples of such technology include integrated distributed learning environments (IDLEs), also referred to as instructional management systems (e.g., WebCT, Lotus Notes, FirstClass, Ole, TopClass). An IDLE is the integration of web browsers with text-based, computer-mediated conferencing software.

The purpose of this paper is to explore possible impacts of text-based, asynchronous, computer-mediated distance education. We make the case that aspects of community important to adult learning are difficult to realize with this type of communication technology and must be given special attention when developing and delivering instruction by distance. The focus is on communities of discourse in higher education and adult learners within these institutions. This investigation should be of interest to persons working in higher education settings because text-based, asynchronous, computer-mediated distance learning is rapidly being integrated into their learning environments and a correspondingly larger number of adult learners are participating in these kinds of learning transactions (Welton, 1997).

We begin this paper by defining distance education and community. We then discuss why communities, particularly communities of discourse, are important to education. Three educational discourse communities are described and discussed in terms of how they can be affected by distance education environments. Finally, the issue of whether these effects should

matter to higher education is examined. We conclude with the position that both instructors and learners should understand the ways in which text-based, asynchronous, computer-mediated distance education may be changing the social structure of learning communities in significant ways. We suggest areas for further study into this important issue.

What is Distance Education?

The scope of educational activities available to adults has expanded over the years and has come regularly to include distance education (Merriam & Brockett, 1997). When most of us think of distance education, we tend to think of a situation in which instructors and learners are separated by a geographical space and technology (print, video, audio, and/or data) is used to bridge that space (Willis, 1993). These assumptions are reflected in the statement by Merriam and Brockett (1997) when they speak of "the technological advances that allow instruction to take place between geographically separated teachers and adult students" (p. 10). When expressed in these terms, distance education can be described most easily as a learning transaction where the instructor is removed geographically from the student. Although this definition provides a depiction of distance education that most of us can relate to, it does not reflect many of the complexities that often are involved in distance education, including, in particular, the many kinds of distances that occur.

The word "distance" may refer to temporal, social, cultural, psychological, geographical, and/or transactional kinds of distance. Any and all of these types of distance might be found in a given distance learning transaction (Evans & Nation, 1989). Temporal distance relates to time barriers produced by limited time or conflicts in time that many learners experience. Haughey (1995) notes that asynchronous Internet communication technologies have made the notion of time as a factor of distance education almost irrelevant. However, the question that continues to surface for us is this: "In what ways does electronic presence still leave learners at a distance?" (Haughey, 1995, p. 4). Social distance refers to an inability of organized groups to gather for the purpose of learning. Social barriers in adult education environments have been referred to typically as "situational barriers" (Cross, 1981). In distance education environments, however, social issues can arise from isolation, and these issues are cited occasionally as the greatest barrier to distance education (Collette, Kanuka, Blanchette, & Goodale, 1999). Cultural distance relates to the differences between cultures that some learners experience. In distance

education the idea of culture also requires a somewhat altered perspective due to the possibility that learners may be not only in diverse physical places, but also in different cultures associated with their place of current habitation—a condition not typical of traditional higher education environments.

Transactional distance is not so easily described. In simple terms, transactional distance refers to the communication gap between the learners and the instructor. This space or gap must be bridged if learning is to be maximized, even in environments that do not involve geographical or temporal distance. As class sizes grow, for example, even students and instructors in face-to-face environments are grappling with ways to overcome this type of communication gap. The concept of transactional distance was first introduced by Moore (1973), who argued that we should use the term "transactional distance education" rather than "distance education" in order to make clearer the point that distance education is a subset of educational events in which the separation of instructor and learner is significant enough to influence their behaviors in major ways. Moore (1991) asserts that transactional distance "is a distance of understandings and perceptions, caused in part by the geographic distance that has to be overcome by teachers, learners and educational organizations if effective, deliberate, planned learning is to occur" (p. 2). Thus, a physical separation can lead to a psychological and communication gap that, in turn, can result in misunderstandings for the learners. Because transactional distance can occur in any form of education, much of what we know currently about adult learning can be applied to the practice of distance education. However, even though we can apply much of what we know, the degree of geographical or temporal separation can transform traditional face-to-face teaching so significantly that new ways of facilitating learning transactions are needed. In order to reflect this view, distance education has been defined by Moore (1988) as the organizational and pedagogical methods of providing learning activities using various forms of educational and communication technologies. This definition is used in this paper as our understanding of distance education, which encompasses, as well, our many understandings of distance. Although we acknowledge that "transactional distance education" more accurately represents this definition, we use the phrase "distance education."

Until relatively recently there was a resistance in higher education to offering learning opportunities at a distance. The reason for this resistance was due partly to an inability of distance learning activities to provide, cost-effectively, the amount and quality of interpersonal interaction

that is considered central to many higher education programs of study (e.g.. small group discussions, Socratic dialogue, collaborative/coopera-tive learning, problem-based learning, etc.; Kanuka & Anderson, 1999). However, it is now possible to sustain these kinds of activities through text-based, asynchronous communication technologies. In certain appli-cations these technologies are also proving to be cost effective and acces-sible to adult learners who are experiencing time, place, or situational barriers (Bates, 1995) while also supporting the development of higher order thinking skills (Bullen, 1997; Newman, Webb, & Cochrane, 1995). Consequently, many higher education institutions are integrating text-based, asynchronous, computer-mediated distance education into their teaching programs. Clearly, communication technologies have made it possible to remove access barriers that many adult learners experience. Although we remain open to the benefits that technology can offer, Chandler (1996) reminds us that technology is not a neutral medium. It is capable of re-shaping our educational systems in profound ways. Even though tangible evidence of substantial social and historical changes within our educa-tional structures resulting from the use of technology may not be present, there is sufficient evidence that the use of technology has had a subtle and penetrating influence on many aspects of our lives, including the restruc-turing of learning communities. To better understand these changes, we must first provide our understanding of community.

What is Community?

Choosing to participate in learning activities is one way that we cre-ate community. In a broader sense, community is a vehicle for creating and maintaining tradition and social structure and is dependent upon spatio-temporal relations. Communities have traditions that provide a basis for individual identity. Tradition is the history of thoughts, feelings, and prac-tices exemplified through such artifacts as story, song, dance, text, and custom. Tradition is inherited through narratives of community existence of which the individual is a part. Communities also have a social struc-ture that (a) is derived from agreement, (b) is influenced by the kind and quality of bonds and attachments among individuals, and (c) provides a basis for individual identity. The social structure of communities is de-rived from agreement on values and beliefs that guide or organize the structure. Values and beliefs include those related to politics, economics, law, social practices, and morality. The social structure of communities is influenced by the kind and quality of bonds and attachments that exist

among individuals, including bonds of kinship and affection. Finally, communities have a spatio-temporal structure that influences the kind and quality of social structures that exist. People and things exist in temporal and spatial relationships. The spatio-temporal structure of a community helps to constitute the relations among social objects. Education plays a fundamental role in forming and maintaining community and, hence, has considerable impact on shaping the structure of community.

Educational Relevance of Community

Community is relevant to education because it is both an end and the means of the learning process. Education involves, centrally, initiation into our traditions (Peters, 1965). Community is an end of education because initiation into traditions is initiation into communities of discourse that enshrine those traditions—communities that encompass roles, styles, conventions, standards, relationships, and understandings. Community also is the means of education because education is conducted in, and made possible by, communities of discourse: "The main work of teaching is conducted by means of verbal communication" (Hirsch, 1987, p. 146). Education is achieved largely through various communicative practices. Engaging through language is engaging in the roles, styles, conventions, standards, relationships, and understandings encompassed by a community of discourse. In the remainder of this section examples of educational discourses are described in order to illustrate the varieties of communication and communities that ensue. The discourses enshrine three major themes that arise in Western educational traditions. The first two themes are that education serves to develop the virtuous and rational potentials of human beings by introducing them to "the best that is known and thought in the world" (Arnold, 1961, p. 245). The third theme is that education serves not only to introduce human beings to what is, but also to open their minds to what might be. We do not hold that these are all the important themes in education, but they are central, enduring, and important ones, and each leads to a particular form of communicative interaction.

Virtuous discourse, which enables open and equitable communication, is characterized by communicative virtues that include patience, tolerance, respect for differences, willingness and ability to listen thoughtfully and attentively, openness to giving and receiving criticism, self-imposition of restraint, and the disposition to express oneself honestly and sincerely (Burbules & Rice, 1993; Rice & Burbules, 1993). Rational

discourse, in which people are moved appropriately by reasons, is characterized broadly as being reasonable, reflective, and focused. It is discourse in which individuals use their abilities "to judge the soundness of information and inferences drawn from information, to produce credible information and inferences, and to maintain clarity" (Norris & Ennis, 1989, p. 8). Emancipatory discourse aims at eliminating oppressive social practices and is characterized by a partisanship toward the oppressed. In general, discourse is characterized by an inextricable relation between language and power (Freire, 1972). Emancipatory discourse attempts to harness the power of language to move one toward democratic social action. Each discourse establishes a community through the creation of tradition, social structure, and spatio-temporal structure. Each of the three characteristics of community is discussed below with respect to each of the three discourse communities.

Tradition is created in virtuous, rational, and emancipatory discourses. Communicative virtues, such as patience and tolerance, are acquired by learners in their relations with instructors and others who already possess those virtues (Rice & Burbules, 1993). In rational discourse persons believe and act on the basis of reason. Developing rationality is aided often by traditions that "enshrine conceptions of rationality which tell us what counts as good reasons for adopting the tradition as our own . . . [and] also tell us what counts as good arguments against objections to tradition" (Worsfold, 1992, p. 331). The emancipatory discourse tradition is based upon the assessment of relations in terms of power distribution and acting to retain or reject those relations in order to improve the quality of life. In each discourse type, by accepting the discourse, the learner comes to identify herself as a member of the discourse tradition.

Social structure also is created in virtuous, rational, and emancipatory discourse. The social structure of virtuous discourse is derived from agreement upon expression of the communicative virtues. The communicative virtues are derived, themselves, from agreement on moral and ethical imperatives and notions of an environment that fosters the acquisition of goods that are achievable communicatively. The social structure of rational discourse is derived from agreement on the importance of reason as the basis for believing and acting, and from agreement on the process and requirements of reasoning. The social structure of emancipatory discourse is derived from an agreement on the value or moral directive to eliminate oppressive social practices from language and power relations.

Temporal and spatial structure is the third characteristic of community that is related to virtuous, rational, and emancipatory discourse and is

the one we shall analyze most comprehensively because of its strong connection to distance education environments. In each discourse type, spatio-temporal structure affects the discourse, the discourse community, and the kind and quality of social structure produced. The spatio-temporal structure of virtuous discourse affects the expression of the communicative virtues. For example, the ability to interpret and translate one's own concerns and the concerns of others may be affected when those engaged are separated in time and space. The intended meaning of an ironic or sarcastic statement, for example, may be revealed in paralinguistic cues (such as facial expressions, body posture, gestures, physical distance from the interlocutor, intonation patterns, and volume). In the absence of paralinguistic cues irony and sarcasm, for example, easily can be misinterpreted when communicating by electronic mail. Even the use of "emoticons" (a short sequence of keyboard letters and symbols, usually emulating a facial expression or expressing a feeling that supplements the message) cannot communicate our many intended meanings as clearly and as fully as intonations, facial expressions, and body language. Baron (2000) argues further that, although emoticons pass along insider information to children and young adults, "adult users are less likely to find compelling need for such auxiliary markers. What's more, many new adult users [of the Internet and email] lack access to models from which to learn such arcana" (p. 242).

The spatio-temporal structure of rational discourse influences the ability to compare and contrast the ideas of others. Comparing and contrasting ideas is constitutive of the social structure of the discourse. In discourse that occurs in face-to-face settings, all are involved in a single conversation where a flow of ideas develops over time. There is a time-ordered progression in the comparison and contrast of ideas. The organizational development of each utterance as imposed by time is clear. In text-based, asynchronous, computer-mediated discourse this natural time-ordered progression is often altered or absent, resulting in an alternation or removal of the natural flow of conversation. As argued earlier, conversation is essential in the building of community as we currently know it. When the essence of conversation changes, so, too, will the essence of community.

The temporal and spatial structure of emancipatory discourse influences discursive power relations, and oppressive practices may restrict or limit individual expression and inclusion in the social structure through which identity is formed. For example, a graduate student who reads an article written by a university professor may send him, by electronic mail,

positive comments about the article in general, but she may also question some of his assumptions, admitting that she would never be so brazen in person. In the absence of immediate time and proximate space, the student is more confident in expressing criticism and in receiving the professor's response to her criticism. We can ascertain that text-based, asynchronous, computer-mediated communication can change the nature of educational discourse and, hence, reshape the structure of learning communities in subtle, yet significant ways.

The Effects of Distance Education Environments on Educational Discourse

When we analyze critically the aspects of community discussed above, we can understand how technologically mediated communication can reshape educational discourse. Examining a few of the communicative virtues illustrates this reshaping with respect to virtuous discourse. For example, patience is the capacity for calm, self-possessed waiting. In discourse it involves waiting for another to think and articulate her thoughts. Patience is time-defined. In immediate-time distance education environments, one expresses patience as one would when face-to-face because waiting in immediate time is common to both environments. In text-based, asynchronous, computer-mediated distance learning environments patience is expressed by waiting for the other to think and respond, but it is a different sort of expression because the individuals are detached in time. This alteration of the concept of patience is one way in which text-based, asynchronous, computer-mediated distance education changes discourse.

Another communicative virtue is respect for differences. Respect is prizing those human dimensions that make individuals diverse and working hard to understand those different from oneself (Egan, 1994). Differences include those related to race, gender, age, and physical ability, as well as personality, idiosyncratic behavior, attitude, and belief. Even the simplest human dimensions are understood differently when in the presence of another because the sensual wholeness of that which makes another different is affected when mediated technologically. Distance education environments affect respect for differences to the extent that they affect the experience of differences themselves that are to be prized and understood. Although it can be argued that distance education environments are more equitable because we cannot see physical differences, it can be argued also that, because we cannot see physical differences, we are less likely to confront our assumptions and biases involving them.

The result can be that many equity-reducing assumptions and presuppositions are left unchallenged and intact. This failure to challenge is another way in which text-based, asynchronous, computer-mediated distance education changes discourse.

Alternatively, there is the communicative virtue, thoughtful and attentive listening. Listening refers to the ability to capture and understand the messages individuals communicate, whether those messages are transmitted verbally or non-verbally, clearly or vaguely (Egan, 1994). In text-based, asynchronous, computer-mediated communication, however, listening is reduced to attentive reading. When these types of environments affect the ability to listen, they, in turn, also affect the ability to capture and understand both the verbal and non-verbal messages individuals communicate. This loss can be illustrated by the communicative virtue, self-imposition of restraint. Self-imposition of restraint implies a sense of timing and awareness in understanding the order and inclusion of turn-taking. Self-imposition of restraint may be manifested in text-based, asynchronous, computer-mediated environments in the choice to refrain for a time from posting any more of one's thoughts until others have posted. Thus, when one cannot see all participants, there is a risk that less gregarious persons are absent from the conversation because, being out of sight, they are overlooked. Moreover, non-contributors are commonly labeled as "lurkers" or, sometimes, as "online voyeurs." These kinds of pejorative labels tend to create a sense of mistrust among contributors and, in turn, can create feelings of isolation in those who choose not to, or who believe they cannot, contribute. A question that arises is the following: In what ways does a virtual social presence (versus physical social presence) reshape our sense of community?

Text-based, asynchronous, computer-mediated distance education environments affect rational discourse to the degree that they affect the abilities required to engage in rational discourse. The ability required to engage in rational discourse stems from the ability to engage in effective interaction that (a) keeps discourse focused, (b) communicates coherently, and (c) receives communication from others intelligibly. Keeping discourse focused involves managing the progression of the conversation. In text-based, asynchronous, computer-mediated distance education environments, order is affected by discontinuous time. As a result, the direction of the conversation may be altered, resulting in noncontiguous and fragmented discussions, most often due to confusion about turn taking and lack of recognition of differences among participants in typing speeds and in time spent contributing.

Communication can involve the use of language, bodily behavior, facial expressions, intonations, and other physical characteristics (e.g., age, race, sex). In text-based, asynchronous, computer-mediated conferencing environments, one is reliant upon writing as the sole means of communication. However, the written word communicates differently from the spoken word and differently from the spoken word in the presence of persons. At best, the written word spells out in sequence what is explicit in the spoken word (Olson, 1994). Text-based, asynchronous, computer-mediated conferencing environments that fail to capture the implicitness of spoken expression affect communication. Language can be used further to describe the context, and though "it extends and amplifies man, . . . [it] also divides his faculties. His collective consciousness or intuitive awareness is diminished by this technical extension of consciousness that is speech" (McLuhan, 1964, p. 79).

A second ability required to engage in rational discourse is the ability to judge information and inferences drawn from information. Making sound judgments involves the assessing of reasons and the warrant they provide for beliefs, claims, and actions and requires a grasp of field-specific criteria and a general understanding of the nature of reasons, warrant, and justification as these notions function across specific fields. Technological mediation may cause some students to "lose touch" with the magnitude or scope of reality, affecting their grasp of specific fields in the real world from which information is drawn and inferences are founded (Soberman, as cited in Gooderham, 1997). Another ability necessary to engage in rational discourse is the ability to maintain clarity about the questions being asked, the assumptions being made, the meaning of particular information, and the decision being reached. In face-to-face environments the organization of discourse and its clarity is defined in part by the linearity of time. In asynchronous, computer-mediated environments, maintaining clarity may become more difficult. Conceivably, such discourse can develop exponentially. Exponentially increasing discourse can blur clarity because a message may evolve from any combination of messages before, a combination known only to the writer.

Text-based, asynchronous, computer-mediated distance education environments affect engagement in emancipatory discourse when they affect the realization of those requirements necessary for the discourse. Emancipatory discourse requires love for the world and for persons and denies subordination of agency and interests. An example is the brazen graduate student, mentioned above, who overcame intimidation by communicating with a professor over electronic mail. When communicating

face-to-face, the student viewed herself in a subordinate role to the professor. Over electronic mail, in the absence of immediate time and space, the student viewed herself as brazen enough to overcome her perception and to communicate freely and openly with the professor about an article he had written. Emancipatory discourse requires faith in persons' ability to engage in discourse itself and in persons' ability to create and transform through discourse. Emancipatory discourse also requires hope that discourse can lead to eliminating oppressive social practices. Separated by distance, there may be little opportunity for affirmation that engaging in discourse has made a difference. Emancipatory discourse requires critical thinking in the assessment of oppressive social practices and in determining action to be taken that will transform realities of oppression into those that contribute to humanization.

Why Educators Should Care?

Throughout this paper we have argued that certain features of discourse are more difficult or, in some cases, impossible to realize in text-based, asynchronous, computer-mediated distance education environments. In turn, we have argued that altering discourse alters the range of community that it is possible to create. Other features of discourse are likely to be altered, but we are uncertain of the nature of such alterations.

Community has significant ramifications for research on text-based, asynchronous, computer-mediated distance education environments. First, we need to investigate ways of maximizing the realization of community in these kinds of educational environments. Second, we need to investigate further the effects of text-based, asynchronous, computer-mediated distance education environments on communities of discourse important to adults within higher education. Conducting such research is a way to meet a responsibility we have as educators to be aware of and to promote educational techniques and technologies that best facilitate our educational goals. Finally, the construct of community should prove useful in the evaluation of text-based, asynchronous, computer-mediated distance education environments. Text-based, asynchronous, computer-mediated distance education environments unable to realize the desirable goal of community in its various educationally relevant forms might be abandoned or supplemented by distance education environments that could. Distance education environments able to realize the goal of community might be sought out and studied for their effects on other desirable goals. The goal of community could serve to open questions concerning the aims of

adult learning within higher education institutions. What is the kind of community into which we wish to initiate our learners? What sort of social group is it that we wish to (re)produce? What is the role and responsibility of education in the (re)production of this social group?

The precise effects of text-based, asynchronous, computer-mediated distance education environments on educational discourse are not entirely clear. However, there is strong reason to believe that this kind of environment does affect the social structure of learning communities and, as a consequence, does affect discourse communities. These effects are cause for concern because discourse communities are both an end and the means of education. Stamps (1998) has argued that communities of learning reflect an ecological metaphor, connoting a system that is self-regulating and self-sustaining. He warns, however, that ecosystems are fragile, and certain conditions can damage a system's ability to survive and thrive. Given the fact that text-based, asynchronous, computer-mediated distance education is becoming an increasing feature in the educational ecosystem, it is important that we make efforts to understand the ways in which it may be reshaping the social structure of our learning communities. We need to continue dialogue on community, on precisely the kind of community we wish to facilitate, and on how it is that we wish to facilitate community. Then we need to assess the environment of distance education to determine its ability to serve these objectives while being ever cognizant and vigilant not to compromise those same objectives in order to serve technology.

References

Arnold, M. (1961). The function of criticism at the present time. In A.O. Culler (Ed.), *Poetry and criticism of Matthew Arnold*. Boston: Houghton Mifflin.

Baron, N. S. (2000). *Alphabet to email: How written English evolved and where it's heading*. New York: Routledge.

Bates, A. W. (1995). *Technology, open learning and distance education*. New York: Routledge.

Bates, A. W. (1997). The future of educational technology. *Learning Quarterly, 2(1)*, 7-16.

Bates, A. W. (2000). *Managing technological change: Strategies for college and university leaders*. San Francisco: Jossey-Bass.

Ben-Jacob, M. G., Levin, D. S., & Ben-Jacob, T. K. (2000). The learning environment of the 21st century. *Educational Technology Review, 6(3)*, 8-12.

Bullen, M. (1997). *A case study of participation and critical thinking in a university-level course delivered by computer conferencing.* Unpublished doctoral dissertation, University of British Columbia, Vancouver, British Columbia, Canada.

Burbules, N. C., & Rice, S. (1993). Can we be heard? Burbules and Rice reply to Leach. In K. Geismar & G. Nicoleau (Eds.), *Teaching for change* (pp. 34-42). Cambridge, MA: Harvard University Press.

Chandler, D. (1996, February). Engagement with media: Shaping and being shaped. *Computer-Mediated Communication Magazine* [online]. Retrieved December 10, 2003, from http://users.aber.ac.uk/dgc/determ.html

Collett, D., Kanuka, H., Blanchette, J., & Goodale, C. (1999). *Learning technologies in adult distance education.* Edmonton, Alberta, Canada: University of Alberta Press.

Comstock, D., & Fox, S. (1995, November). *Computer conferencing in a learning community* [On-line]. Retrieved December 10, 2003, from http://www.seattleantioch.edu/Gmp/COMPCONF.HTM

Cross, K. P. (1981). *Adults as learners.* San Francisco: Jossey Bass.

Daniel, J. S. (1997). Why universities need technology strategies. *Change, 29(4),* 11–17.

Daniel, J. S. (2000). *Implications of virtual universities for the University of Alberta* [On-line]. Retrieved December 10, 2003, from http://www.open.ac.uk/vcs-speeches/

Egan, G. (1994). *The skilled helper* (5th ed.). Pacific Grove, CA: Brooks/Cole.

Evans, T., & Nation, D. (Eds.). (1989). *Critical reflections on distance education.* New York: The Falmer Press. (Deakin Studies in Education Series, No. 2)

Frank, T. (2000, October). Universities compete for a presence online. *University Affairs,* 10-20.

Freire, P. (1972). *Pedagogy of the oppressed* (M. B. Ramos, Trans.). New York: Herder and Herder.

Gooderham, M. (1997, January 7). Lecturers' reliance on Web assailed. *The Globe and Mail,* p. A8.

Griffiths, J., & Gatien, G. M. (1999, February). The role of the traditional research university in the face of the distance education onslaught [On-line]. *Vision.* Retrieved December 10, 2003, from http://ts.mivu.org/default.asp?show=article&id=45

Haughey, M. (1995). Distinctions in distance: Is distance education an obsolete term? In E. Keough & J. Roberts (Eds.), *Why the information highway? Lessons from open and distance learning* (pp. 2-14). Toronto, Ontario, Canada: Trifolium Books.

Haughey, M. (2000). A global society needs flexible learning. In V. Jakupec & J. Garrick (Eds.), *Flexible learning and human resource development: Putting theory to work* (pp. 11-29). London, UK: Routledge.

Hirsch, E. D. (1987). *Cultural literacy: What every American needs to know.* Boston: Houghton Mifflin

Kanuka, H. (2001). University student perceptions of the use of the Web in distance delivered programs. *The Canadian Journal of Higher Education, 31*(3), 49-71.

Kanuka, H., & Anderson, T. (1999). Using constructivism in technology mediated learning: Constructing order out of the chaos in the literature [online]. *Radical Pedagogy, 1*(2). Retrieved December 10, 2003, from http://radicalpedagogy.icaap.org/content/issue1_2/02kanuka1_2.html

Levine, A., & Cureton, J. S. (1998). Collegiate life: An obituary. *Change, 50(10)*, 14-17, 51.

McClenney, K. M. (1998). Community colleges perched at the millennium: Perspectives on innovation, transformation, and tomorrow [Online]. *Leadership Abstracts, 11*(8). Retrieved on December 10, 2003, from http://www.league.org/publication/abstracts/ leadership/labs0898.htm

McLuhan, M. (1964). *Understanding media: The extensions of man.* New York: McGraw-Hill.

Merriam, S. B., & Brockett, R. G. (1997). *The profession and practice of adult education: An introduction.* San Francisco: Jossey-Bass.

Moore, M. G. (1973). Towards a theory of independent learning and teaching. *Journal of Higher Education, 44*, 661-679.

Moore, M. G. (1988). Telecommunications, internationalism and distance education. *American Journal of Distance Education, 2(1)*, 1-7.

Moore, M. G. (1991). Distance education theory. *The American Journal of Distance Education, 5(3)*, 1-6.

Newman, G., Webb, B., & Cochrane, C. (1995). A content analysis method to measure critical thinking in face-to-face and computer supported group learning [Online]. *Interpersonal Computing and Technology, 3(2)*, 56-77. Retrieved December 10, 2003, from http://www.helsinki.fi/science/optek/1995/n2/newman.txt

Norris, S. P., & Ennis, R. H. (1989). *Evaluating critical thinking.* Pacific Grove, CA: Midwest.

Olson, D. R. (1994). *The world on paper.* Cambridge, UK: Cambridge University Press.

Peters, R. S. (1965). Education as initiation. In R. D. Archambault (Ed.), *Philosophical analysis and education* (pp. 87-112). London: Routledge & Kegan Paul.

Rice, S., & Burbules, N. C. (1993). Communicative virtues and educational relations. *Philosophy of Education, 47*, 34-44.

Stamps, D. (1998). Learning ecologies. *Training, 35(1)*, 32-38.

Sumner, J. (1999). Global vision or corporate nightmare? The privatization of adult education in the new millennium. *The Canadian Journal for the Study of Adult Education, 13(2)*, 73-85.

Welton, M. (1997). In defense of civil society: Canadian adult education in neo-conservative times. In S. Waters (Ed.), *Globalization, adult education and training: Impacts and issues* (pp. 27-38). London: Zed.

Willis, B. (1993). *Distance education: A practical guide.* Englewood Cliffs, NJ: Educational Technology Publications.

Worsfold, V. (1992). MacIntyre and Bloom: Two complementary communitarians. *Philosophy of Education, 46*, 328-335.