THE TYRANNY OF TECHNOLOGY:
A CRITICAL ASSESSMENT OF THE SOCIAL ARENA OF ONLINE LEARNING

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Abstract

Educators and learners in adult education have been sentenced to online learning before we have truly explored the verdict of whether online learning is all it is touted to be. The vast majority of online learning dialogue has extolled the virtues of cybereducation as not only the future but the salvation of education (Brabazon, 2002; Menchik, 2004). Davison (2004), however, suggests we have not mindfully considered how technology transcends mere use and intertwines with our sense of self and the world. In this article we critically question this dominant view of technology, using Bourdieu's (e.g., 1977) theory of practice to inform our challenge of dominant discourses around online education. We present a brief review of Bourdieu's theory of practice, followed by an overview of the dominant discourses associated with cybereducation and our Bourdieusian interpretation of cybereducation. We conclude with implications for the future of online learning for the field of adult education.

"Sentence first, verdict afterwards."
(The Queen of Hearts, *Alice's Adventures in Wonderland,* Carroll, 1865/1961, p. 157)

Educators and learners in adult education in many contexts, ranging from adult basic education to adult higher education, have been sentenced to online learning before truly exploring the verdict of whether online learning is all it is touted to be. While there have been studies cautioning adult educators about the uncritical embracing of distance technologies as a panacea for issues of access and success for adults in higher education and more informal learning contexts (Boshier, Wilson, & Qayyum, 1999; Gibson, 2000; Gray, 1999; McKie, 2000; Miller, 2001; Miller, Leung, & Kennedy, 1997), the vast majority of dialogue and popular discourse about online learning in more formal adult education contexts, including adult literacy education and especially adult higher education, has extolled the virtues of cybereducation as not only the future but perhaps even the salvation of education (Bates & Poole, 2003; Brabazon, 2002; Cahoon, 1998; Conceição, 2002; Day, 2004; Hanna, Glowacki-Dudka, & Conceição-Runlee, 2000; Huang, 2002; Huber & Lowry, 2003; Menchik, 2004; Negroponte, 1995; Russell, 1999; Schrum, 1998; Wang, 2005). Miller (2001) argues that this "utopian" vision of technology

in adult and higher education embraces technology with "evangelical enthusiasm" (p. 191), seeing technology as "having the power to transform education, providing learners with greater choice, flexibility, and control in relation to what, where, and when they study" (p. 187).

Proponents of distance education, online learning, and computer-based tools for learning have dominated much of the dialogue around these modes of education and learning in adult education journals, for example, suggesting means to foster cultural inclusivity (Chang, 2004; Ziegahn, 2005), reducing barriers to technology integration amongst adult basic educators (Kotrlik & Redmann, 2005), or incorporating distance education as a means to appeal to non-traditional female students (Carney-Crompton & Tan, 2002). While some scholars recognize the inherent problems of using online learning technologies, there is nevertheless an implicit assumption that such technology is a given and it is the instructors' responsibility to improve their practice to meet demands (Hodge, Tucker, & Williams, 2004). Davison (2004) suggests, and we agree, that educators have not fully and mindfully considered how technology transcends mere use to intertwine with our sense of self and the world. Indeed, from within the discipline of adult education, the most salient challenges to, or critiques of, these dominant perspectives of technology as a pedagogical tool have appeared in scholarly journals primarily as book review essays (e.g., Fenwick, 2004; Walter, 2001), as book chapters (Miller, 2001), or conference proceedings (Boshier & Wilson, 1998; Miller et al., 1997). More comprehensive reflections and research on the implications of technological pedagogy are still lacking in the adult education literature.

Thus, we contend that online entrepreneurs have presented adult educators and learners with a rabbit hole into cybereducation and that adult educators, learners, and administrators have fallen into it. The purpose of this article, then, is to present a critique of the mass acceptance of cybereducation in the practice of adult education. In this article, we use Pierre Bourdieu's (e.g., 1977) "theory of practice to frame our challenge of the dominant discourse around online learning and teaching. We focus largely on the context of higher education, which continues to see an increase in adult learner enrollment (Sissel, Hansman, & Kasworm, 2001) and is one of the main arenas where adult educators are practicing, researching, and promoting online learning (Miller, 2001). Higher education is one of the arenas of adult learning (along with business and industry, the military, government, and health fields) hosting the majority of all educational programs offered at a distance (Gibson, 2000). Higher education continues to see an increase in the numbers of universities offering online learning courses and adult learners enrolling in online courses (Gibson, 2000; Waits, Lewis, & Greene, 2003; Yoon, 2003).

Before embarking on our challenge of cybereducation, it is important that we position ourselves within the very arena of online and distance learning. Both authors of this article are experienced users of online learning technologies. Indeed, this article emerged from our observations of online learning during the administration of a grant to convert traditional courses to an online format. Both authors also have experience with a variety of different online learning software platforms, including Centra, Blackboard, FirstClass, WebCT-SE, and WebCT Vista, having used them in both web-supplemented (hybrid) and fully online graduate courses. The first author also used blogs and wikis as a central component of her teaching when these tools were not yet incorporated into the online learning software platform for the university. Thus, our observations of, and subsequent challenges to, cybereducation are not borne of a lack of

familiarity or competence in applying the technologies. They have emerged from our reflections in and on our practice as adult educators.

In what follows, we first present a brief review of the key elements of Bourdieu's theory of practice. We then offer our Bourdieusian interpretation of the dominant discourse associated with cybereducation in adult higher education. We conclude with implications for the future of online learning and the fields of adult education.

Through the Looking Glass of Bourdieu

Bourdieu sought to build a theory that synthesized both subjective and objective paradigmatic perspectives (Grenfell & James, 1998). His structuralist conflict approach (Morrow & Torres, 1995; Turner, 1991) incorporated subjective schemes of self-embodiment within context, identified as *habitus,* and objective orientations of positions within a common network, identified as *fields*. Individuals' positions within any given field are, in part, determined by their habitus, and the interactions between positions result in unequal distributions of power, or *capital*. In turn, the use of capital to maintain dominant positions within a given field results in *symbolic violence* toward those in less powerful positions.

Habitus represents a dialectic of how the body inhabits or exists within the social world, while, at the same time, the social world inhabits the body (Reay, 2004). Habitus is not simply the representation of belief systems, but includes the whole range of ways of thinking, feeling, and acting. Lingard and Christie (2003), following Bourdieu, describe habitus as a system of "socially-constituted dispositions" (p. 320). Topper (2001) further describes these dispositions as "the embodied product of an individual's history, experience (especially early childhood experience) and social location, becoming over time an ethos, a set of flexible but enduring 'mental structures' and 'bodily schemas' that organize, orient, and direct comportment in private and public space" (p. 38). These dispositions are durable over time and are deeply embedded, becoming our "common sense" or seemingly "natural" responses and personalities. They are also transposable in that these dispositions can be adapted to guide behavior, thoughts, and feelings in fields outside of the one where they were originally developed (Topper, 2001). Habitus influences how we walk and talk, how we make decisions, what entertainment we pursue, when and how we display anger or joy or sorrow, and all of the other elements of "being" within a network of interconnected relationships.

Fields are those interconnected relationships (Grenfell & James, 1998; Menchik, 2004). Bourdieu (1998) describes a field as

> A structured social space, a field of forces, a force field. It contains people who dominate and people who are dominated. Constant, permanent relationships of inequality operate inside this space, which at the same time becomes a space in which the various actors struggle for the transformation or preservation of the field. All the individuals in this universe bring to the competition all the (relative) power at their disposal. It is this power that defines their position in the field and, as a result, their strategies. (p. 40)

A field is thus "a structured system of social relations" (Grenfell & James, 1998, p. 16), which is also "a structure of power relations" (Topper, 2001, p. 39). Fields are comprised of

differential positions that compete for capital. This competition leads to the concept of fields of conflict: Various positions within fields are held by individuals or institutions, or *actors*, and the relationships and interactions (or conflicts) between different positions shape how the field is structured (Topper, 2001). Actors occupy positions within these fields based on their habitus, which is learned through familial socialization and previous education exposure. In turn, the thoughts, feelings, and actions that form habitus serve to either reinforce or reshape the structure of fields. Fields are relatively autonomous; however, multiple fields exist within any given society and new fields can emerge (Menchik, 2004). In the context of education, Morrow and Torres (1995) explain Bourdieu's concept of fields as being "close to what are often academic disciplines, that is, contexts of cultural discourse and activity that are organized as markets of symbolic goods" (p. 182).

As actors interact within their field positions, they enact capital (Grenfell & James, 1998). There are three essential types of capital—economic, cultural, and social—which are interpreted as symbolic products of habitus in action (Grenfell & James, 2004). The root of all capital is economic in nature; however, the economic underpinnings and implications of cultural and social capital are often obscured. All positions within a field have capital; however, the nature and influence of that capital is different and unequal and results in a hierarchical field structure (Naidoo, 2004). In other words, different positions within a field are determined by the extent to which individuals or institutions possess certain forms of capital that are considered valuable in any particular field (Topper, 2001).

Bourdieu (1977) argued habitus and capital are reproduced, in part, through the field of education, which serves as an important purveyor of social and cultural values. The obscuring of economic capital through social and cultural values legitimizes unequal power relationships (Grenfell & James, 2004; Wolfreys, 2000). As a result, those who are dominated come to accept their positions as normal and natural. This application of capital to control the field of conflict is referred to as symbolic violence; those with more capital within a field are able to control symbolic meanings and to "impose them as legitimate by concealing the power relations which are the basis of its forces" (Bourdieu, 1977, p. 4). Symbolic violence refers to a kind of violence, oppression, or coercion that is not physical; rather, symbolic violence is "a gentle, invisible violence, unrecognized as such" (Bourdieu, 1990, p. 127).

Bourdieu and Cybereducation

We argue that the field of adult education has patterns of action (habitus) associated with cybereducation that have come to be accepted as normal and natural. This habitus is enacted as adult education, as a field in conflict with other fields, tries to achieve legitimacy, status, and credibility in its larger social context. The economic roots of habitus are obscured by the superficial purpose of education as the purveyor of cultural and social capital. This hegemonic process of making cybereducation seem normal and natural is consistent with Bourdieu's (e.g., 1990) conception of symbolic violence.

While online distance education, or cybereducation, is not yet a field in its own right (Menchik, 2004), it can be explored as part of the broader fields (in the Bourdieusian sense) of adult and higher education. Within those fields, technology can be considered "little crystallized

parts of habitus" (Sterne, 2003, p. 376). Technology plays a fundamental role in shaping our lives, and members of society often fail to appreciate this phenomenon (Madaus & Horn, 2000). Such a failure is referred to as *misrecognition* by Bourdieu (Grenfell & James, 1998, 2004)—a failure to see how economic capital masquerades as cultural or social capital. In this way, technology itself serves as symbolic violence that maintains unequal distributions between people who occupy various positions in society.

Challenging the Dominant Discourse

The dominant discourse within adult education associated with information technology, internet education, online learning, and similar refrains of the digital age centers on accepting the inevitable reality that the nature of adult education—and specifically the nature of adult education within higher education settings—will fundamentally change as a result of distance technology (Miller, 2001). Even though universities have been cornerstones of society for hundreds of years, some have contended that universities simply will not survive the technological revolution and others have supported that notion by comparing universities to the now practically non-existent family farm (Duderstadt, Atkins, & Houweling, 2002). The discourse framed by proponents of cybereducation typically follows three streams: availability of and access to learning, learner engagement and involvement in learning, and revenue generation.

Availability and Access to Learning

Perhaps the loudest argument made by proponents of adopting cybereducation is the claim that technology renders higher education open to anyone (Duderstadt et al., 2002) because it transcends the boundaries of time and space (Schrum, 1998). As such, proponents claim that cybereducation helps increase the diversity of the student body (Conceição, 2002; Sanders, 2001). The implication is that because underrepresented adults now have access to higher education, cybereducation increases equality among diverse groups in society.

Education is widely viewed within a capitalist society as a means to achieve upward mobility (Baptiste, 2001; Delbanco, 2005). Two profound moments in higher education policy in the United States, for instance, were crafted specifically to meet the needs of adult learners: the Morrill Act which created land grant universities in 1862, and the GI Bill, which was implemented in 1944 to help returning soldiers afford higher education (Sissel et al., 2001). Furthermore, in the Cold War Era fight against communism, the exclusive doors of higher education were cracked to many adults who otherwise could never have gained access. Those doors, however, are currently being pulled shut because tuition is increasing, financial aid is waning, faculty salary is stagnating, and public support is decreasing. As a result, the gap between elites and non-elites is widening. Dominant discourses proclaim cybereducation to be the answer to increasing access and gaining funding (Katz & Associates, 1999). However, we join oppositional voices (e.g., Gibson, 2000) who suggest cybereducation may actually increase this gap.

Technology creates a gap between adults who have access to a common language of technology and those who do not. Proponents of online education hail the equalizing properties of distance education and the technological improvements that have made online education more

personal (for example, Katz & Associates, 1999). However, these "bells and whistles" require more sophisticated computer equipment and high speed internet access that make it more difficult for less advantaged adults to access the distance learning services of higher education (Gibson, 2000). University administrators argue online technology increases outreach for geographically marginalized learners; however, studies have shown that this perception is not accurate (David, 2003). Benson and Wright (1999) found technology actually hindered learning for over 20% of their students. And in Canada and England, for example, adults with lower socio-economic and educational statuses are significantly less likely to own a computer (Miller, 2001; Nakhaie & Pike, 1998).

In other words, education is increasingly associated with wealth, which is, in turn, associated with increased access to technology. Thus, as cybereducation becomes more popular, education is made virtually inaccessible to those who do not have the wealth to afford state of the art computers and high speed internet access. This constriction of access contributes to a vicious cycle that feeds the human capital theory perspective that low socio-economic status individuals remain in poverty because they choose to limit their personal investment in education (Baptiste, 2001). This cycle of manufactured inequalities lends support to our contention that both technology and education produce elites. In this way, cybereducation serves as a mechanism of symbolic violence because it provides the false perception (or creates misrecognition) of increasing access and, in turn, equality while instead maintaining inequalities.

Engagement and Involvement

Another argument in the discourse supporting cybereducation is that cybereducation enables learners to become active consumers of educational services (Conceição, 2002; Duderstadt et al., 2002). Proponents argue that participants are more engaged in the learning process because technology allows them to have a greater voice in their education. Opponents argue that the dominant discourse has co-opted the language of critical and feminist pedagogy by claiming learners have more "power" in the online classroom. As Miller's (2001) study shows, however, technology is not value neutral and cybereducation does not always allow for the "empowerment" of all students. Rather, technologies are socially shaped, with "assumptions built into their production and consumption that are class, gender, and culture specific" (Miller, 2001, p. 203). Miller (2001) found, in her study of poor black women who participated in an introduction to technology course, that while these women were given access to computer hardware, they encountered racism when interacting with computer support technicians, as well as other aspects of institutional racism that negatively impacted their cybereducation experiences. Viewed within the context of Bourdieu, these learners navigated the field of cybereducation while possessing less-valued cultural capital and were thus relegated to a less powerful position within the field. Miller (2001) concludes that power relations--particularly inequalities with regards to gender, ethnicity, and class--are always implicit in the practice of cybereducation.

Furthermore, viewing learners as consumers, as some proponents of cybereducation do, has resulted in higher education becoming what Noble (2001) refers to as digital diploma mills. Within these digital diploma mills, learners and the market are determining the content of learning instead of faculty exercising their expertise through academic freedom. Similarly, Jarvis

(2000) speaks of "corporate universities" that are seeking to compete in the "global learning market" (p. 49) through offering market-driven, vocationally-oriented courses, increasingly through distance technologies.

In this case, both learners and educators are affected by the symbolic violence enacted by implementing cybereducation. As disadvantaged learners attempt to engage with cybereducation, their access does not ensure full engagement. Indeed, barriers of gender, ethnicity, and socio-economic status continue to shape the inequalities found within the field while those who support cybereducation simultaneously make claims to the contrary. Thus, those who would seek to use education as a means to increasing their position within the field discover that inequalities continue to be reproduced. Further, adult educators are also victims of symbolic violence in the application of cybereducation. Instead of maintaining a relative position within a field based on their earned expertise, educators are pressured into basing the content of their courses largely on the whims of the market.

Revenue Generation

Revenue generation is one of the key reasons higher education administrators are leaping to implement online learning systems (Brabazon, 2002; Duderstadt et al., 2002). With decreasing government support (Delbanco, 2005), universities are searching for innovative ways to generate funding streams. Online learning is seen as the answer because higher fees can be charged for the convenience of earning a diploma from home, a larger pool of potential learners can be reached, and overhead for facilities is minimized; this further exacerbates the positioning of adult learners in higher education as "cash cow boons" (Sissel et al., 2001, p. 18), which many adult educators have decried (Sissel et al., 2001). Not accounted for in this equation is the increase of time and effort by faculty to support this online initiative.

One of the ways technology creates elites within the university setting is by diminishing the purpose of higher education and fostering a higher-level technical college that serves corporate interests (Brabazon, 2002; Jarvis, 2000). While the most elite universities are still able to regulate themselves, newer and public universities try to earn their "keep" by serving corporate capital interests. By becoming handmaidens to corporate interests, higher educational institutions are unable to foster equality among different positions within society (Grenfell & James, 1998, 2004); and, exactly as Bourdieu (e.g., 1977, 1990) argued, symbolic violence will then occur because differential positions are part of any field (Wolfreys, 2000).

Furthermore, the symbolic violence of online education results in the exploitation of educators. Educators are encouraged, even brow-beaten, into using online technology to deliver their courses (Bates & Poole, 2003; Brabazon, 2002). Mirroring our own experiences, we consistently hear complaints from colleagues at conferences, in hallways, and other informal spaces about the overwhelming burden of using online technology with little or insufficient technological support and even less time and energy to devote to delivering quality courses online. The online media of delivery is substantially more time consuming than traditional modes of delivery: higher course development time, greater learner expectations of immediate response, increased time in course delivery, and greater expectations for technological expertise (Fein &

Logan, 2003). And these increased expectations and workloads are not typically remunerated.

Thus, in this final stream of the dominant discourse, symbolic violence is primarily directed at those within the field of education—the educators and the administrators. Educators are victims of symbolic violence because they are tasked to do more with less and for less based on the false premise of providing greater access and equity to the less powerful. Administrators are victims of symbolic violence because they have accepted the market-driven premise that cybereducation will solve their financial woes and enable them to achieve a respected and credible position within the field of education.

Conclusion

University of Michigan President Emeritus, James J. Duderstadt, argued that the advent of virtual universities, or educational institutions with only online education, could be compared to the Nike Corporation. Sadly, we agree, although we employ the analogy quite differently. Duderstadt (1999) suggests

> Nike, a major supplier of athletic shoes in the United States and worldwide, does not manufacture the shoes it markets. It has decided that its strength is in marketing and that it should outsource its manufacturing to those who can do it better and cheaper. In a sense, the virtual university similarly unbundles marketing and delivery. It works with the marketplace to understand needs, and then it outsources courses, curricula, and other educational services from established colleges and universities…and delivers them through the use of sophisticated information technology. (p. 13)

We suggest the analogy rests in the fact that Nike exploits oppressed workers in order to profit from their labor and to provide mass produced goods at a high price to consumers desperate to create a sense of belonging through brand image. Our contention is that educators are exploited when pushed to use online technologies to teach without remuneration for the extra work required, or be "demeaned as neo-luddites, reactionaries, or has-beens" (Brabazon, 2002, p. xii). Online classes are often cookie-cutter copies created by web-specialists and lack depth of spontaneous interactive reflection. Furthermore, learners recognize they need credentialing in order to be successful and, therefore, seek what they perceive to be the easiest path to achieve that goal.

The push for online platforms of learning represents an implicit incursion of corporate capital into the field of adult education that results in the exploitation of educators, the corporatization of education, and the expansion of the gap between privileged and disadvantaged learners. David Noble (2001) sounds a chilling warning about the automation of higher education, "…all too often in the past people had only belatedly realized the dimensions of the calamity that had befallen them, too late to act effectively in their own interest" (p. ix). Let adult educators take a lesson from *Alice's Adventures in Wonderland* (Carroll, 1865/1961) and be aware of both the reality and fantasy of cybereducation. We call for the field of adult education to not simply enact a "blind embrace of technology" (Davison, 2004, p. 86) but, rather, to act mindfully instead of mindlessly, so we can perhaps avoid falling deeper into the rabbit hole of online education.

References

Baptiste, I. (2001). Educating lone wolves: Pedagogical implications of human capital theory. *Adult Education Quarterly, 51*(3), 184-201.

Bates, A. W., & Poole, G. (2003). *Effective teaching with technology in higher education: Foundations for success*. San Francisco: Jossey-Bass

Benson, A., & Wright, E. (1999). Pedagogy and policy in the age of the wired professor. *Technological Horizons in Education, 27*(4), 60-62, 64, 66, 68.

Boshier, R., & Wilson, M. (1998). Panopticon variations: Surveillance and discipline in Web courses. In J. C. Kimmel (Ed.), *Proceedings of the 39th Annual Adult Education Research Conference* (pp. 43-48). College Station: Texas A&M University.

Boshier, R., Wilson, M., & Qayyum, A. (1999). Lifelong education and the World Wide Web: American hegemony or diverse utopia? *International Journal of Lifelong Education, 18*(4), 275-285.

Bourdieu, P. (1977). *Outline of a theory of practice* (R. Nice, Trans.). Cambridge: Cambridge University Press.

Bourdieu, P. (1990). *The logic of practice* (R. Nice, Trans.). Stanford: Stanford University Press.

Bourdieu, P. (1998). *On television and journalism*. London: Pluto Press.

Brabazon, T. (2002). *Digital hemlock: Internet education and the poisoning of teaching*. Sydney, Australia: University of New South Wales Press.

Carney-Crompton, S., & Tan, J. (2002). Support systems, psychological functioning, and academic performance of nontraditional female students. *Adult Education Quarterly, 52*(2), 140-154.

Carroll, L. (1865/1961). *Alice's adventures in Wonderland*. London: Folio Society.

Cahoon, B. (1998). Teaching and learning Internet skills. *New Directions for Adult and Continuing Education*, *78*, 5-13.

Chang, W. W. (2004). A cross-cultural case study of a multinational training program in the United States and Taiwan. *Adult Education Quarterly, 54*(3), 174-192.

Conceição, S. (2002). The sociocultural implications of learning and teaching in cyberspace. *New Directions for Adult and Continuing Education, 96*, 37-45.

David, M. (2003). The politics of communication: Information technology, local knowledge and social exclusion. *Telematics and informatics, 20,* 235-253.

Davison, A. (2004). Reinhabiting technology: Ends in means and the practice of place. *Technology in Society, 26*(1), 85-97.

Day, M. (2004). Enhancing learning communities in cyberspace. In M. W. Galbraith (Ed.), *Adult learning methods: A guide for effective instruction* (pp. 425-450). Malabar, FL: Krieger.

Delbanco, A. (2005). Colleges: An endangered species? *The New York Review of Books, 52*(4) 18-20.

Duderstadt, J. J. (1999). Can colleges and universities survive in the information age? In R. N. Katz & Associates (Eds.), *Dancing with the devil: Information technology and the new competition in higher education*, p. 1-26. San Francisco: Jossey-Bass Publishers.

Duderstadt, J. J., Atkins, D. E., & Houweling, D. V. (2002). *Higher education in the digital age: Technology issues and strategies for American colleges and universities*. Westport, CT: Praeger.

Fein, A. D., & Logan, M. C. (2003). Preparing instructors for online instruction. *New Directions for Adult and Continuing Education, 100*, 45-55.

Fenwick, T. J. (2004). [Review of the book *Adult learning and technology in working-class life*]. *Adult*

Education Quarterly, 54(4), 332-334.

Gibson, C. C. (2000). Distance education for lifelong learning. In A. L. Wilson & E. R. Hayes (Eds.), *Handbook of Adult and Continuing Education* (pp. 423-437). San Francisco: Jossey-Bass.

Gray, D. E. (1999). The Internet in lifelong learning: Liberation or alienation? *International Journal of Lifelong Education, 18*(2), 119-126.

Grenfell, M., & James, D. (2004). Change *in* the field—chang*ing* the field: Bourdieu and the methodological practice of educational research. *British Journal of Sociology, 25*(4), 507-523.

Grenfell, M., & James, D. (1998). *Bourdieu and education*. London: Falmer Press.

Hanna, D., Glowacki-Dudka, M., & Conceição-Runlee, S. (2000). *147 practical tips for teaching online groups: Essentials of web-based education.* Madison, WI: Atwood.

Huang, H. (2002). Toward constructivism for adult learners in online learning environments. *British Journal of Educational Technology, 33*(1), 27-37.

Hodge, E. M., Tucker, S. Y., & Williams, S. (2004). Teaching and learning: Student perceptions of course delivery methods. *New Horizons in Adult Education, 18*(1), 4-15.

Huber, H. E., & Lowry, J. C. (2003). Meeting the needs of consumers: Lessons from postsecondary environments. *New Directions for Adult and Continuing Education, 100*, 79-88.

Jarvis, P. (2000). The corporate university. In J. Field & M. Leicester (Eds.), *Lifelong learning: Education across the lifespan* (pp. 43-55). London: Routledge.

Katz, R. N. (1999). *Dancing with the devil: Information technology and the new competition in higher education*. San Francisco: Jossey-Bass.

Kotrlik, J. W., & Redmann, D. H. (2005). Extent of technology integration in instruction by adult basic education teachers. *Adult Education Quarterly, 55*(3), 200-219.

Lingard, B., & Christie, P. (2003). Leading theory: Bourdieu and the field of educational leadership. An introduction and overview to this special issue. *International Journal of Leadership in Education, 6*(4), 317-333.

Madaus, G. F., & Horn, C. (2000). Testing technology: The need for oversight. In A. Filer (Ed.), *Assessment: Social practice and social product* (pp. 47-66). London: RoutledgeFalmer.

McKie, J. (2000). Ageing with technology: Adult viability in a technological world. In J. Field & M. Leicester (Eds.), *Lifelong learning: Education across the lifespan* (pp. 276-288). London: Routledge.

Menchik, D. A. (2004). Placing cybereducation in the UK classroom. *British Journal of Sociology, 25*(2), 193-213.

Miller, N. (2001). The politics of access and communication: Using distance learning technologies. In R. M. Cervero & A. L. Wilson (Eds.), *Power in practice: Adult education and the struggle for knowledge and power in society* (pp. 187-205). San Francisco: Jossey-Bass.

Miller, N., Leung, L., & Kennedy, H. (1997). Challenging boundaries in adult and higher education through technological innovation. In P. Armstrong, N. Miller, & M. Zukas (Eds.), Crossing borders, breaking boundaries: Research in the education of adults. *Proceedings of the 27th Annual SCUTREA Conference* (pp. 333-337). London: Standing Conference of University Teachers and Researchers in the Education of Adults (SCUTREA).

Morrow, R. A., & Torres, C. A. (1995). *Social theory and education: A critique of theories of social and cultural reproduction*. Albany, NY: SUNY Press.

Naidoo, R. (2004). Fields and institutional strategy: Bourdieu on the relationship between higher education, inequality and society. *British Journal of Sociology, 25*(4), 457-471.

Nakhaie, R., & Pike, R. M. (1998). Social origins, social statuses and home computer access and use. *Canadian Journal of Sociology, 23,* 427-450.

Negroponte, N. (1995). *Being digital*. London: Hodder & Stoughton.

Noble, D. F. (2001). *Digital diploma mills: The automation of higher education.* New York: Monthly Review Press.

Reay, D. (2004). 'It's all becoming a habitus': Beyond the habitual use of habitus in educational research. *British Journal of Sociology, 25*(4), 431-444.

Richardson, J., & King, E. (1998). Adult students in higher education: Burden or boon? *Journal of Higher Education, 69*, 65-88.

Russell, M. (1999). Online learning communities: Implications for adult learning. *Adult Learning, 10*(4), 28-31.

Sanders, W. B. (2001). *Creating learning-centered courses for the World Wide Web.* Needham Heights, MA: Allyn & Bacon.

Schrum, L. (1998). On-line education: A study of emerging pedagogy. *New Directions for Adult and Continuing Education, 78*, 53-62.

Sissel, P. A., Hansman, C. A., & Kasworm, C. E. (2001). The politics of neglect: Adult learners in higher education. *New Directions for Adult and Continuing Education, 91*, 17-27.

Sterne, J. (2003). Bourdieu, technique, and technology. *Cultural Studies, 17*(3/4), 367-389.

Topper, K. (2001). Not so trifling nuances: Pierre Bourdieu, symbolic violence, and the perversions of democracy. *Constellations, 8*(1), 30-56.

Turner, J. H. (1991). *The structure of sociological theory* (5th ed.). Belmont, CA: Wadsworth.

Waits, T., Lewis, L., & Greene, B. (2003). *Distance education at degree-granting postsecondary institutions: 2000-2001*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Walter, P. (2001). The restructuring of academia. *Adult Education Quarterly, 52*(1), 70-77.

Wang, H. (2005). A qualitative exploration of the social interaction in an online learning community. *International Journal of Technology in Teaching and Learning, 1*(2), 79-88.

Wolfreys, J. (2000). In perspective: Pierre Bourdieu. *International Socialism Journal,* 87, 1-16. Retrieved February 9, 2005, from http://pubs.socialistreviewindex.org.uk/isj87/wolfreys.htm

Yoon, S. W. (2003). In search of meaningful online learning experiences. *New Directions for Adult and Continuing Education, 100*, 19-30.

Ziegahn, L. (2005). Critical reflection on cultural difference in the computer conference. *Adult Education Quarterly, 56*(1), 39-64.