

The Possibilities of Transformation: Critical Research and Peter McLaren

Brad J. Porfilio, Ph.D.*

The Richard Stockton College of New Jersey

Abstract

The purpose of this paper is to unveil how Peter McLaren's revolutionary brand of pedagogy, multiculturalism, and research colored my two-year qualitative research study, which unearthed twenty White female future teachers' experiences and perceptions in relationship to computing technology and male-centered computing culture. His ideas positioned me to see beyond technocentric discourses generated by political, economic, and education leaders, as I was enabled to pinpoint how larger social relations of power perpetuate computing technology as a "boy's toy," designed to amass wealth and power for elite White male corporate leaders at the expense of the vast majority of global citizens. His scholarship also proved to be a source courage and inspiration. It prodded me to believe my research project has the potency to bludgeon unjust practices that perpetuate women's and girls' technological reticence, fuel the corporate takeover of teacher education, and perpetuate Western imperialism, environmental degradation, and hopelessness across the globe. Not coincidentally, the critical study served as an educative space for several pre-service teachers. They uncovered how several constitutive forces merge with unjust practices to create women's and girls' computing reticence as well as perpetuate women's marginalization in schools, the business world, and in other social contexts. They appear to possess the critical mindset and courage to create classroom practices bent on forging an egalitarian society.

* Brad J. Porfilio received his PhD. (2005) in the Social and Cultural Foundations of Education at the University of Buffalo. He has published several academic articles, including recent works appearing in *Journal for Critical Education Policy Studies*, *Networks: An On-line Journal for Teacher Research* and the *Electronic Magazine of Multicultural Education*. His research interests include education and privatization, action research, globalization and gender and technology.

The Possibilities of Transformation: Critical Research and Peter McLaren

For the past decade, Peter McLaren has profoundly influenced my development as a teacher educator, learner, scholar and citizen. His work has pushed me to examine the social world through many intellectual domains, such as critical theory, critical pedagogy, critical multiculturalism, critical ethnography, and critical media studies, for the purpose of excavating systemic inequalities that create hate, violence, and oppression across the globe. Most recently, his scholarship has deepened my understanding of how neoliberalism, deindustrialization, and economic globalization have led to the ascendancy of market imperatives over democratic impulses in all facets of social life. Particularly, within my own lived world, I have turned to Peter's scholarship to untangle how the commercial ethos at my current institution has influenced my teaching, relationships with students and colleagues, and vision towards the functions of schooling. His bold critique of market-driven educational approaches to teaching and learning gives me the courage to voice my opposition and resistance to this reactionary trend and the role it plays in gutting the progressive and democratic elements within public institutions (Porfilio & Yu, 2006).

In my classroom, I employ Peter's revolutionary scholarship to explore with my students the "conditions making possible the growth of unprecedented globalization, U.S. imperial domination, the spread of militarism, and deepening economic crises" (McLaren, 2005, p. x). My students also examine *Life in Schools* (2006) for the purposes of understanding how unjust social, cultural and economic practices ensure inner-city, marginalized students are set up to fail in schools and society, to become familiar with critical education theory, and to recognize the immediacy to contest and destroy Whiteness (McLaren, 2003). They also gain inspiration and hope through Peter's reconstituted, Marxist-inspired pedagogy. Unlike many critical educators on the Left, McLaren (2005, p.75) provides an alternative social vision for educators that moves "education reform past its log-jam of social amelioration into the untapped waters of social transformation." By reflecting upon McLaren's revolutionary project, future teachers are aware, often for the first time, of the urgency to ratchet a revolutionary agenda for their classrooms. They believe their pedagogical projects, along with similar educational practices engendered by schoolteachers across the globe, have the potency to subvert social relations of oppression as well as eliminate "economic exploitation, racism, sexism, and homophobia" (p.105).

Beyond the confines of the graduate seminar, Peter's theoretical insights surrounding the way racial, class, gender, and sexual forms of domination have historically developed and are perpetuated in today's society have positioned me, as a young scholar, to conduct research that joins the ongoing "process of critical world making, guided by the shadowed outline of a dream of a world less conditioned by misery, suffering of deceit" (Kincheloe & McLaren, 2000, p. 303). The purpose of this essay is to capture how McLaren's brand of *revolutionary multiculturalism* helped shape my two-year qualitative research study, which unearthed twenty White female pre-service teachers' beliefs and experiences surrounding computing technology and phallogocentric computing culture.^[1]

In the sections that follow, I will illustrate how harnessing McLaren's major ideals helped me see beyond technocentric discourses generated by politicians, business leaders, government officials, and school administrators, which position computing technology as an omnipotent artifact, allegedly having the power in and of itself to improve society as well as the power to wash away pervasive social ills, such as poverty, racism and sexism. By taking inventory of how "ideological inscriptions and multiply-organized discourses of desire" merge together with systemic barriers, I untangled how computing technology and culture functions to perpetuate "existing hegemonic arrangements" between the sexes (McLaren, 1995, p.104).

I will also provide several “snapshots” from the study, which consists of participants’ alternative narratives, to detail how the research project was linked to McLaren’s and several other critical scholars’ view of critical inquiry. According to Kincheloe and McLaren (2000, p.291), qualitative research is deemed “transformative” when it is “connected to an attempt to confront injustice of a particular society or public sphere within society.” With the globalization of capital “turning the world into a global toilet of toxic waste while adding legions to Marx’s reserve army of labor,” McLaren believes critical researchers must up their radical ante. To eliminate institutional forms of oppression, their lens must examine how social relationships and dominant ideologies are colored by unfettered capitalism (McLaren, 2005, p. 20).

In this vein, the study was, indeed, *political*; it served as an educative site for several of my participants and for me. Several future teachers left the study with a newfound understanding of how entrenched systemic barriers, gendered stereotypes, and political, cultural, and social processes surrounding technology perpetuate many women’s and girls’ computing reticence in the business world, schools, and the wider society, while concomitantly coming to a deeper understanding of how their own life is mediated by patriarchal structures of power. It is a mindset that will allow them to surreptitiously deconstruct how their own experiences as well as the experiences of women across the globe are structured by unjust social and economic practices. For me, the future teachers’ narratives made me more aware of the socio historical forces that breed sexism in today’s society. They still push me to reflect upon the unearned gendered privilege I garner by living in this unjust society, and remind me, that I must strive towards extinguishing systemic inequalities within my own social circles as well as formulate additional critical research projects that will serve as a springboard to tackle institutional forms of oppression against women and girls across the globe (Kincheloe & McLaren, 2000).

Computing Technology and Its Hegemonic Functions

Over the past decade, citizens across North America have been saturated by technocentric discourses in the wider society. The variety of texts construct new forms of technology as being inherently good for society (Bromley, 1995; Bromley, 1998). Bill Gates and other high-tech corporate leaders have (mis)informed the public by claiming the Internet is an omnipotent force. It is allegedly imbued with the power to “break down barriers between (and within) nations, opening up economies and democratizing societies” (as cited in Hunt 2004, p.1). Political leaders have also put forth romantic claims about computing technology. Five years ago, Al Gore suggested to his constituents that computer generated technology should be considered the “magic bullet,” the artifact that will finally ensure poor communities have the power to educationally and economically “compete with more fortunate kids” (Kellman, 2000). Likewise, the British Prime Minister Tony Blair has put forth similar false claims about the potency of computing technology, stating IT centers have the power to eliminate poverty in the “poorest sections” of Great Britain. He is implying, incorrectly, there is a necessary connection between poverty and ignorance (Henwood, Wyatt, Miller, & Senker, 2000).

By examining Peter’s work, we see the claims made by business and political leaders, namely that computing technology will eliminate social ills, ameliorate education, and bring prosperity across the globe, are specious. Information technologies are social artifacts that are affected by the social context of use. When they are “embedded heart and soul in the capitalist marketplace,” they can only exacerbate alienation for citizens across the globe (Rizvi, 2002).

At today’s historical juncture, computers serve as the linchpin of transnational capitalists’ desire to liquidate their organizations, social relations, and ideologies to the so-called Third World regions. The globalization of capital has led to the disappearance of “good jobs” in most “developed” nations, while at the same time, creating jobs that imperil many global citizens, in less “developed” countries, to toil in the midst of poverty, pollution, and hopelessness (Aguirre, 2001). As McLaren makes it clear, digitized

information systems have sped up the “circulation and production” of capital, which has concentrated more wealth and power in hands of transnational corporate giants. Computers are used by the global aristocracy “to expand the free market in the interest of quick profits, to increase global production, to raise the level of exports in the manufacturing sector, and to intensify competition among transnational corporations” (Rizvi, 2002).

Narrowing the focus to how computing technology has influenced women’s and girls’ social status, we find it has done little to improve the quality of their lives. Despite popular perception, high-tech jobs created by corporate leaders have not cushioned the blow of the loss of manufacturing in North America; rather, over the past decade, the high-tech sector has also been dealt a “death blow” by transnational capitalists fixated on reducing labor costs to yield more profits. During the 1990s, corporate leaders and government officials espoused that the computer would provide limitless economic opportunities for women. The “technological genie” proved to be fanciful (Scott-Dixon, 2004).

Corporate leaders instituted the processes of automation, integration and networking, which have resulted in the “massive erosion, deskilling and demeaning of work” (Millar, 1998). Sophisticated computer technologies generally functioned to eliminate or degrade jobs staffed by women, rather than providing well compensated work that is performed at home “or in the paperless office” (p.11). On another pernicious level, the Internet functions as a “breeding ground for the exploitation” of women and children (Pehar, 2003, p.174). Tech-savvy entrepreneurs have used cyberspace to propagate the globalized male-order bride industry, “extend the breadth and depth in pornographic communications and other sexually explicit activities,” and ensnare more and more impoverished women and children, particularly within sections of Asia, in the sex tourism business (Rajagopal and Bojin, 2004).

There is also a clear demarcation in relation to how women and men harness computers. In the West, women do get to use computers as much, if not more, than men; however, the way in which they use the technology, within most social contexts, gives them less power. Women generally use computers in “nonexpert” jobs, for the purpose of allowing the computer to get “its work done” (Bromley 2001, p.36). They are forced to “manipulate text, images, or information” for businesses controlled by men, rather than using the computer for their own ends (Weinstein 1998, p.94).

Outside the West, women are almost absent from traditionally male-dominated fields, such as science, mathematics and engineering. For instance, Akubue (2001) details how women in Third World countries are typically relegated to stereotypical feminine duties-household management, reproductive and nurturing, and food production. Dispossessed women and their children are also less likely to receive an education, but unfortunately are far more likely to live in poverty than their male counterparts. Specifically, when it comes to computing technology, the picture is very bleak for women and girls who live in so-called Third World societies. In developing nations, individual computer ownership is very uncommon. For instance, only 6% of the people in Ghana own computers, as compared with 78% in the United States (Irwin, 2000). Most of the people who own computers are men. Therefore, just as it is often the case with many other social and economic activities, women are generally playing either a nonexistent or passive role that blocks them from power when it comes to computing.

The Politics of Signification and Other Unjust Practices: Perpetuating Women’s Technological Reticence

As captured in the brief overview of computing technology and its hegemonic functions at today’s historical moment, computing technology is a key conduit harnessed by powerful social actors to garner more wealth, control territories, and reap power. It should not be viewed as an emancipatory device, which by itself, breeds symmetrical relations of power between the sexes across the

globe. However, women's computing relationship has the potential to be altered. We must reflect upon how larger social forces merge with systemic barriers to generate this unjust social practice. Echoing McLaren (1995, p. 111), we must also believe unjust practices can be subverted, even in a social framework predicated on the accumulation of wealth and power, provided we believe society is an "irreducible indeterminacy; the social field is always open" and we "explore its fissures, fault lines, gaps and silences."

To eliminate the gendered computing gap, it is imperative to deconstruct how women's technological subjugation is currently engendered in specific, micro-level social sites across the globe. It is also imperative to throw light on how various forms of signification, in several discursive fields, structure women's computing "difference." The debilitating discourses are often normalized and remain unchallenged by most social actors. The cloaking of how "difference" is inextricably linked to "social conditions of domination and subordination" propels relationships of domination over democratic, humane relationships, including asymmetrical computing relationships between the sexes (McLaren & Torres, 1999, p.54).

Male-Centered Gaming Culture

Over the past decade, a variety of new "teaching machines" have reinscribed the notion, to peoples across the globe, that technology and power are associated with maleness. Video and computer games have become one of the most persuasive forms of entertainment amongst boys and men (Cassell and Jenkins, 1998; Jenson, 1999; Margolis & Fisher, 2003; Agosto, 2004). The video game industry has witnessed its sales mushroom over the past five years. In 1999, it has been estimated that consumers purchased 7 billion dollars in video games (Huntemann, 2000). This figure seems quite pale compared to the 23 billion dollar of video game sales that transpired in 2003 (Slagle, 2005). The cadre of White, middle-class males who design these games came to realize young boys and men gravitate to spaces that are not fraught with the day-to-day uncertainties and anxieties that are all-pervasive in our physical and social lives (Sofia, 1998). One computer science student details clearly what attracts many disaffected boys and men to video or computer gaming (Margolis & Fisher, 2003):

I would go to the computer lab and started playing computer games...And this is how I found my social interaction over the computer, so it was a lot more comfortable for me than dealing with people in school...I had difficulty just approaching someone and talking to them...It would be easier for me to talk over a computer. (p.41)

Computer and video gaming is also appealing to many boys and men because of the presence of male-centered sexual fantasies, violence, and adventures. They are particularly attracted to many hyper-masculine characters, who use weapons, large muscles, and aggressiveness to attract women as well as to deflect any obstacles that prevent them in their quest for power and sexual conquest. On the other hand, through video and computer video games, girls and women learn that their identities are not valued in our society. Research has shown that best-selling video games rarely contain female characters. One study states they appear only 16% of the time (Douglas, Dragiewicz, Manzano, & McMullin, 2002). When women are represented, they generally are constructed as docile, sexualized creatures, characters with large-breasts, who are thin, scantily dressed figures, relying upon the aggressive men to rescue them (Millar, 1998; Jenson, 1999; Huntemann, 2000).

Since most girls and women either find these games offensive or find them meaningless, they tend not to play video games. The video "gaming gap" that exists between boys and men and girls and women has unfortunately operated to perpetuate computing being associated with the masculine. The constant play that boys have with computer and video games leads them to view computing, at an early age, as a fun activity. Consequently, boys are much more likely to tinker with their "toy" to determine

how it works, whereas girls tend to view computers as a tool to complete a task, such as check email or type school assignments (Bryson & de Castell, 1998; Jenson & Brushwood Rose, 2003).

Some researchers have gone so far to state that boys' gaming conflates with their computer tinkering to lead parents, teachers, and students to believe that boys have a "magnetic attraction" to the masculine machine (Margolis and Fisher, 2003). This gendered stereotype is a guiding force in how boys and men and girls and women are positioned vis-à-vis computing technology. This is witnessed in many households across North America; it occurs when adult caregivers unconsciously assume boys have a penchant for playing with computers. They act on this gendered stereotype by placing computers in male-centered spaces, such as the boys' bedroom (Weninger, 1998; Margolis and Fisher, 2003). This practice often ensures that boys will develop an early comfortableness and attachment to computing technology, while concomitantly ensuring that girls are on the computer "sidelines" during their childhood and adolescent years (Jenson, 1999; Littleton & Hoyles, 2002; Cooper & Weaver, 2003; Margolis & Fisher, 2003).

Not only have video games configured computing as being associated with the masculine, but advertisements designed to sell gaming products and computers have represented gender in very conservative ways, locating the White male as the dominant computer user (Millar, 1998; Weinstein, 1998; Buchanan, 2000; Eubanks, 2000; Huntemann, 2000; Gorski & Clark, 2002). For instance, Weinstein analyzed advertisements in two magazines, *PC Home Journal* and *Amiga World* and found the images employed by White male advertisers catered to a White male audience. Men were depicted as actively engaged with computing technology, manipulating it for their own pleasure. Whereas women were totally left out of the computing picture, just as they are in most activities or occupations that confer wealth and status in the wider society. On the rare occasion that feminine images appear, they are design to position women as passive computer users, individuals who are incapable of using computers with skill or power.

The power of these images, within media culture, has prodded many women to completely resist using computers or partaking in computer culture. Some feel that the general masculine love for computer equipment is unhealthy for all members in the wider society, while others take exception to how women and children are demonized on the "Internet's Superhighway" through advertisements, movies, and music videos (Clerc, 1996; Sofia, 1998; Gorski & Clark, 2002). A study conducted by the American Association of University of Women (2000) suggests many teenage girls often deliberately resist developing a better understanding of computers because they believe boys' attachment to technology is a "waste of intelligence," a social activity that does little to improve society, but does much to create an outlet where boys have full-reign to assert male-centered qualities of violence, aggression and control.

Gender, Computers and Education

Over the past thirty years, women's computing experiences within the circles of education have been overwhelmingly negative. Computing now operates alongside many other social practices within schools to produce docile feminine bodies (Barrtky, 1990 as cited in Stepulevage, 2001). The collective magnitude of these practices ultimately ensures that elite males control schools and the wider society. Several studies illustrate that the dominant discourse in the wider society-the one that naturalizes "technological expertise" as being a male domain-surreptitiously seeps its way into schools to structure asymmetrical social relations between the sexes (Apple and Jungck, 1998; Bryson & de Castell, 1998; Huber and Schofield, 1998; Clegg, 2001; Stepulevage, 2001; Jenson & Brushwood Rose, 2003; Jenson, de Castell, & Bryson, 2003).

For instance, Bryson and de Castell (1998), in a two-year ethnographic study of elementary schools in British Columbia, show, at the micro-level, how "technical patriarchy" became inscribed in these schools after various school districts decided to usher computers into classrooms to ensure that

elementary students would begin to: develop technological skills that prepare them to work in our information-saturated economy, develop academic skills to pass high-stakes examinations, and develop intellectual skills to boost reading proficiency. The normalness of males being computer experts became ingrained within the schools as soon as the district constructed the technological curriculum. Men overwhelmingly were the powerbrokers in the district, which allowed their voices to color the district's technological-educational blueprint of: what should students learn, what educational standards must be met, and how much technology and resources are needed to meet these goals. Unfortunately, their technological hegemony only increased when the program was unpacked within the schools. Male teachers and technical employees were continually relied upon to repair computers within the computer labs, while a group of male administrators were called upon to tout the alleged benefits of this "progressive" program to the general public.

In the end, women found it arduous to work within this phallogocentric environment. Many female teachers felt very alienated or incapable of gaining access to the cultural capitals that would allow them to be perceived as innovative technological pedagogues by their students, individuals who could guide them to become "computer experts." Partially their perception of technological "incompetence" stems from the fact that their university education as well as their teacher education failed to provide them with the needed skills to use technology within K-12 settings. Yet, equally important, their negative perception stems from being technologically subjugated by males who used the technology as an opportunity to control women's labor. They left female educators without the basic resources to keep the computer system up and running, positioned women so they lacked the needed skills to fix the technology, and kept women from playing an active role throughout this technological experiment.

Unfortunately, the technological "patriarchy" did not end its reach with the female teachers; instead, the masculine expertise over computing spilled over into the classroom. Many male administrators and female teachers allowed their perception of computing as a male domain to color their behavior with students. This possibly caused another generation of youth to internalize the asymmetrical nature of computing within schools and society. For instance, both male and female teachers constructed a different pedagogy for boys and girls; the boys learned how to understand the logic behind technological programming, whereas the girls were passively told to what to do. In fact, their teachers did not worry whether the girls gained an understanding of how or why technology works (Bryson, p. 560).

If we change the trajectory from Canada to the United States and from the elementary school to the middle school, we find that computing continues to be a male domain. Apple and Jungck (1998) went inside several classrooms and found that female teachers lacked the technological knowledge and skills to implement a computer-based curriculum, an instructional design aimed to produce computer literate youth. However, their perceived technological "incompetence" did not spur these women to reject the district's computer curriculum because the curriculum was handed to them "on a cart," an instructional design consisting of ditto sheets, videos, and cassettes that any person without technological skill could implement in the classroom (p.137).

Although some of the teachers were cognizant this form of curriculum denigrated their professional autonomy, served to promulgate the ideological imperatives set forth by businesses and governmental leaders, and blocked students from gaining a rich understanding of computers and male-centered computing culture, they, paradoxically, implemented it into the classroom. The curriculum provided them with extra time needed to "survive" the day-to-day rigors associated with contemporary schooling. The teachers used the two-week instructional unit to grade tests and paperwork that are now part of the growing intensification associated with the back-to-basics movement. In today's schools, this translates into teachers having a lack of time to have coffee or time to go to the bathroom, having

overcrowded classrooms, and having an often unbearable pressure to prepare students for taking high stakes examinations (p.134).

Looking beyond classrooms in North America, Stepulevage (2001) examines an array of research studies in Denmark, England, the Netherlands and Austria to determine how gender-technology relations are constructed within K-12 classrooms. In these various contexts, we find, again, that computing is considered a masculine domain, where female and male teachers allow boys to use the classroom as a breeding ground for demonstrating their expertise with technology (Stepulevage p. 328). However, unlike the studies presented above, we find that most women and girls *do* possess a similar computing expertise as their masculine counterparts. They feel compelled to acquire skills that will make them technologically literate because they believe that it is essential to possess these skills to amass wealth and power in our Information Society. Yet, these girls also feel compelled to keep their computer competency well hidden. If it is detected that they possess this attribute, they will face social reprisals from their teachers and peers for not embodying the “perfect image” of femaleness—that is, the intellectually submissive schoolgirl. On the other hand, if they play a submissive role vis-à-vis technology in the classroom, they will be positioned as “nice” and “good” in their inextricable web of social relationships within schools and the wider society, gaining social clout from their peers and teachers in the process (p.330).

Within the context of teacher education, female pre-service teachers’ computing experiences have been overwhelming negative (Luther, 1997; Margerum-Leys & Marx, 1999). Teacher education programs have historically failed to prepare teachers to use computer-generated technology to improve their own lives, let alone prepare them to use this technology to help students improve their understanding of various people who live within our interconnected world. As teacher education programs become infiltrated by corporate logics and practices, female pre-service teachers are even less likely to be provided with the instructional support and critical coursework needed to understand: what is fueling the “digital divides” in schools and society, how schoolteachers can use computing technology as a communication device to eliminate the West and “Other” binary that fuels hatred, violence, and poverty across the globe, or how to implement classroom practices that help our youths understand the social nature of computing technology and its corresponding male-centered culture.

It would be incorrect, however, to paint a solely deterministic portrait of women’s computing relationship. Not all women or girls find cyberspace alienating nor do they manipulate technology to reproduce hierarchal relations of oppression. Despite the various unjust practices and systemic forces, as detailed above, that marginalize many women and girls in relationship to technology, some women and girls have gained a sense of power from cyberspace and have employed the technology to remove unfair social, economic, and cultural practices. Young women are turning to the Internet to learn what causes institutional forms of inequalities in their own social world, to provide support to their female peers who are grappling within oppressive formations, such as racism, sexism, and poverty and to find role models who have the courage to confront oppressive practices that harm people across the globe. For example, *Teen Voices* is an online magazine and website that gives young women an outlet to share stories, produce artwork, and write original essays about issues that challenge them. In a recent issue of the magazine, young women have challenged “the mainstream media’s harmful images of girls and women by providing an intelligent alternative” (www.teenvoices.com). There are also women who gain power in their lives and confront various forms of injustices by harnessing technology. Their computer network use has ranged “from mailing lists focused on women’s issues, to coordinating of statewide lobbying efforts, to academic conference held online in order to include many participants lacking money or time to attend in person” (Bromley, 1995, p.32).

Emancipatory Insights: The Influence of Critical Research

Clearly, McLaren's scholarship provided the impetus to help me think beyond technocentric discourses generated by economic, political and educational leaders that give superhuman, ameliorative potency to computers. I was equipped to unpack the macro-level forces that merge with unjust micro-level processes to fuel the gendered computing gap in today's society as well as perpetuate computing technology as a draconian instrument used to empower elite White men at the expense of the vast majority of global citizens. Additionally, Peter's ideas provided the critical vision that anchored my two-year qualitative research study with twenty White female pre-service teachers. The *raison d'être* of this project was political, designed to excavate systemic inequalities that perpetuate institutional forms of oppression. By brining pre-service teachers' voices to center of discussion, I was able to evaluate whether teacher education programs are preparing future teachers to have the critical courage and confidence to reconfigure the role computers play in the Western World, from being a tool used to empower elite White men that control women and children at a "distance" to being a tool that empowers people across the globe for the purpose of forging a society predicated on justice, democracy, and equality.

Although the vast majority of the participants' stories suggest the infiltration of market-driven programs and practices across the teacher education spectrum has thwarted future teachers from garnering the knowledge, insight, and confidence to generate pedagogical projects that will retool computing technology and its relationship to society, the study itself functioned as a reflexive space for my participants. The women-to-women talk, one-on-one interviews, and informal conversations, which took place for the course of one year, functioned as an educative space, where several future teachers uncovered the previously "covered" (Kincheloe, 2006); they politicized the sociopolitical processes and institutional practices that structure asymmetrical computing relationship between the sexes, recognized how the hegemonic, commercialized function of computing technology shaped their own lived experiences at home, work, and at teachers' college, and generated pedagogical visions that have the potency to guide our youth to engage in the same interrogation of the world. For example, one of my participants, "Barbara" details how the most prevailing computing practices in the current social context are inextricably tied to amassing wealth and power for large-scale, transnational corporate giants. Barbara's comments reveal she is quite aware the trajectory of computing has taken a turn for the worse in today's society. She states:

B.P.: Has your computing use changed since 1989?

Barbara: Oh definitely. The culture has changed a lot, too. Then, the Internet was all education sites and .org sites. Actually, I much preferred it back then. I really don't like the rise in the .com stuff. I think it has cluttered the Internet with a lot of unnecessary stuff. I think I trusted the information back then, more then I do now. Before the tone was very much about sharing things, sharing information, sharing ideas, and sharing thoughts. You don't hear about shareware anymore, everything's become commercialized. I try to use it as a tool. My family accuses me as being a Ludditte.

Barbara recognizes the nature of the Internet has changed dramatically since she first used computers to complete a distance education course at the University of Waterloo. She postulates, correctly, that the Internet "was all education sites and .org sites during the late 1980s" (Thomas & Wyatt, 2000). She has witnessed how the "tone" of the Internet has changed dramatically over the past 15 years. Indeed, the tremendous commercialized growth of the Internet did not occur until 1993, when firms were given the power to access the World Wide Web via a graphical user interface. Many corporations soon "saw the advantages of having an 'online brochure,' which could advertise their goods and service around the

world at a low cost” (Thomas & Wyatt, 2000, p. 21). As demonstrated above, computers now serve as the linchpin, for transnational capitalists, to propagate an insatiable consumer culture across the globe. According to Barbara, this means the Internet is filled “with a lot of unnecessary stuff,” and it is less about “sharing things, sharing information, and sharing thoughts.”

In fact, it is estimated by the year 2007 “consumers will account for 60 percent of all Internet traffic generated” (Sarikakis, 2004). The Net functions less for educative purposes in today’s society compared to when Barbara found computing “really exciting.” She used computers in the late 1980s as a gateway to garner more education before her children “started public school.” Through her children’s eyes, Barbara details the powerful role the “virtual class” plays in structuring computer use today. She states:

My house is filled with books. I love books and value books, reading books are always part of our bedtime routine and if they wanted my attention they (her children) knew to come to me with a book and I would get it and I would tell stories and we would read. I always made lots of opportunities for it and we had some stories he loved and I read them over and over again. He had a great sense of humor and was fun. He is now seventeen and he does not pick up a book for enjoyment at all. He reads, but reads what he finds on the computer when he surfs the Internet. So he finds ways to obtain certain games that he plays or to find music or whatever... So I have some apprehension on what is the future for that generation that has become so interested in it (commercial culture on the Internet). It is geared to playing games and the games aren’t educational anymore. They are Grand Theft Auto and war games things. That’s why I am disappointed in that’s how it evolved. The Internet has really lost its opportunity. It is warped by commercial things and by incredibly violent games.

Barbara reveals the Internet serves as a conduit to the world of video gaming, popular music icons, and sports figures for many of today’s border youth across the globe. Her son, as many adolescent boys, appears to be particularly attracted to the computing game software developed by a cadre of disaffected White men, who create virtual texts that are inline with many boys’ and men’s interests and world visions. Most computer gaming software is colored with typical masculine visions of violence, sex, and power (Cooper & Weaver, 2003). Barbara is quite worried that the commercialized culture “is not educational,” as her son is more interested in consuming cultural texts produced by corporate conglomerates than “picking up a book for enjoyment.” Although her family has labeled her as a ‘Ludditie,’ believing she is overly critical about the role computing technology plays in today’s society. It appears the label is not justified. Concerned citizens and educators must recognize how commercialized computing culture shapes the hearts and minds of our children. Barbara seems to possess this critical insight; she recognizes how the world of computing is implicated in spawning racialized, sexist, and violent portraits of visible minorities and women, while simultaneously, sanctifying violence and war, mainly for the purposes of generating handsome profits for large-scale corporations and blocking North Americans from seeing the deleterious effects emanating from neo-liberalism, the globalization of capital, and North America’s current war on “terror” (McLaren, 2006, p. 9).

Four future teachers’ narratives also speak to how many discursive systems function to normalize computing technology with the masculine. They were aware of how large-scale corporations, directed by mainly White men, configure cultural texts and language systems that associate computing with the masculine. Several participants detail how computer-generated advertisements reinscribe computing technology with the masculine.

B.P.: You said computing is geared towards men and boys. How so?

Annie: You know in the job market, when you see advertisements, for men and women, usually women go into the caring fields like teaching, nursing whatever. The men go into engineering, technology. So, theirs' is more of a logical mentality and ours is more caring.

B.P.: So what type of ads, can you give me an example of an ad?

Annie: Oh, there was one for DeVry which is one of the colleges in Canada and they do a lot of information technology. They have a guy busily working on a computer and then at the end the girl smiles and says, "for more information you can call our number." So you can see men in roles where they are using information technology versus women, who are more the assistant selling the product instead of using the product. In the paper, you usually hear about business and there's usually a man involved in it, there's usually a man involved in IT. It's probably the truth that there's more men in it, so when there's a story, it's usually about a man. I'm just trying to think of commercials or magazines off hand. It's usually flipping through *the Globe and Mail*; it's usually men that are the focus of the article.

B.P.: You stated (in the focus group) society perpetuates computing as a masculine activity. Can you tell me how this happens?

Betty: Well, I mean the richest person in the United States is Bill Gates, a man who is linked with technology. And he's is the one you hear about in the media all of the time, and it's extremely important for our female children to look to women role models and take on that role. I think the media should show the real fact that women take apart and build computers everyday or are expert programmers.

The participants' narratives indicate they do recognize large-scale corporate giants perpetuate computing as an activity socially appropriate for men. Annie notes how media giants leave women out of advertisements, which are designed to sell technological products or promote computer-oriented schooling. When women happen to be located in these forms of computing ads, they are positioned to serve as docile commodities, "smiling" in front of the camera for the purpose of alluring potential customers to fulfill their wants and desires through the world of computing. She also spots men in the center of the technological spotlight, when sifting through newspaper articles that focus on IT or business culture. Newspapers, like Toronto's *Globe and Mail*, perpetuate computing as a male-domain by highlighting how male business leaders harness technology to reap economic windfalls. Similarly, Betty documents how media outlets continue to link computing with the economic success of large-scale capitalists like Bill Gates. Women are, again, absent from various cultural texts, which serves to sanctify men are the social actors who have the ability to use computing technology for their own ends.

As Millar (1998, p.174) details, the dominant computing actors in today's society, such as Bill Gates and his techno-followers, engender cultural texts that have a great impact on cementing computing as a male-domain. The digital discourse of computing technology has positioned men as "masculine deities," individuals who will lead the globe in an expansion of wealth and power via the use of computing technologies. Not only have digitized discourses functioned to dupe the public into believing computing technology ushers positive social change merely by its adaptation in various social contexts of its use, but also have sent a direct message that hypermacho men of the digitized world are the only social actors capable of developing technology to "improve" the world (Millar, 1998).

Outside of these cultural texts, it appears corporate leaders are telling the public a technological lie. As Betty notes, many women are in fact taking "apart and building computers everyday or are expert

programmers.” There are also many women, who are using computing technology to truly improve the nature of the world, through their own computing use, instead of using computers as “masculine deities” who have used the technology to layoff or permanently jettison workers, institutionalize sweatshop labor across the globe, and debase various cultures by glorifying Western beliefs and practices, such as individual communication over face-to face interaction, embracement of commercialized cultural icons and products, and the myth of progressive development in all social contexts.

These women also reflected upon what larger forces and unjust practices reproduce the gendered computing divide at work, in elementary classrooms, and at teachers’ college. Here Sandy details what factors positioned a classroom teacher with whom she worked, from using technology in the classroom. She states:

B.P.: Do you think this teacher could incorporate technology in the classroom? Could she create meaningful lessons around technology in her classroom?

Sandy: I think she could. Mind you, everyone’s different and she’s been teaching for a long time, but I think she’s tired and she’s the first to admit it. So I think bringing ideas is just not an option for her at this point of the year. I’m just saying for her right now, whatever is getting her through the day is the idea. This is her lesson on coins; there’s no relating it to the real world. I think there’s always ways you can relate the lesson and bring in other information and present things and always have something new to say.

B.P.: If you asked her, do you think she would think she is a great teacher?

Sandy: I don’t think she would say she was a great teacher. She would say she does the best with what she has, which could be very well true. And I think she would also say she needs a break. I think she would be the first to admit that she needs a break. I also think that it’s a school with just not a lot of support. They don’t have a lot of money, the kids don’t have a lot of money, there’s not a lot of help at home, there’s not involved parents, which I think when you have kids that are having problems, you need help at home because there’s only so much you can do for them.

Sandy’s narration reveals an all-too familiar portrait of how female classroom teachers are positioned not to take action to eradicate the gendered computing gulf in their classrooms. Sandy notes how this teacher has not been given the instructional support, given the financial resources, or possesses the cultural capitals to create more democratic computing relationships inside and outside of her classroom. This positions her to focus on the immediate future, as she embodies a teaching philosophy of doing things that will get “her through the day.” Consequently, she rarely develops student-centered lessons to push youths to develop critical thinking skills, let alone honing curricula to curtail the computing gulf within and outside of her classroom. She had three computers in the classroom, but Sandy “never saw a kid on one” during the 18 months she volunteered at the school. The computers were only used to help the Ontario government collect standardized, student assessment measures, as this teacher showed Sandy how to enter student’s grades on the computer.

Many classroom teachers face a similar uphill struggle to incorporate technology in their classrooms. Government officials have positioned them to do more with less, as they have created an environment where commercial imperatives are structuring life within classrooms. This is a move that is destroying “much of the quality of public sector education” (McLaren, 2006, p. 39).

According to Apple & Jungck (1998), the corporate ethos not only operates as a means to control the labor of female teachers, but also functions to discipline the public to solve problems through the

market. For example, computer-driven standardized testing is one key educational practice, which brings commercial logics into schooling, provides a market to business leaders, and disciplines teachers to perceive themselves as workers rather than intellectuals. As McLaren & other critical scholars show, neo-liberal educational practices have ushered a growing intensification of teaching (Lissovoy & McLaren, 2003; Hill 2004; Saltman, 2004; McLaren, 2006). Teachers are often overwhelmed due to the vast array of tasks and contradictory demands played upon them by government officials and business leaders and the general public, such as grading standardized forms of assessment, entering assessment data on to computers, and meeting the various, often conflicting, intellectual, spiritual, and emotional needs of students in classrooms, spaces that frequently resemble prisons, corporations and shopping malls than institutions of learning. Therefore, these social forces have positioned many in-service teachers to lack the ambition, courage, and critical mindset to eliminate the gendered computing gulf plaguing our society or to create transformative classroom practices, which have the potency to help our youths understand what causes oppression in schools and society.

The various social forces and unjust practices that have braided together to position teachers not to use computing technology are embodied in the participants' quintessential story of computing use in Ontario classrooms. Most participants, such as Sandy, made it quite evident computers "were merely collecting dust" in classrooms. It is the same story documented by many researchers, who have attempted to untangle what social forces and unjust practices structure computing technology to be (mis) (under) (not) used in classrooms (Bromley, 1995; Bryson and de Castell, 1998; Jenson, 1999; Cuban, 2001). Arguably, if classroom teachers fail to implement computing technology to guide students to interrogate the unjust foundations of our society, the gendered computing gap, amongst a whole host of other unjust social practices, will be perpetuated. Just as the current generation of young women, our next generation of women will be positioned as "incompetent" in relation to computing technology and male-centered computing culture.

The project itself also nudged several participants to examine how larger social forces, beyond their own control, structure their experiences as women. For example, they detailed how many men, in positions of power, regulate their sexuality. They tell stories of government leaders, school officials and corporate leaders creating debilitating discourses and institutional practices that position women to regulate their bodies to fulfill men's needs and desires.

By reflecting collectively on how their lived experiences are mediated by systems of power, some participants also became compelled to reflect upon what can be done to dismantle institutional practices that marginalize many women.

Nicole: Like, we need to do something radical (to eliminate barriers that cause women's oppression). Go online or go on TV. Why can't we just converse like other people on television?

Betty: Because we are not allowed to.

Diane: Do you think men would let you have the airtime?

Although it is not clear whether these women went "online or on television" to detail what forces marginalize women in this unjust society, their alternative narratives do lend the possibility they will converse with other women about what is needed to create a democratic society. This ongoing reflexive process is needed, if they are to recognize how race, sex, and class domination work alongside gender domination in our schools and our society. It is with this form of insight that future teachers can guide youth to work towards creating a democratic society, a social landscape speckled with institutions that engender democratic practices and just power relationships amongst its citizenry.

On the other hand, the study helped me take inventory of how my gendered status has afforded me unearned privileges, within the realm of my privileged social world. I was not aware of the degree of power my White male body holds in structuring relationships. Within the context of the study, my White male medium build body, containing wired rim spectacles, animated to my participants that I possessed the skills and knowledge of society's stereotypical computing "geek." Although this is far from the case, as I do not play computing games, have not taken classes involving computing programs, and have not felt the need to control the world's resources via computing technology, this gendered stereotype, along with my status as a university professor, generated unbalanced power relationships within the context of the study.

For example, during one of the interview sessions with Annie, the topic of my subjectivity came to the surface. Annie told me that many female students were "afraid" to take part in the study because they thought I knew a great deal about technology. She told me the "girls shied away as soon as (I) mentioned the word technology." The students "were like well I don't really know much about that, so I don't think I want to participate in the study."

For those who possessed enough interest and courage to venture beyond the encounter with the computing "geek," they faced the prospect of sharing their technological "incompetence" with a male authority figure. Anne made it clear to me the extent of the power I hold over women by position as a university professor. She told me that it was difficult for some participants, especially the ones who do not have much information in relation to computers, to talk with me about this subject. She believes it is integral for female students to feel accepted by a male professor, stating "we are students and we always want you to perceive us as intelligent, right? "Some critical feminists' scholars have made the similar point: Female students look to university professors for acceptance, approval, and even for self-worth (Houston, 1996).

As the study unfolded, my gendered privilege became more evident. Several participants faced pressures of raising a family, completing coursework for six graduate classes, volunteering time in schools, but still managed to find time to talk with me. This made me question whether this research is merely an additional unpaid task that women are expected to do for men. I am left to wonder if future male teachers would have taken time out for this project, or would have demanded compensation for sharing their insights.

Taking Inventory and Looking Forward: Critical Teacher Education, Research, and a Democratic Future

Although the critical research project did not indicate teacher education programs are taking it upon themselves to ensure future teachers have a critical understanding of computer technology and its male-centered culture, the study showed critical research has the power to begin to eliminate unjust practices that fuel systemic forms of oppression across the globe. By upping the radical ante and employing McLaren's ideas surrounding neoliberalism, globalization of capital, and Western imperialism and revolutionary multiculturalism as a theoretical window, I was equipped to understand women's technological reticence, the commercialized, hegemonic function of computing technology, and the privileges associated with my gender class status. In juxtaposition, several of my participants developed the insights, confidence, and courage to employ technology to forge a more equalitarian social order. These women also became aware of how larger structures of power generate unjust practices that create systemic barriers in their lives as well as the lives of women across the globe. They appear to have desire and ability to "read the languages and discourses in which they find themselves in order to reinvent themselves" and, possibly, remap the world (McLaren, 2006, p.319).

Yet, the success stories of the critical research project should not overshadow the fact that neo-liberal policies and practices inhibited many future teachers from understanding the social nature of computing technology, understanding the unjust practices perpetuating women's and girl's computing reticence and recognizing the urgency to build a new social order inside and outside of their classrooms. As many transformative scholars have shown, neo-liberal policies and practices are smothering critical thought, coursework and pedagogical projects across the teacher education landscape (Hill, 2004; McLaren, Martin, Farahmandpur & Jaramillo, 2004; Hinchey & Cadiero-Kaplan, 2005; McLaren, 2006). Therefore, it is here where we must follow McLaren's clarion call to expose the reactionary trend of capitalism structuring all social life. Particularly, teacher educators must renew the social democratic and cultural transformative vision of schooling within and outside of their classrooms. They must guide schoolteachers to unpack how capitalist social relations are gutting the humane, progressive elements of schooling as well as breeding greed, hate and hostility across the globe (Saltman, 2004; McLaren 2005;). They must also launch critical research projects that are bent on exposing as well as subverting the social forces perpetuating hegemonic forms of schooling, which are igniting the fires of school hell in North America (Kincheloe, 2006, p. XV). Finally, concerned educators and scholars must turn to Peter for inspiration that collectively our pedagogical and research projects will parlay into emancipatory results. We must believe revolutionary forms of pedagogies and research will lead us beyond the current educational, economic and political malaise to inhabit a world predicated on democracy, social justice, and equity.

References

- Agosto, D. (2004). Girls and gaming: A summary of the research with implications for practice. *Teacher Librarian* 31(3), Retrieved February 23, 2004 from, http://www.teacherlibrarian.com/tlmag/v_31/v_31_3_feature.html
- Akubue, A. I. (2001). Gender disparity in Third World technological, social, and economic development. *The Journal of Technology Studies*, 27(2), Retrieved June 22, 2004 from, <http://scholar.lib.vt.edu/ejournals/JTS/Summer-Fall-2001/akubue.html>
- American Association of University Women Educational Foundation and American Association of University Women (April 2000). *Tech-savvy: Educating girls in the new computer age* (Parts 1-12). Retrieved April 2, 2002, from *Contemporary Women's Issues* database.
- American Association of University Women (1998). *Gender gaps: Where schools still fail our children*. New York: Avalon Publishing Group.
- Aguirre, L. C. (2001). The role of critical pedagogy in the globalization era and the aftermath of September 11, 2001. Interview with Peter McLaren. *Revista Electrónica de Investigación Educativa*, 3(2). Retrieved January 22, 2004, from <http://redie.ens.uabc.mx/vol3no2/contenido-coral.html>
- Apple M.W. & Jungck, S. (1998). "You don't have to be a teacher to teach this unit": Teaching technology and control in the classroom. In H. Bromley & M. Apple's (Eds.), *Education/technology/power: Educational computing as social practice* (pp. 133-154). Albany: SUNY Press.
- Bromley, H. (1995). *Engendering technology: The social practice of educational computing*. Unpublished Doctorial Dissertation. University of Wisconsin-Madison.
- Bromley, H. (1998). Introduction: data-driven democracy? social assessment of educational computing. In H. Bromley & M. Apple's (Eds.) *Education/technology/power: Educational computing as a social practice* (pp. 1-25). Albany: SUNY Press.
- Bromley, H. (2001). The Influence of context: Gender, power, and the use of computers in schools. In R. Muffoletto's (Ed.), *Educational and technology: Critical and reflective practices*. New York: Hampton Press.
- Bryson, M. & de Castell, S. (1998). New technologies and the cultural ecology of primary schooling: Imagining teachers as luddities in/deed. *Educational Policy* 12(5), 542-68.
- Cassell, J., & Jenkins, H. (1998). Chess for girls? Feminism and computer games. In J. Cassell & H. Jenkins (Eds.), *From Barbie to mortal kombat: Gender and computer games* (pp. 2-45). Cambridge, MA: MIT.
- Clegg, S. (2001). *Theorising the machine: Gender, education, and computing*. *Gender and Education* 12(3), 307-24.
- Clerc, S. (1996). Estrogen brigades and "big tits" treads: Media fandom online and off. In L. Cherny & R. Weise's (Eds.), *Wired_women: Gender and new realities in cyberspace* (pp. 73-97). Seattle: Seal Press.
- Cooper, J. & Weaver, D.K. (2003). *Gender and computers: Understanding the digital divide*. New York: Lawrence Erlbaum Associates.
- Cuban, L. (2001). *Oversold & Underused: Computers in the Classroom*. Cambridge, MA: Harvard UP.

- Douglas, C., Dragiewicz, M., Manzano, A., & McMullin, V. (2002). United States: In video games, Black women are victims, Latinas don't exist. *Off Our Backs*, 43(3/4), 6.
- Eubanks, V. (2000). Paradigms and perversions: A women's place in cyberspace. *The CPSR Newsletter* 18(1). Retrieved October 24, 2003 from, <http://www.cpsr.org/publications/newsletters/issues/2000/Winter2000/eubanks.html>
- Gorski, P. & Clark, C. (2002). Multicultural education and the digital divide: Focus on gender. *Multicultural Perspectives*, 4(1), 30-41
- Henwood, F., Wyatt, S., Miller, N. & Senker, P. (2000). Critical perspectives on technologies, in/equalities and the information society. In S. Wyatt, F. Henwood, N. Miller, & P. Senker (Eds.), *Technology and in/equality: Questioning the information society* (pp. 1-18). New York: Routledge.
- Hill, D. (2004). Critical education for economic and social justice: A Marxist analysis and manifesto. In M. Pruyne & L. M. Huerta-Charles' *Teaching Peter McLaren: Paths of Dissent* (pp. 146-185). New York: Peter Lang.
- Hinchey, P. & Cadiero-Kaplan, K. (2005). The Future of Teacher Education and Teaching: Another Piece of the Privatization Puzzle. *The Journal for Critical Education Policy Studies*, 3 (2). Retrieved, September 27, 2005, from <http://www.jceps.com/?pageID=article&articleID=48>
- Houston, B. (1996). Role models: Help or hindrances in the pursuit of autonomy? In A. Diller, B. Houston, & K. P. Morgan (Eds.), *The gender question in education: Theory, pedagogy, & politics*, (pp. 144-160). Boulder, Colorado: Westview Press.
- Huber B.R. & Schofield J.W. (1998). "I like computers, but many girls don't": Gender and the sociocultural context of computing. In H. Bromley & M. Apple (Eds.), *Education/technology/power: Educational computing as a social practice* (pp. 103-32). Albany: SUNY Press.
- Huntemann, N. (Director and Producer). (2000). *Game over: Gender, race, and violence in video games* [videorecording]. Northampton, MA: Media Education Foundation.
- Jenson, J. (1999). *Girls ex machina: A school-based study of gender, culture and technology*. Unpublished doctoral dissertation. Simon Fraser University.
- Jenson, J., de Castell, S. & Bryson, M. (2003). "Girl talk": Gender, equity, and identity discourses in a school-based computer culture. *Women's Studies International Forum*, 26(6), 561-573
- Jenson, J. & Brushwood Rose, R. (2003). Women@ work: Listening to gendered relations of power in teachers' talk about new technologies. *Gender and Education* 15(2), 169-181.
- Kellman, L. (2000, June 20). Bush promoting \$400 million education plan. Retrieved June 20, 2000 from, <http://www.aol.com>.
- Kincheloe, J. L., & McLaren, P. (2000). Rethinking critical theory and qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research: Second Edition* (pp. 279-314). Thousand Oaks: Sage.
- Kincheloe, J. (2006). Life in.... In Peter McLaren's *Life in schools: An introduction to critical pedagogy in the foundations of education* (Xi-Xvi). New York: Allyn & Bacon.
- Lissovoy, N. & McLaren, P. (2003). Educational 'accountability' and the violence of capital. *Journal of Educational Policy*, 18(20), 131-144.

- Littleton, K. & Hoyles, C. (2002). The gendering of information technology. In N. Yelland & A. Rubin (Eds.), *Ghosts in a machine: Women's voices in research with technology* (pp. 3-32). New York: Peter Lang Publishing.
- Luther, D. (1997). *First Nations preservice women teachers' experiences and perceptions regarding technology*. Unpublished doctoral dissertation. University of Saskatchewan.
- Maher, F. (2002). The attack on teacher education and teachers. *Radical Teacher*, 64 5-8.
- Margerum-Leys, J. & Marx, R.J. (1999). *Teacher education students' beliefs about technology*. Washington D.C.: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED429589)
- Margolis, J. & Fisher, A. (2003). *Unlocking the clubhouse: Women in computing*. Cambridge, Massachusetts: The MIT Press.
- Millar, S.M. (1998). *Cracking the gender code: Who rules the wired world*. Toronto: Second Story Press.
- McLaren, P. (1995). White terror and oppositional agency: Towards a critical multiculturalism. In P. McLaren, R. Hammer, D. Sholle, & S. Reilly's (Eds.). (1995), *Rethinking media literacy: A critical pedagogy of representation* (pp. 87-124). New York: Peter Lang.
- McLaren, P. & Torres, R. (1999). Racism and multicultural education: Rethinking race and Whiteness. In S. May's (Eds.) *Critical Multiculturalism: Rethinking multiculturalism and antiracist education* (pp. 42-76). New York: Falmer Press.
- McLaren, P. (2000). *Che Guevara, Paulo Freire, and the pedagogy of revolution*. Lanham, MD: Rowman & Littlefield.
- McLaren, P. & Farahmandpur, R. (2003). The globalization of capitalism and the new imperialism: Notes towards a revolutionary critical pedagogy. In G. Dimitriadis & D. Carlson (Eds.), *Promises to keep: Cultural studies, democratic education and public life* (pp. 39-76). New York: Routledge.
- McLaren, P. (2003). (4th Ed.) *Life in schools: An introduction to critical pedagogy in the foundations of education*. New York: Allyn & Bacon.
- McLaren, P. (2005). *Capitalists & conquerors: A critical pedagogy against empire*. New York: Roman and Littlefield Publishers.
- McLaren, P., Martin, G., Farahmandpur, R., Jaramillo, N. (2004). Teaching in and against empire: Critical pedagogy as revolutionary practice. *Teacher Education Quarterly*, 31(1), 131-153.
- McLaren, P. (2006). (5th Ed.) *Life in schools: An introduction to critical pedagogy in the foundations of education*. New York: Allyn & Bacon.
- Pehar, J. (2003). E-Brides: The mail-order bride industry and the Internet. *Canadian Women Studies*, 22(3/4), 171-157.
- Porfilio, B. & Hall, J. (2005). "Power city" politics and the building of a corporate school. *Journal for Critical Education Policy Studies* 3(1). Retrieved, June 22, 2005 from <http://www.jceps.com/index.php?pageID=article&articleID=38>.
- Rajagopal, I. & Bojin, N. (2004). Globalization of prurience: The Internet and degradation of women and children. *First Monday*, 9(1). Retrieved February 16, 2005 from, http://firstmonday.org/issues/issue9_1/rajagopal/index.html

- Rizvi, M. (2002). A radical educator's view on the media. Interview with Peter McLaren. *Znet*. Retrieved, April 22, 2003.
- Saltman, J.K. (2004). Coca-cola's global lessons: From education for corporate globalization to education for global justice. *Teacher Education Quarterly* 31(1), 155-72.
- Sarikakis, K. (2004). Ideology and policy: notes on the shaping of the Internet. *First Monday*, 9(8), retrieved January 23, 2005 from, URL: http://firstmonday.org/issues/issue9_8/sarikakis/index.html
- Scott-Dixon, K. (2004). *Doing it: Women working in information technology*. Toronto: Sumach Press.
- Slagle, M. (2005 March 11). PSP serves up games, audio & video. Retrieved March 12, 2005 from, <http://abcnews.go.com/Technology/wireStory?id=570484>
- Sofia Z. (1998). The mythic machine: Gendered irrationalities and computer culture. In H. Bromley & M. Apple (Eds.), *Education/technology/power: Educational computing as a social practice* (pp. 29-52). Albany: SUNY Press.
- Stepulevage, L. (2001). Gender/technology relations: Complicating the gender binary. *Gender and Education* 13(3), 325-338.
- Thomas, G. & Wyatt, S. (2000). Access is not the only problem: Using and controlling the Internet. In S. Wyatt, F. Henwood, N. Miller, & P. Senker (Eds.), *Technology and in/equality: Questioning the information society* (pp. 21-46). New York: Routledge.
- Weiler, K. & Maher, F. (2002). Teacher education and social justice. *Radical Teacher*, 64, 2-4.
- Weinstein, M. (1998). Computer advertising and the construction of gender. In H. Bromley & M. Apple (Eds.), *Education/technology/power: Educational computing as a social practice* (pp. 85-102). Albany: SUNY Press.
- Weinstein, M. (1998). Computer advertising and the construction of gender. In H. Bromley & M. Apple (Eds.), *Education/technology/power: Educational computing as a social practice* (pp. 85-102). Albany: SUNY Press.
- Weninger, M. D. (1998). Achieving gender equity in classroom computer usage. *Women in Higher Education*, 7(11), 35-36.

Notes

-
- ^[1] The study was launched, in the spring of 2003, at a small, independent coeducational institution of higher learning, which comprises 2,600 students, nine hundred of whom are housed within the Graduate Department of Education. "Border College" (pseudonym) is located proximate to the Canadian/U.S. border, somewhere in the Northeastern part of the United States.