INTERNATIONAL JOURNAL OF CRITICAL PEDAGOGY

WHAT WOULD PAULO FREIRE THINK OF BLACKBOARD™:
CRITICAL PEDAGOGY IN AN AGE OF ONLINE LEARNING

DRICK BOYD
EASTERN UNIVERSITY

Abstract

The rise of online learning in higher education presents a unique challenge for educators committed critical pedagogy. While Paulo Freire formulated his ideas about teaching in a pre-Internet era, he did not object to the use of technology in the teaching-learning process. He urged educators to think critically about the use of technology and to find new ways of seeking and creating knowledge with the aid of technology. This article offers a brief review of the development of online learning. Then with the assistance of Feenberg's Critical Theory of Technology, I analyze the practice of online teaching and learning through the lens of several Freirean concepts. Then I conclude with a series of problem-posing which guide our exploration moving forward.

Keywords: Paulo Freire, Online Learning, Critical Pedagogy, Critical Theory of Technology, Andrew Feenberg

During a recent faculty training event, as I listened to a presentation of how to teach effectively on Blackboard, an online platform used by my university, I reflected on my struggles to employ a critical pedagogy in the increasingly assessment-oriented, outcomes-based environment in which I find myself as a university professor. As my university has turned to online delivery systems as a way to attract students not able to attend or interested in a residential campus experience, I wonder about the nature of their learning experience. While designed to make teaching in the online environment more efficient, these systems confront the critical pedagogue with challenges to create a teaching-learning environment that promotes critical reflection not only on the content of a course but on the very way in which content is delivered. So I mused: "What would Paulo Freire think of Blackboard?"

I have been teaching online courses for over fifteen years, including accelerated courses with undergraduate adults, semester courses with graduate students, and blended or hybrid courses conducted in both a traditional classroom and online. Since I began teaching online, the technology has greatly improved. Furthermore I have learned, along with others, that teaching in cyberspace requires a different teaching paradigm altogether (Harasim, 2000; Palloff & Pratt, 2007).

I am also deeply committed to critical pedagogy, particularly as articulated in the writings of Paulo Freire. Because most of the literature on critical pedagogy assumes a traditional classroom, I have largely had to apply the principles of Freirean pedagogy in a trial and error manner, often wondering if teaching like Freire online was even possible.

Freire's pedagogical concepts, such as problem posing, dialogue, praxis, *conscientiazation* and the politics of education, were developed in a pre-Internet era. His work in popular education was deeply interpersonal and involved spending significant time in a community becoming familiar with the culture, linguistic patterns, and lifestyle of the people before ever embarking on teaching. He practiced a "situated pedagogy" in which it was essential to teach in the vernacular of the people and use cultural symbols and forms familiar to them. Freire believed the educator must first seek to understand reality from

the perspective of the students before he/she could encourage them to resist and transform their reality (Shor & Freire, 1987). For these reasons it is hard to imagine how Freire would react to a teaching-learning environment where instructor and student are geographically separated from one another, only connected by the electronic impulses of a computer network.

Nevertheless, Freire (2014) did not object to the introduction of technology into the practice of teaching. While he recognized the dangers of the "relegation of education to a mere exercise of technology," he also believed "that the use of technical aids and materials is indispensable" to the educational process (p. 75). He urged educators to think critically about the use of technology in teaching and "to create new channels of knowledge, new methodologies, new relationships between the subjects who seek knowledge and the most advanced technological innovations that we have at our disposal" (pp. 74-75). With this caveat in mind I want now to take a critical look at how Freirean critical pedagogy can be practiced in the online environment.

After giving a brief history of the development of online learning, I review Feenberg's Critical Theory of Technology (CTT). Then I examine the practice of online teaching and learning through the lens of selected Freirean concepts, identifying areas where I believe he would be troubled and others where he might sense the ways online learning can enhance the learning process. I then close with a series of problem-posing questions which guide our exploration moving forward. The purpose of this analysis is not to dismiss the contributions of online learning, but to raise fundamental questions that critical educators can and must address.

ONLINE LEARNING

The first experiments in online learning occurred in the mid-1970s when computers were used for email, crude forms of computer conferencing, and computer-mediated instruction for skill development and simple knowledge-based instruction. Early online tools such as email supplemented in-class instruction and the correspondence course style of distance education. Corporations and universities in the United States and Canada experimented with various formats for delivering

education in an online format. In 1981 the first totally online courses developed were non-credit mini-courses offered by educational institutions and executive training programs in the corporate sector (Harasim, 2000).

In 1996, eleven U.S. state governments pledged $100,000 each to launch Western Governor's University (WGU), the first virtual university in the United States. Initially, WGU did not create its own courses, but served as an access point for potential students to take online courses from several state universities in the Western United States. Each course had a list of competencies that had to be mastered, and when those competencies were achieved, the student "passed the class." Based on their past experience, previously developed skills and knowledge, and diligence, students progressed at different paces. Eventually, WGU moved out of its role as an education "broker" and began to hire its own content experts to identify key competencies for courses, which they then offered as a separate institution (Meyer, 2009).[1]

Soon several other state university systems developed online offerings gleaned from existing courses at their state-funded institutions. Heavily dependent on state funding, these initiatives were eventually absorbed into existing schools or faded away. Like WGU, these early online courses tended to be competency-based, relying on testing as the primary mode of assessment. While WGU's goal was to create a virtual university, the goal of the other early efforts was more modest, in that they created opportunities for students unable to attend a place-based university to take university courses (Garn, 2009).

The push for the development of online education came largely from government and business interests. States often used a carrot-and-stick approach with educational institutions, insisting upon the further development of online options while offering grants for training future teachers in the use of technology. Corporate entities like Microsoft, Apple, and various software companies promoted their products as a means to more effective teaching and learning. The overall message was that society was becoming more technology-based and therefore education had to change with this cultural shift or become irrelevant. Accrediting agencies required university faculty to create quantifiable

learning outcomes to justify and validate their students' learning (McCurry, 2000). While the language spoke of being "learner-centered," most educators still felt these directives were top-down oriented and undermined their primary role in the teaching-learning process. Thus, essentially online learning did not come into being because educators found a more effective way to teach, but rather because they were forced to adapt due to the political and economic interests that pushed and promoted it in their institutions.

Since the early 2000s the pervasiveness of online programs in the United States has continued to grow. Between 2002 and 2011 the percentage of students enrolled in online courses at colleges and universities grew from 9.6% to 32%. In 2002, 1.6 million students reported taking at least one online course, and by 2012 the number was 6.7 million. One of the largest areas of growth was in the development of programs offered completely online. In 2012, 62.4% of institutions offered at least one degree program completely online compared to only 34.5% in 2002. Furthermore the confidence of both students and teachers in the quality of education being offered increased significantly (Allen & Seaman, 2003, 2013). While administrators have generally had a positive attitude toward online learning, by 2012 only 30% of chief academic officers reported their faculty had accepted the value and legitimacy of online learning. Retention rates in online courses were significantly lower than in face-to-face courses, and only 40% of academic leaders believed potential employers saw online degrees as equivalent to degrees earned in the traditional face-to-face classroom (Allen & Seaman, 2013).

Since its beginning, when online learning involved cumbersome software and was dependent on bandwidth often beyond the reach of many users, "e-learning" has come a long way. Now learning management systems (LMS) create relatively easy-to-use platforms for organizing and delivering course content through the use of text-based and virtual face-to-face options for instruction. While in the beginning online instructors often just posted lectures previously delivered in traditional classrooms, now many practitioners have discovered innovative, discussion-based constructivist methods for teaching online (Palloff & Pratt, 2007). Moreover larger universities like MIT, Stan-

ford, Yale, and Duke have experimented with MOOCs (Massive Open Online Courses), offering online lectured-based courses for no or low cost to existing and potential students (Allen & Seaman, 2013).

Regardless of one's perspective on online learning, unquestionably in the last 25 years the paradigm of university education has shifted. Driven by economic and political forces, most universities now regard online education as an important component of their course offerings. Moreover, by and large this paradigm shift has occurred primarily for non-pedagogical reasons, forcing those entrusted with the responsibility of creating meaningful, transformative learning experiences to adjust to the new paradigm (Harasim, 2000).

CRITICAL THEORY OF TECHNOLOGY

Reflecting on this incorporation of online learning technologies into the educational sector, Feenberg (2009) developed the Critical Theory of Technology (CTT), which rejects the "techno-utopianism" of those who assume there is a technical solution for all challenges and barriers facing teachers. From the perspective of CTT, "technologies are not separate from society but are adapted to specific social and political systems" and in their use promote and reinforce the values, beliefs, and "truths" of those systems. Thus, technology is not regarded as economically or politically neutral. From a CTT perspective technologies are environments that shape the values and worldviews of their inhabitants. Technological environments redefine the way human users understand themselves and their relationship to the world and operate at the level of meaning and ethics. Like the town common in the middle of a New England town, today the Internet is regarded as a common space to which all persons regardless of rank or position should have access.

Rather than being value-neutral, CTT posits that embedded in all technologies are implicit values and principles referred to as "technical codes." Technical codes describe "the congruence of a social demand and a technical specification" (Feenberg, 2009, p. 151), in the process redefining basic values and social principles. For example, when the U.S. government required all automobiles to be built with seatbelts and airbags (technologies), the meaning of auto safety (a value) was rede-

fined. From the perspective of CTT these technical codes "are always biased to some extent by the values imposed by the dominant actors" (p. 152), thus making them essential to hegemonic control by those dominant actors on the wider society.

As outlined by CTT, technology creates a cyber culture that redefines human identity and the meaning and means of human interaction (Gomez, 2009). When viewed through this lens, online education is not simply another tool for the promotion of learning, but rather an all-encompassing environment managing and controlling access to information, structuring relationships, and redefining individual identities. Accompanying and contributing to this rise in online education, an education technology industry has emerged, comprised of LMSs, content providers, information database providers, computer software, e-books, and the like. While masquerading as efforts to enhance student learning, these industries are clearly profit-oriented. Knowledge has become a commodity, students have become consumers, faculty have become content providers, and schools operate as businesses. In the cyber culture these changes are seen as necessary and normal and are not to be challenged or questioned.

However, it is precisely because of this overarching and rapid transformation of the culture of higher education that a critical perspective is needed. The key question CTT asks is: What are the underlying values and beliefs embedded in a given technology and for which it is designed (Feenberg, 2009; Hamilton & Feenberg, 2005)? Freire's critical pedagogy, informed by the insights of CTT, helps expose these underlying values and raises important questions as to the role online learning plays and should play in the teaching-learning process.

FREIRE AND ONLINE LEARNING

Freire stressed that he offered a philosophy rather than a methodology of teaching and believed the appropriate application of that philosophy had to be recreated in every context. For Freire, context is critical in determining the manner in which the instructor will conduct his/her teaching. Thus, I take a critical look at teaching and learning in the

online environment and examine it from a Freirean critical perspective. In particular, I have chosen to focus on those aspects of Freire's educational philosophy that critique the dominant values in online learning and which empower educators and their students to recreate the learning environment in a way that is liberatory for those often marginalized by the educational system and equitable for all who participate in it.

THE POLITICS OF EDUCATION

Essentially, Freire understood education as inherently political and believed its central goal to be the liberation of those who are politically marginalized and impoverished. Liberatory education is humanizing because it dignifies people and empowers them to shape their destinies and their world. In Freire's words, they move the oppressed from being objects to subjects of their experiences (Freire, 2007). Freire wrote: "A humanizing education is the path through which men and women can become conscious about their presence in the world" (as cited in Macedo, 1998, p. xiii). By contrast those educators who claim their teaching is apolitical by default align themselves with the status quo and reinforce conditions leading to the dehumanization and marginalization of their students. While Freire acknowledged that education should help students develop skills and knowledge to be able to survive economically, he also insisted education should challenge students to question the very capitalistic enterprise for which they are preparing (Escobar, Fernandez, Guevara-Niebla & Freire, 1994).

Freirean critical pedagogy views education as a "form of social and cultural criticism" (McLaren, 1994, p. xvi), with a vision toward creating a politically democratic, racially inclusive, economically just social order replacing the hierarchical, exclusive powers currently dominating the social and political world. Likewise, Freire believed education must take into account both the social, political, and economic context in which it occurs and also the vision (Freire used the word "utopia") toward which it strives. Like Feenberg (2009), Freire would be concerned with the values and principles embedded in the technology of online learning, as well as the cyber culture it has created. As Feenberg (2009) has shown, technology is more than a tool for transmitting edu-

cation; it is an environment which must be critically analyzed for its underlying values and assumptions.

Therefore, our discussion of Freire and online learning must begin with the origins of online learning. As has already been noted, the primary impulse for the expansion of online learning in higher education was due to economic and political interests, rather than pedagogical ones. Schools did not venture into online learning because they thought it was a better way to teach, but rather because they saw it as a way to reach unreached student populations with the promise of off-site educational offerings. Only later was attention given to developing online pedagogies.

At the same time online programs were being developed, colleges and universities adopted a business model with a primary focus on the financial bottom line and preparing graduates for the job market. As recent criticisms of higher education have indicated, students are now seen as educational consumers who expect a return on investment in terms of employable skills. Online learning is seen as a cost-effective and efficient way for students to get an education. Whereas education in the United States was originally viewed as a way to prepare students for effective citizenship, now it is seen as a way to develop loyal and capable employees of their corporate overlords. As a result, those academics who do seek to practice critical pedagogy find their efforts significantly compromised by an insistence on content standards and pre-determined learning outcomes (Martin & Riele, 2013).

Those who teach in an online setting must be aware of this larger social and political context, for as McLaren (1994) writes, they "must have a vision that is not content with adapting individuals to a world of oppressive social relations but [be] dedicated to transforming the very conditions that promote such conditions"(p. xxxii). In practical terms, this means teachers committed to critical pedagogy must develop exercises and assignments that challenge students to examine their social and cultural contexts, including the technological environment in which their class is being conducted. However, to do so may cause these teachers to become suspect to those who expect faculty and their students to simply fit into their corporately-directed niche.

ONLINE BANKING

A second area of concern is the banking nature of the LMSs. One of the underlying assumptions of an LMS like Blackboard™ , Moodle™ , or Brightspace™ is that the online platform is a repository of resources for teaching and learning. Some forms of online learning go so far as to design learning modules, which when completed, certify the student as having developed certain skills or mastered certain content areas.

The latest expression of this banking orientation is the development of MOOCs, large online courses offered by major universities with so-called "experts in their field." MOOCs were originally believed to be a way to provide "universal access to free, high-quality, impeccably branded online courses" (Carey, 2012) and are characterized by massive number of students watching short video lectures combined with short quizzes, automated assessments, and optional peer discussion formats for answering questions. Largely patterned after traditional lecture-style courses, MOOCs were initially developed by computer programmers and content experts with little attention paid to the unique challenges of teaching in the online environment. Even by their own standards, MOOC providers have reported mixed results on student learning and engagement, with roughly only 15% of the students who start courses completing them. Promoted as efficient and simple means of delivering education, MOOCs offer little opportunity for students to engage in critical reflection, focusing mostly and information retrieval and concept mastery. Furthermore, while promoted as a way to provide higher education for low income and less educated students, the primary MOOC user has been the individual who has already earned a higher education degree. (Adair et al., 2014; Baggley, 2013; Carey, 2012; Glance, Forsley, & Riley, 2013).

Freire vehemently rejected this banking approach to education because it did not recognize or encourage the student's creative, exploratory, and critical abilities. In the banking model the teacher is regarded as the holder and transmitter of knowledge, which is then imparted to the student. The banking model assumes the student is an empty vessel and does not value or recognize the student's experiential and cultural knowledge. Moreover, it leaves the student in the role of pas-

sive recipient rather than active creator of knowledge (Freire, 2007).

By contrast Freire argued for a problem-posing, constructivist approach that invites students to critically engage their world and one another. In the critical classroom, the student at times takes on the role of teacher and the teacher becomes a learner, inviting a sharing of power and mutual learning. While this approach can be carried out to an extent online, the LMS is set up to be the primary source of information in a course, and the teacher is assigned as the expert designer of the learning experience, thus limiting the constructivist nature and mutuality of the learning process.

THE DIGITAL DIVIDE

A third area of concern is the limited access to online learning to large sectors of society. While e-learning advocates tout the greater access to learning provided by online learning (Goral, 2013; Kashi & Conway, 2010), the digital divide is a reality impacting millions of students. While 95% of households in the United States have access to broadband and therefore the Internet, only 68% actually have Internet in their homes. In 2009, a study found that 35% (or 80 million) of U.S. adults (not counting children) did not use broadband in their homes (Congressional Digest, 2013). Moreover, a 2013 Pew Research Center study found lower rates of usage among low income families and among Blacks and Hispanics than the general population (Zickhur, 2013). Recent studies (Anderson 2014; Mossberger, Tolbert & Anderson, 2014) have indicated that the gap may be closing slightly with the increased use of smart phones by low income Blacks and Latinos, but often this is more for communication than academic purposes. These statistics suggest that a significant number of students have no access in their homes to online education. Lack of access to digital technology tends to be located in areas of concentrated poverty and racial/ethnic segregation. Thus, the disparities in health care, adequate housing, social services, economic opportunity, and quality education also include technological deprivation. As more public services go online, including education, these communities become increasingly disenfranchised (Mossberger et al., 2006).

With the digital divide comes digital illiteracy, which is the in-

ability to find, assess, and construct knowledge in the digital realm (Bawden, 2008). In practical terms, effectiveness in the online learning process requires facility with information technology and digital literacy. A recent study found huge disparities between wealthy suburban and poor urban school districts in terms of their access to and use of computer technology (Education Week, 2014). This has translated into a notable disadvantage for first-generation college students who, even if they have access to information technology, lack the knowledge and ability to effectively use information and communicate online (Fleming, 2012).

Freire was particularly focused on empowering those who have been socially and economically marginalized and oppressed. A learning environment that by its very nature is unavailable to a significant percentage of the population and whose presence tends to increase economic and racial disparities is inherently problematic. Moreover, students coming into higher education from technology-impoverished high schools find themselves at a disadvantage in an age of online learning. Unless teachers and educational institutions are consciously committed to closing the digital literacy and access gap, the very presence of online education contributes to increasing disparities not only in the educational present, but also in the future possibilities for those students to whom access is denied.

DISEMBODIED LEARNING

A final area of concern is the disembodied nature of the online learning process. One of the major attractions of online learning to potential students is the freedom from having to be in a classroom in a particular time or place. In online courses information is shared via articles and presentations posted on an LMS, and students are required to read or view these resources in a particular period of time. Then students interact with the instructor and classmates through an electronic discussion format where they write responses to prompts and respond to the posting of other students. Often to augment these asynchronous interactions, online courses will include synchronous sessions using video-conferencing software that enables students and instructor to be in a virtual classroom together for short periods of time. However,

overall the modality of interaction online is highly focused on text-based communication.

Because the primary medium is text-based, this tends to encourage a cognitively-oriented learning process. However, Freire (1988) believed learning was to be holistic. As he saw it, a key component of the teaching-learning process was the demonstration of love and the cultivation of community among the instructor and students. For Freire, love was not simply a virtue to be followed, but an embodied emotion to be expressed. He writes "… we study, we learn, we teach, we know *with our entire body* [emphasis mine]. We do all of these things with feeling, with emotion, with wishes, with fear, with doubts, with passion and also with critical reasoning" (p. 3).

Embodied learning means students must not only engage the cognitive dimension (thinking and reflection), but also partake in concrete action. This action in reflection, and reflection in action, referred to as praxis, involves acting on and in the world as one is seeking to learn about and transform the world. For Freire, the willingness to act on what one is studying is absolutely critical to learning; we learn as we do, and we do as we learn. To limit education to the transmission and reception of text-based knowledge without action undermines the entire learning process (Escobar et al., 1994). The nature of online learning technology strongly leans toward this disembodied form of learning and mitigates against the holistic, praxis-oriented learning process Freire promotes.

DIALOGUE ONLINE

Despite the challenges created by the online learning environment, there are ways I believe Freire would find the online environment enhances the teaching-learning experience. The first way in which online learning coincides with a Freirean pedagogical approach is its capacity to facilitate meaningful dialogue.

Freire believed dialogue begins not with what the teacher professes to know, but with the student's experience and knowledge. Ever aware of the power dynamics between teacher and student in the educational space, the teacher enters into an exploration with student of the subject at hand. In this process students become subjects of their own learning,

developing the capacity to name their own reality. As Freire (2007) writes: "Dialogue is the encounter between [persons], mediated by the world, in order to the name the world" (p. 88). For Freire, dialogue must not be manipulative and must be carried out with "profound love" and respect for the other, especially when the other holds views and perspectives different than one's own. Through dialogue, both within oneself and with other learners, Freire believed one could come to a critical consciousness (*conscientization*) of one's place in the social, political, and economic context.

Dialogue is not simply a teaching technique, but also a process essential to the nature of human beings. We come to know the world and ourselves in and through our interaction with others; knowledge is created in the dialogical encounter. Moreover, this knowledge is not something held by an individual but is held corporately by those in the dialogue. This includes even the instructor who by virtue of previous study and teaching has a certain level of understanding greater than the students. However, in the dialogue even the instructor re-learns the subject matter in a way that transforms him/her as well as the students. In this way, instructors become teacher-learners and students become learner-teachers (Freire, 1988; Shor & Freire, 1987).

The tool often used to facilitate online dialogue is called computer conferencing, which is "distributed, asynchronous, text-based communication" in an online course (Hamilton & Feinberg, 2005, p. 109). In a computer conference the instructor may post one or more discussion questions, and then over the course of a designated time (usually a week or two), students interact with the instructor and one another around a designated topic or set of assigned readings. At times the instructor may add or provide direction to relevant information missing in the discussion or encourage the students to reflect on a particular issue at hand. Thus, effective online discussion in this mode is not just free-flowing but has a particular focus and direction. When done well, these discussions can lead to a greater depth of understanding and connection between participants. The extended nature of the online dialogue allows for deeper inquiry and reflection often absent in a time-bound classroom setting (Hamilton & Feenberg, 2005; Palloff & Pratt, 2007).

For Freire, the building of a learning community is essential to creating meaningful dialogue; this is also true for those who seek to teach effectively online. Palloff and Pratt (2007) contend that all online teaching must begin with building community and stress that a carefully constructed online learning community provides a space for students to test ideas, get feedback, and create a collaborative learning experience. Freire regarded the learning community as the container in which knowledge is held jointly by the group. For Freire, learning was a social and democratic event where authoritarianism and control of the learning process are minimized. In dialogue "the object to be known is not an exclusive possession of one of the subjects doing the knowing, one of the people in the dialogue. …. [Rather] they meet around it and through it for mutual inquiry" (Shor & Freire, 1987, p. 99).

The goal of this dialogical encounter is greater comprehension of one's experience not only on a personal level, but also in the sociopolitical and economic dimension as well. This is what Freire (1988) called "reading the world," or *conscientization*, that is, understanding the larger political context in which experience occurs and knowledge is situated. In the current era of Facebook, Twitter, instant message, and other social media, in-depth discussion and analysis is often absent in favor of brief, often innocuous statements and personal opinions. If done effectively, online discussions can push students and teachers beyond a superficial level to an expanded understanding of the context in which this knowledge is being created. Instead of giving into the pattern of shallowness created by contemporary tendencies of computer-mediated communication, online teachers can use the online discussion to reach toward a greater critical consciousness.

ONLINE ACCESS TO INFORMATION

A second way online environments can facilitate a critical approach to teaching-learning is through greater access to information on the Internet. Through online academic databases, students have easy access to far more sources of information than previous generations. Furthermore, search engines like Google, Yahoo, and the like bring students in contact with remote sources, organizations, and individuals instantly.

In addition to proprietary information, open sources of information are also available, such as online journals, multimedia databases, YouTube channels, Open Universities, and even MOOCs. With this increased access to information, comes the ability to act on what is learned in new and refreshing ways. One only has to look at how the 1999 WTO demonstrations in Seattle, the 2011 Arab Spring uprisings in Tunisia and Egypt, and the 2011 Occupy Wall Street Movement used cyber technologies to connect previously unconnected individuals toward a common social goal (Carroll-Miranda, 2011). In 2015, *Black Lives Matter* did the same.

However, recent revelations of extensive government surveillance on private citizens demonstrate how government and corporate elites are using their extensive power to suppress free expression of ideas. Moreover, telecommunications companies have aggressively sought government-sanctioned license to create a multi-tiered internet, thereby limiting optimum bandwidth to an elite few. While the Internet remains a virtual public square, if the corporate elites get their way, the open access of the Internet could be greatly curtailed (Clement, 2014; Galloway, 2014).

Despite these concerns, the online environment offers tremendous opportunities to remote and marginalized communities to gain access to previously unavailable information. For example, Srinivasan (2006) highlights remote communities in Brazil and India who have promoted their cultural and political agendas through the use of information technology. These examples illustrate tremendous potential for Freire's vision of praxis and social learning to be realized and the development of oppressed and marginalized communities to be advanced. For students in an online learning context, particularly those students from marginalized communities, this open access to information has revolutionary possibilities.

However, the challenge is not only the accessing of information, but also encouraging students to become discerning purveyors of information—to develop "critical digital literacy," the capacity to effectively and critically navigate the databases and myriads of potential sources (Poore, 2011, p. 15). The sheer magnitude of the information available to students often is overwhelming such that they have dif-

ficulty prioritizing and evaluating their search results. Often educators are not much further ahead of their students in terms of digital literacy and so are limited in their ability to help their students in this regard. Thus, an essential component of student and faculty preparation for online education must strengthen instructor digital literacy skills. In this way, the potential for freer and more democratic access to previously privileged information can be maximized.

CONCLUSION

What would Paulo Freire think of Online Learning? In the end the answer to that question hinges on several inter-related questions. Thus, in the problem-posing manner endorsed by Freire, I conclude with a series of questions for practitioners of critical pedagogy who teach in the online environment to consider.

- How can online educational technologies be employed to counter a top-down, banking-oriented approach to learning and be used to create constructivist, democratic classrooms where students and teachers interact in collaborative production of knowledge?
- How can online education be used to create communal connections across geography, culture, and worldviews thereby countering the tendency to atomize learners in their individualistic and isolated learning modes?
- How can online instructors help their students recognize how online teaching and learning occurs within a cyberculture, which itself implies certain values, beliefs and life principles?
- How can online educators encourage their students to interrogate the neoliberal, capitalistic context which has given rise to and continues to shape online education and challenge its assumptions in the pursuit of a more equitable and just society?
- What are creative methods online instructors can employ to help their students embody their learning by engaging in embodied praxis-oriented activities as part of their learning efforts?

Given the explicit and implicit investment both students and teachers

have in their economic and social survival, this process of liberating education is always at best a compromised enterprise (Carroll-Miranda, 2011). As employees of the university whose mission is to enable students to fit and thrive in the dominant system, faculty face the temptation to compromise their essential academic and pedagogical values. Likewise, because most students attend the university in order to become employable, even the most critically and socially conscious learners can find themselves caught between their need for a job and their desire to do the "right thing." Thus the challenge for critical pedagogues is to maintain a clear fixation on their revolutionary values and social vision, while working in the spaces allowed by academic freedom and seeking to "[fill] the concepts of [one's] pedagogy with liberating forces" (Escobar et al., 1994, p. 87).

Ultimately, a tension exits between the tendency of technology to supersede the learning process and the creativity of teachers and learners to subvert the very environment designed to pacify and subordinate them. Like it or not, critical educators find themselves in a world largely defined and shaped by telecommunication technologies. The challenge in our time is to turn those technologies toward the pursuit of social and political liberation, so they can become the tool for empowering engaged citizens committed to creating a more equitable and just world in which to live, work, and learn.

REFERENCES

Adair, D., Alman, S., Budzick, D, Grisham, L., Mancini, M., & Thackaberry, A. S. (2014). Many shades of MOOCs. *Internet Learning, 3*(1), 53-72.

Allen, I. E., & Seaman, J. (2003). *Sizing the opportunity: The quality and extent of online education in the United States, 2002 and 2003*. The Sloan Consortium. Retrieved at http://sloanconsortium.org/publications/survey/sizing_the_opportunity2003

Allen, I. E., & Seaman, J. (2013). *Changing Course: ten years of tracking online education in United States*. Babson Survey Research Group and Quahog Research Group, LLC. Retrieved at http://sloanconsortium.org/publications/survey/changing_course_2012

Anderson, J. (2014). The second digital divide: The effects of ethnicity and socioeconomic status on student technology access and use outside the school day (Doctoral Dissertation). Retrieved at http://paperroom.ipsa.org/papers/paper_36182.pdf

Baggaley, J. (2013). MOOC rampant. *Distance Education 34*(3), 368-378.

Bawden, D. (2008). Origins and concepts of digital literacy. In C. Lankshear & M. Knobel (Eds.), *Digital literacies: Concepts, policies and practices* (pp. 17-32). New York: Peter Lang.

Carey, K. (2012, Sept 7). Into the future with MOOC's. *Chronicle of Higher Education 59* (2) Retrieved from EBSCOHost.

Carroll-Miranda, J. (2011). Emancipatory technologies. In C. Mallott & B. Porfilio (Eds.), *Critical pedagogy in the twenty-first century: A new generation of scholars* (pp. 521-539). Charlotte, NC: Information Age Publishing.

Clement, C. (2014). Can we keep the internet free? *YES! Magazine*. Retrieved at http://www.yesmagazine.org/issues/the-power-of-story/can-we-keep-the-internet-free?utm_source=YTW&utm_medium=Email&utm_campaign=20140516

Congressional Digest. (2013). Access to telecommunications technology: Bridging the digital divide in the United States. *Congressional*

Digest, 92(4), 2-5.

Education Week. (2014). Vast digital divide found in nation's schools. *Education Wee*k. Retrieved at EBSCOHost.

Escobar, M., Fernandez, A., Guevara-Niebla, G., & Freire, P. (1994). *Paulo Freire on higher education: A dialogue at the National University of Mexico*. Albany, NY: State University of New York.

Feenberg. A. (2009). Critical theory of technology. In J. Olsen, S. Pederson, & V. Hendricks (Eds.), *A Companion to the philosophy of technology* (pp. 146-153). Malden, MA: Wiley-Blackwell.

Fleming, N. (2012). Digital divide strikes college-admissions process. *Education Week*, *32*(13). Retrieved at EBSCOHost.

Freire, P. (1988). *Teachers as cultural workers: Letters to those who dare to teach* (D. Macedo, D. Koike, & A. Oliveira, Trans.). Boulder, CO: Westview Press.

Freire, P. (2007). *Pedagogy of the oppressed, 30th Anniversary Edition*. New York: Continuum Press.

Freire, P. (2014). *Pedagogy of commitment* (D. Brookshaw & A. Oliveira, Trans.). Boulder, CO: Paradigm Publishers.

Garn, M. (2009). On the edge of innovation: Transition and transformation in statewide administrative models for online learning. *New Directions for Higher Education 146* (Summer 2009), 55-64.

Glance, D.G, Forsey, M. & Riley, M. (2013). The pedagogical foundations of massive open online courses. *First Monday, 18*(5). Retrieved at http://firstmonday.org/ojs/index.php/fm/rt/printerFriendly/4350/3673

Gomez, M.V. (2009). Emanuel Levinas & Paul Freire: The ethics of responsibility for the face-to-face interaction in the virtual world. *International Journal of Instruction, 2*(1), 27-58.

Goral, T. (2013). A conversation with Tony Bates. *University Business, 16*(2), 44-45.

Hamilton, E. & Feenberg, A. (2005). The technical codes of online education. *E-Learning 2*(2), 104-121.

Harasim, l. (2000). Shift happens: Online education as a new paradigm of learning. *The Internet and Higher Education, 3*(1-2), 41-61.

Kashi, S. & Dessinger, J.C. (2010). Paulo Freire's Relevance to Online Instruction and Performance Improvement. *Performance Improvement 49*(2), 17-21.

Macedo, D. (1998). Foreword. *Teachers as cultural workers: Letters to those who dare to teach*. Boulder, CO: Westview Press, ix-xx.

Mallott, C. (2011). From Toussaint L'Ouverture to Paulo Freire: Complexity and critical pedagogy in the twenty-first century: A new generation of scholars. In C. Malott & B. Porfilio (Eds.), *Critical pedagogy in the twenty-first century: A new generation of scholars* (pp. xxiii-xiii). Charlotte, NC: Information Age Publishing.

McCurry, D. (2000). Multimedia knowledge and culture production: On the possibility of critical and ethical pedagogy resulting from the current push for technology in the classroom. *Bulletin of Science Technology & Society, 20*(2), 100-105.

McLaren, P. (1994). Foreword. *Paulo Freire on higher education: A dialogue at the National University of Mexico*. Albany, NY: State University of New York, ix-xxxiii.

Martin, G. & Riele, K. (2011). A place-based critical pedagogy in turbulent times: Restoring hope for alternative futures. In C. Malott & B. Porfilio (Eds.), *Critical pedagogy in the twenty-first century: A new generation of scholars* (pp. 23-52). Charlotte, NC: Information Age Publishing.

Meyer, K. (2009). Western Governors University: Creating the first virtual university. *New Directions for Higher Education 146*(Summer 2009), 35-43.

Mossberger, K., Tolbert, C. & Anderson, C. (2014). Digital citizenship: Broadband, mobile use, and activities online. Paper presented at the International Political Science Association Conference, Montreal, Canada. July 2014.

Mossberger, K., Tolbert, C., & Gilbert, M. (2006). Race, place and information technology. *Urban Affairs Review, 41*(5), 583-620.

Palloff, R., & Pratt, K. (2007). *Building online learning communities: Effective strategies for the virtual classroom*. San Francisco: Jossey-Bass.

Srinivasan, R. (2006). Where information society and community voice intersect. *The Information Society, 22*, 355-3675

Shor, I. & Freire, P. (1987). *A pedagogy for liberation: Dialogues on transforming education*. Westport, CT: Bergin & Garvey.

Zickhur, K. (2013). Who's not online and why. *Pew Research Center Internet & American Life Project*, Washington, D.C

(Endnotes)

1 See also Western Governors University website: www.westgov.org