

CRITICAL CONNECTIONS: TECHNOLOGY USE THAT EMPOWERS

by

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Abstract

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This research employs the use of narrative and auto-ethnography in an examination of the complex relationships that arise when students and teachers use technology as an instructional tool. The story unfolds in an exploration of the significant impact and implications the use of computers and related technologies have on educational and societal spheres.

This narrative, drawing from personal experiences in the secondary New York City classroom, also references existing published quantitative and qualitative research that exemplifies the use of technology in urban educational settings. Within a theoretical, hermeneutical framework, and couched in social theory and critical theory, the empowering potential of effective technology use by students and teachers is discussed throughout as well.

Dedication

To my husband David Majewski,
my children Meghan Rose and William John,
and to my teacher Joe Kincheloe

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With appreciation I thank those who have made this doctoral journey possible:

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CHAPTER I

INTRODUCTION: THERE'S SOMETHING HAPPENING HERE...

It is a cold, windy, rainy October morning and the streets are beginning to flood. Despite the driving rain, clumps of colorful leaves, saturated, blow through the air and stick to the building's brick façade and wood scaffolding. From what I recall, the scaffolding has been up for over a year, but no sign of construction work is ever present. For now, the structure serves as a shelter to some of the 4,000 students that file into the building. They stand in small groups under the dripping overhang, waiting to fit through the steel door entrance way. They talk and laugh amongst themselves. Some shout to friends somewhere far away in the line. Some stand quietly, listening to an iPod or Mp3 player. Others talk on their cell phones; even more "text." Once through the heavy door, students are met by a dozen security guards and two New York City armed police officers standing near a blockade of brown Formica folding tables, complete with plastic bins that hold personal belongings and a conveyor-belt scanner. Two metal detectors keep the line moving slowly. When an occasional stop at the security guard holding the metal sensor wand is needed, the crowd seems to be kept at a standstill.

Upon entering the marble rotunda, I wave to one of the security guards. From working periodically in the building for the past several years I am familiar to him, so he lets me go around the detector, past the students standing under a "No Weapons, No Hats, No Cell Phones" sign, putting their belts back on.

As I walk down the hallway, a song I had been listening to on the car radio is still playing in my head. It's a song written in the late sixties by Stephen Stills.

*There's something happening here
 What it is ain't exactly clear
 There's a man with a gun over there
 Telling me I got to beware
 I think it's time we stop, children, what's that sound?
 Everybody look what's going down*

I once read that Stills wrote the song for his band Buffalo Springfield in reaction to escalating conflict between police and young people after closing a popular club on California's Sunset Strip. Despite its origins, the song later came to symbolize the turbulence and confrontation arising from events during the 1960s. Over three decades later, the lyrics are eerily apt to what I experience on a daily basis, as I work with teachers, students and technology in some of New York City's 1,400 public schools. And, there is something happening here. But, what's different from Stephen Still's view, is that I am getting a clearer picture as to what it is.

"Technology in education"...what does it mean?

The Association for Educational Communications and Technology (AECT) promotes scholarship and best practices in the creation, use, and management of technologies for effective teaching and learning in a wide range of settings which include K-12 education, higher education, and adult learning environments. According to AECT Definitions and Terminology Committee,

"instructional technology" is the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning... The words "instructional technology" mean a discipline devoted to techniques or ways to make learning more efficient based on theory but theory in its broadest sense, not just scientific theory.... Theory consists of concepts, constructs, principles, and propositions that serve as the body of knowledge, including resources that are sources of support for learning, including support systems and instructional materials and environments. ... The purpose of instructional technology is to affect and effect learning. (Association for Educational Communications and Technology, 2001, ¶ 3)

Through my work as a classroom teacher and in more recent years, as an educational technology staff developer or as an instructional technology specialist, I have worked with technology in educational settings. Exclusive of the titles, it can be simply said that I have worked over a decade with both students and teachers, using technology to “affect and effect learning.”

However, unlike AECT, I do not look at instructional technology as a discipline devoted to techniques or ways to make learning more efficient based on theory. In fact, my work with technology tends to discount an efficiency model, but it is however, based on theory. After being introduced to the work of Brazilian educator, Paulo Freire in my doctoral studies, I now realize that much of what I have done and much of what I continue to do within the spheres of teaching and learning with technology is grounded in critical pedagogy or Freire’s liberatory education (2005), in which education is not viewed as neutral political, with the potential of being transformative; teachers and students working together, challenging the status quo of education as the transfer of “official knowledge” from teacher to students. By challenging the status quo, teachers and students work collaboratively, in toward critical consciousness. It was not until I read Freire’s work that I was able to “name” what I was doing in the classroom with my students and what I will continue to do with New York City teachers and their students, despite numerous limits and challenges.

The challenges I encounter result from my attempt to make changes within a system that quite clearly draws from a social efficiency model. Beginning in the late 1800s the social efficiency model emerged as a response to industrialism and the

transformation of the American social institutions of family and church. For most people at that time, social efficiency in education held a promise of social stability in a period that desperately called for massive social change. The model looked toward educating students effectively for their predetermined role in society. This model needed a potent backing of science in order to defend it. But, this would be “a science of exact measurement and precise standards in the interest of maintaining a predictable and orderly world” (Kliebard, 1995, p.77).

Generally speaking, advocates of the social efficiency model were educational reformers. However, the model itself did not have a single influence; a multitude of reformers contributed their views and philosophies to its development. Ironically the humanitarian motives of Joseph Mayer Rice were an early influence on the model. Rice’s belief that school should serve the “best interest” of the student may not have resonated in the way in which he originally intended. What instead evolved in later years, even decades, is that there are multiple perspectives as to what “best interest” entails.

It was the social theory of Edward A. Ross that guided the growth of the efficiency model. Ross felt that schools should develop a more direct and defined social purpose and unlike parents, teachers would be the best suited to enforce social control. Similarly in terms of “control,” it was Frederick Winslow Taylor, an American mechanical engineer who sought to apply his system of scientific management of factories to that of schools.

And in keeping with the management of schools, with control at the classroom level, John Franklin Bobbitt, university professor and author, asserted that curriculum be modified for each class of individuals. In other words, education of students would be

based on the perceived “need” of the individual. Students would be taught according to their predicted social and vocational roles. These reformer influences, coupled with American psychologist Edward Thorndike’s belief that the human mind is a machine with innumerable functions, contributed to the efficiency mission of applying standardized techniques of industry and manufacturing to the new “business of schooling.”

Their belief that students needed to be controlled for their own good and for the good of society reinforced the dichotomy of the teacher as the all knowing expert of what is considered necessary knowledge, with the student as the passive receiver of information. Over a century later, the social efficiency model can be seen in the modern classroom in the form of standardized testing, rote memorization, tracking, vocational based coursework, and in subject specific curriculum restructuring.

Freire discusses the dangers of the “banking” concept of education in which the students are the depositories and the teachers the depositors. As teachers, the knowledge we “give” our students is often times viewed as a package or parcel of facts to be passed along through narration and lectures. In this model the students can become mere “collectors or cataloguers of the “things” they store, in the last analysis, it is the people themselves who are filed away through lack of creativity, transformation, and knowledge in this (at best) misguided system” (Freire, 2005, p. 72).

As I walk up the stairwell, I pass students being reprimanded by security guards to put away their Mp3 players and cell phones. “Yo! I’m gonna take that if ya don’t put it in your bag,” shouts an officer at a teenage girl texting on her phone. She bumps my arms as she runs down the stairs, shoving the phone into a pocket of her backpack. The guard

immediately calls on his walkie-talkie radio instructing another officer on a lower floor “stop her.” He quickly gives her description over the airwave as well as her offense.

The technologies the students and teachers witness within moments of entering the school building are used for purposes far from educational. And, yet students are not alone in these encounters of control. Teachers are not exempt from the dominant power’s attempts to regulate (Kincheloe, 2008, p. 31). Classroom teachers can be observed routinely punching a time clock, changing classrooms at the ring of an electronic bell, following principal’s directions announced throughout the day on a public address system, and using instructional time to “bubble in” attendance sheets that are then collected by monitors and fed through a scanner to be input in the “Automate the Schools” (ATS) administrative system. This system is school based and required by New York State so that schools can automate the collection and reporting of data concerning their students.

In aforementioned examples, technology is used within a network of power intending to keep the students and the teachers as “docile bodies.” In his book, *Discipline and Punish: The Birth of the Prison*, Foucault (1995) studies the production of “docile bodies” in prisons, but also sees the general extension of disciplinary control in society. The prison as the original carceral institution is now extended in many different forms in a carceral network throughout our social order; public schools being one of those forms. The carceral normalizes individuals as it ‘naturalizes’ the legal power to punish, as it ‘legalizes’ the technical power to discipline (Foucault, 1995). By the time students reach high school, they have come to accept institutionalized discipline, their teachers

accommodate the norms of the bureaucratic control and their parents, including the extended school community, have come to accept the “norm” of these technology based, power and disciplinary mechanisms. And, unfortunately technology used within a framework of power, control, and regulation, can also be found within the classroom walls as well.

“Digital Divisions”

Before addressing any use of technology at the classroom level, within school districts or within homes in the United States, the notion of “The Digital Divide” must be taken into consideration.

There are varying histories of the term, but the phrase “The Digital Divide” has its origins in the 1990s, referring to the gap between those with access to digital technologies and those without. The gap, a result of socio-economic and/or geographical factors, created conditions of limited or no access to technologies, in particular computers. The divide referred not only to the people of our nation but to the developing world as well.

In 1996, I began my work as a New York City classroom English teacher when talk of the digital divide was starting to develop. My students did not have computers or Internet access in their homes. And when it came to access in school, it was clear to me, my colleagues and, most importantly, my students that our South Bronx school did not have nearly as much technology as our suburban counterparts or even one of the “chosen” schools within the five boroughs, we accepted it as how things were, not really understanding the particulars of the “haves and have-nots” scenario.

But by July of 1999, the National Telecommunications and Information Administration, U.S. Department of Commerce released a report, *Falling through the Net: Defining the Digital Divide* which examined “which American households have access to telephones, computers, and the Internet, and which do not. The ‘digital divide’— the divide between those with access to new technologies and those without — is now one of America’s leading economic and civil rights issues” (1999, p. xiii). The findings were nothing unexpected, reflecting data on divides by economic and geographic areas; however certain significant disparities were disturbing and alarming.

- Whites are more likely to have access to the Internet from home than Blacks or Hispanics have from *any* location (U.S. Department of Commerce, 1999, p. xv).
- The digital divides based on education and income level have also increased in the last year alone. Between 1997 and 1998, the divide between those at the highest and lowest education levels increased 25 percent, and the divide between those at the highest and lowest income levels grew 29 percent (U.S. Department of Commerce, 1999, p. xvi).
- Regardless of income level, Americans living in rural areas are lagging behind in Internet access. Indeed, at the lowest income levels, those in urban areas are more than twice as likely to have Internet access than those earning the same income in rural areas (U.S. Department of Commerce, 1999, p. xv).

The report exemplified disproportions related to race, economic incomes, education levels, and geographic areas presenting us with a traditional definition of the term “digital divide” as: noun, singular. However, upon closer look, we can see that this singular noun has in fact, several “divides.” And these divides viewed through the social theory lens of Pierre Bourdieu (1984), uncovers several “capitals” at play.

The form of capital that appears to trump all is economic capital. According to Bourdieu, economic capital is money, real estate, valuables, possessions or other financial assets. In the economic arena, it is clear that wealthier school districts can offer their students and teachers more technology access and use than poorer school districts.

In New York City, all borough regions (or at one time “local school districts”) are controlled centrally as one large district under the Department of Education (DOE). The New York City Public School District’s budget is determined and controlled by the mayor. In school districts other than New York City’s, school boards can develop a budget for their schools, drawing from property taxes. In these districts, community members can vote on a budget and have input on spending allowances as well. However, in New York City, there are no taxes distinguishable as being levied for schools. And, a school budget approved in New York City is not necessarily one truly in place for a full academic year.

For example, mid year in January of 2008, Mayor Bloomberg proposed a revised budget that would cut money from every city department, including schools. According to a *New York Times* article, as a result of Bloomberg’s budget, The Department of Education “is set for a \$324 million cut in the next fiscal year and is undergoing a \$180 million reduction in the current fiscal year” (Cardwell, 2008, ¶ 12). Schools Chancellor Joel I. Klein said that principals will “have to tighten some programs.” Klein explained that, “Different schools may find that they have to cut back on a program or that they may have to make some adjustment with the staff.”(Cardwell, 2008, ¶ 17).

For the general public, the DOE touts that they have now given New York City schools “more control” than they have in past years. But, according to several administrators I spoke to, how that control materializes at the building level is very different than what is presented to the public. As one administration put it, “Central (DOE) still gives us a lump sum and claims we have control on how to spend it but it’s like Three Card Monty...in years past they would give me five dollars and a cup of coffee

now they give me five dollars and tell me I have to buy my own cup of coffee...but hey, they still get to say that they gave me five bucks.”

Within each schools’ “lump sum” there is money allocated for teachers’ professional development. When I asked several administrators if they have ever purchased technology training for their teachers, most said “No.” For them the reality is that professional development for their teachers is “need driven” and most often relates to testing, data, or the latest math and literacy initiative.

Additionally, as part of this “decentralized shift” the City has “transferred some spending responsibilities, including paying for computer repairs, to individual schools.” (“In Turnabout,” 2008). With both curricular and administrative constraints, it has become yet another accepted part of the system that students and teachers who opt to use technology do so with the understanding that the technology will not be maintained or repaired.

The second form of capital that can be distinguished within the digital divide is symbolic capital. Symbolic capital involves socially ascribed status linked particularly to physical appearance; gender, race, age, body size. Besides the symbolic capital ascribed to one’s appearance, it also relates to the prestige claimed by association with high-status distinction, honor or prestige. Like all forms of capital, symbolic capital is defined by the very market system in which it is valued; a system which generates such schemes for status or distinction.

Schools using the word “technology” in their name have increased their symbolic capital by adapting a sign of distinction and engaging in the dominant discourses of society that sings the praises of technology as a powerful force. Using the keyword

“technology” on the Department of Education’s Web site search “Find a School,” results in 30 schools that use the word in their name. I have worked in a few of these schools or have colleagues that do and the amount of technology used for instructional purposes is far less than the name of the school or the school’s mission statement implies. Some mission statements explain that technology courses are “offered” or vaguely state that students will be “technologically knowledgeable.” Also, a number of the schools that include technology in their name, do so with “Math and Science,” isolating it as a separate subject to be “acquired” or “mastered” instead of a tool to be used for teaching and learning within critically engaged classrooms.

A third form of capital, defined by Bourdieu, is cultural. Cultural capital refers to training or competencies acquired or education that leads to a certified or demonstrable expertise but not only in an academic sense but also one’s knowledge, skills and capacities gained through experience. There are numerous schools whose principals proudly announce to the school community that the teachers in their building are “technologically literate.” Sounds good but what does it mean? I have found that when teachers have technology skills, administrators want them because of their expertise. In fact, most advertisements for teaching positions require the candidate to have the ability to use technology. Often times the teachers with a high comfort level of technology use are the ones that are “rewarded” with the technology in the building. However, regardless of their personal ability to use technology we need to examine how effectively these teachers use technology in their classrooms for teaching. Research shows that personal technology use (such as emailing, using word processing, “surfing the Net,” or using a

social networking site such as Facebook or MySpace) does not necessarily translate to classroom practice.

It is clear that most of the current generation of teachers have been more exposed to technology than have their predecessors. This exposure results in higher confidence levels with technology but does not translate into higher levels of use of technology in the classroom. The assumption that technology use in classrooms will increase simply because a teacher grew up in a technology-rich world appears false. (Russell, Bebell, O'Dwyer, & O'Connor, 2003, p. 308)

Lastly the form called social capital, refers to an individual's social networks, connections or relations that can be used to produce benefits or inequalities, can be seen at work within school buildings when a particular person "holds the key," literally, to the technology. Often time there is one person in charge of the technology, either officially or unofficially. This person holds the key to closets in which the technology is stored or has the key to the lockdown devices securing pieces of hardware. If one holds the official role of computer teacher, building tech coordinator or library media specialist, certain responsibilities (such as fixing hardware, installing software or troubleshooting problems) come with the title. Titles vary but the power to control technology use and access has now been given by a 'higher up' in the education ladder. Unofficially, there are teachers who "know technology," "can fix computers" or are "into media." The skills they embody (cultural capital) enable them to determine who will be the "haves and have-nots" in the building. By knowing one of these "key holders" classroom teachers are able to acquire access for themselves as well as for their colleagues. What begins to unfold is a complex layering of capitals. In addition to the cultural capital of the "key holder," there may have also been social capital helping that individual acquire the position. And, for the classroom teachers, it is their own social capital that establishes if the key holder allows them access to the technology.

In addition to forms of capital, there are “digital divisions” that are rarely discussed when it comes to the use of technology in education. These include multi-dimensional inequalities such as gender, age, cultural bias, as well as the existing disconnect of tech savvy, media using students in relation to their teachers and their schools.

When it comes to gender inequities regarding the use of technology, complicated issues are involved. Research proposes numerous reasons for the existence of the gap and the reinforcement of the bias. These factors include the media’s depiction of men as experts in math, science and technology, societal expectations of males and females, teachers’ perceptions of male and female students, and the recurrence of males dominating classroom technology use.

In addition to the overarching technology based findings, the broader scope of gender biased pedagogical practices must be taken into account. After decades of feminist activists trying to raise gender consciousness, women are still caught in a web of oppression. Men are still socialized for gender dominance and women are still psychologically inducted into a culture of passivity of acceptance of patriarchal subjugation (Kincheloe & Steinberg, 1997).

A recent *Computerworld* article described the findings from “The Athena Factor: Reversing the Brain Drain in Science, Engineering, and Technology,” a research project by Sylvia Ann Hewlett, Carolyn Buck Luce and Lisa J. Servon that examines the career trajectories of women. Hewlett, founding president of the Center for Work-Life Policy in New York, explained the following, “Women are actually excelling in science, engineering and technology, despite the fact that the schools are not very good at

encouraging them. Many don't just survive the educational process but get some distance in terms of careers.”

But despite this good news, the Athena Factor project found that attrition rates among women rise sharply between ages 35 and 40. And, not only are these women leaving technology and science companies but a large number of them are leaving the field altogether. “The most important antigen is the machismo that continues to permeate these work environments...They[women] talk about demeaning and condescending attitudes, lots of off-color jokes, sexual innuendos, arrogance; colleagues, particularly in the tech culture, who genuinely think women don't have what it takes -- who see them as genetically inferior. It's hard to take as a steady stream. It's predatory and demeaning. It's distressing to find this kind of data in 2008” (Melymuka, 2008, ¶ 6, 7).

Much like gender gaps, digital divisions exist based on age. Within school districts it has been my experience that lower grades use technology more often within their curriculum. For example, computers are physically available to them in their classroom whereas high school students and their teachers must locate and then go to the technology in their school building. The various technologies, computers in particular, are frequently kept somewhere within the architecturally large academic structure, but never in a classroom because classrooms are shared by so many students, moving throughout rooms and corridors every 43 or 90 minutes a day. Fear of theft and vandalism pervade. But unless you had exposure to classrooms of all grade levels, one would not know that there was inequity in usage, highlighting the fact that “not everyone benefits from the emergence of modern social, political, economic, and intellectual structures” (Harding, 1998, p. 105).

An impacting factor that also exists is cultural bias. Within classroom practice, the same technology used for instruction can be also used to perpetuate the dominant culture; a culture “despairingly viewed as a storehouse of dead facts, a time capsule of frozen memories detached from historical context” (McLaren, 1996, p. 275). For example, the Internet can be used as a research resource but it often times is the teacher, “the expert” that gives the students the Web sites. Much like the use of available text books, students take the information presented as “facts” that are “indisputable.” In this way, technology can have unintentional negative effects when used within a curriculum created by those whose values and beliefs become widely accepted or simply go unchallenged. Schools unconsciously identify what it means to be educated with a particular social group. The belief systems, the definitions of citizenship, views of success, and histories of these groups are seen and understood as privileged while the perspectives and histories of other groups are devalued (Kincheloe, Steinberg, & Tippins, 1999).

And last, we cannot ignore the disconnect of technology using students in relation to their teachers and their schools. Before we can analyze how teachers are using technology in the classroom, we must first determine if teachers are even using technology in their personal lives. If they aren’t using technology, then who takes the responsibility for teaching them to do so? Themselves? Their schools’ administrations? Professional development opportunities cost money and this is often times not feasible to include in an urban school’s budget. But is professional development the answer? Does a training session change teachers’ attitudes toward the use of technology in their classrooms? How does one begin to value technology as an effective instructional tool? “Teachers’ attitudes and beliefs toward technology are of great importance in their

decisions to adopt and frequently use technology in the classroom” (Russell et al., 2003, p. 307). As educators, if we look to use technology to better suit the learning preferences and needs of students, essentially we are creating learning experiences for ourselves as well. But teacher as learner may be an uncomfortable role shift for some. An education graduate student of mine once said, “Teachers should never admit they do not know anything about technology.” Like many others, his indoctrinated belief that the teacher is the bearer of knowledge, the expert, or the authority in the classroom, limits both his own pedagogical potential as well as the learning potential of his students.

Therefore, with the previous divisions in place it is crucial that critical analysis is initiated so that we can begin to deconstruct the “normalized” configuration in which these variables operate. We can do so with a starting position that acknowledges and addresses the multiple divisions but yet simultaneously focuses on the “haves” and most importantly, what we intend to do with that part of the equation.

The “State” of New York

Although my work predominantly focuses on technology use in New York City high schools, it is important to review the larger framework when much, if not all, decisions related to technology for classroom use are typically made outside the classroom. Classrooms, within schools, within districts, within cities, within states...again, the entire structure surrounding and including the classroom is a complex, a multi-dimensional network with “capitals” and “disciplinary mechanisms” at play.

The *New York State Technology Report*, which is a supplement to *Technology Counts 2008*, a joint project of Education Week and the Editorial Projects in Education Research Center, depicts findings from states across the nation that were surveyed to

assess the status of K-12 educational technology in the areas of access, use, and capacity. The report assigns grades to the states for their overall technology performance as well as separately, in those three categories.

On a scale of A through F, the report awards New York an overall grade of C- compared with that of an average state grade of C+. The greatest area of discrepancy was in the area of “use,” with New York receiving a grade of D+ while the average state score was a C-. One specific criterion within the area of “use” is “student standards include technology.”

The report positively notes there are 22 states with a goal of fully integrating technology throughout their curriculum and have thus embedded technology expectations within the standards of other subjects. New York, not one of the 22, has technology standards that exist as distinct, stand-alone documents (State Technology Report, 2008). Again, it is common to see technology as “add-on” or a subject area separated out from the rest of the curriculum opposed to being fully integrated into the disciplines as a tool for literacy and content development.

Other conclusions were expressed in the 2007 *New York Technology Policy and Practices Council Report*, conveyed mixed findings from statewide data.

- Nearly all learning environments and administrative offices in New York schools have high speed Internet connectivity, and the majority of schools report student-to-computer ratios of 5:1 or better (p. 1).
- The State of New York has not created a collective vision and strategy for how technologies can advance teaching, learning, and leading in the 21st Century. With some notable exceptions, few K-12 teachers or administrators report having a clear understanding of their district or school’s vision and expectations for educational technology in the context of learning, teaching, and leading (p. 1).

- Student use of computers in New York schools, on average, is limited to two or less hours per week, and is focused primarily on drill and practice and online research. The use of these tools for problem solving, critical thinking, student productivity, collaboration, simulations, modeling, and authentic learning is evident in a limited number of schools (p. 2).

The report reflects the positive trends of increased Internet access for schools and lower student-to-computer ratio than in previous years. However, what still poses a challenge is the lack of a clear, or even an existing, vision on the part of those who ultimately make decisions that effect classroom practice. The study also specifically mentions “critical thinking” and the lack there of. By using technology ineffectively and treating it as a separate subject instead of an integrated tool that mediates both teaching and learning experiences, we continue to promote decontextualized notions of education and support a neutral curriculum. Neutral in that we keep hidden multiple realities hidden by dominant ideologies, through dominant curriculum.

Freire warns, “More and more, the oppressors are using science and technology as unquestionably powerful instruments for their purpose: the maintenance of the oppressive order through manipulation and repression” (2005, p.60). For example, New York State requires students in grades 3 through 8 to take standardized exams. In high schools, students in New York State must pass the Regents exams in order to receive a diploma. And although benchmarks and assessment are needed, these state mandates trickle negatively to the classroom level with instruction heavily weighed down with test prep and review. Rich, in-depth curricular give way to lessons filled with a “list of facts” or “sound bites” of what is “on the test.” Teachers working in this way may choose to use technology but only to perpetuate the status-quo with test driven, rote memorization of standardized materials. Students sit in computer labs or in groups in front of laptops or as

an entire class viewing a projected image of a test-prep Web site or test preparation software.

Given this, it is imperative that students and teachers work in unity toward a shared vision and “participatory classrooms” (Shor, 1992). But this, by no means, will be an effortless and uncomplicated task within a system of indoctrinated roles of the teacher as truth bearer and the student as receiver of knowledge. Building collective responsibility for successful participation in a field is a challenge because teachers have historically sought to establish and maintain control over students (Tobin, 2005). The nuances of control, power and regulation add to the complexity of the technology integrated classroom.

And although there is a “lack of vision” on their part, the New York State Education Department *has* made available a number of programs that provide substantial funding to New York schools and their communities to bridge the digital divide and promote educational initiatives designed to aid in the use of technology for teaching and learning. The following are some of programs listed on New York State Education Department Web site (NYSED Educational Technology Programs:

http://www.emsc.nysed.gov/technology/EdTech/EdTechPrograms/other_sources.htm)

- The New York State Model Schools Program, Information for Teachers from the New York State Library, and the New York State Museum Education Office are programs that are accessible from the State Department’s Web site but not prevalent in New York City Schools.

The consensus of the administrators, literacy coaches, staff developers, and classroom teachers I asked, was that they were not aware of technology based initiatives

or funding from any of these programs that would significantly impact use at the classroom level. A few administrators and librarians were aware of the New York State Library and had in fact received grants. However, the grants received supported school libraries, updating them to become “Library and Media Centers,” with a focus on information literacy, which The American Library Association defines as a set of abilities requiring individuals to recognize the need for information, and the ability to locate, evaluate, and effectively use that information.

- The E-Rate Program for Schools and Public Libraries in New York State (<http://www.emsc.nysed.gov/technology/EdTech/EdTechFunding/erate.htm>) ensures that all eligible schools and libraries have affordable access to modern telecommunications and information services. School eligibility correlates with schools that receive funding for free and reduced price lunches from the National School Lunch Program.

The New York City Department of Education applies for E-rate money but does not allow individual schools to do so on their own. With a top down model in place, the use of the awarded money complies with the vision of the central office and not that of the administrators, teachers and students of the individual schools themselves. Donaldo Macedo warns, “...the subtext of ‘choice’ is that although choice is theoretically possible, not all of us have the same privileged position from which we can exercise our right to choose” (1994, p. 138). This applies not only to choices by individuals but by individuals organized within institutional structures.

- NCLB-Enhancing Education Through Technology (EETT or Title II D) (<http://www.emsc.nysed.gov/technology/EdTech/EdTechPrograms/eett.htm>) are state funding grants awarded to improve student achievement through the use of technology.

In my current position I have supported both EETT and Title II D grants for Bronx elementary and secondary school teachers. My support consisted of conducting stand-alone workshops, to groups of teachers, outside of classroom practice. Although I acknowledge that this is not the most effective means of professional development, the sessions did result in teachers creating project based lessons and activities that incorporated technology in meaningful ways. Unfortunately when it came time for them to implement their technology based lessons or activities into classroom instruction, the underlying sentiment was they were not able to do so because they needed their instructional time to prepare their students for standardized exams.

- New York State Teacher Resource and Computer Training Centers (Teacher Centers) (<http://www.nyiteez.org/NYteachercenters/homepage.htm>) were established by the New York State Legislature in 1984 to provide systematic, ongoing professional education services to the State's teachers. Their goals encompass the following areas:
 - Assist educators in assessing and meeting the learning needs of students
 - Provide computer demonstration and training sites and programs for educators
 - Promote educators' use of and involvement in educational research to develop and produce curricula and curricular material
 - Provide educators with training for the improvement of teaching skills
 - Provide a location and atmosphere to foster sharing and increased understanding of resources, ideas, methods, approaches, information and materials among educators
 - Train educators to prepare students to use high technology and to teach the critical thinking and related skills needed for the changing world community.

I currently work for the New York City United Federation of Teachers Teacher Center as an Instructional Technology Specialist. I am 1 of 8 members of the “Teacher Center Tech Team,” working to provide technical and instructional support to over 250 Teacher Centers housed within elementary, middle and high schools as well as over

80,000 teachers and paraprofessionals. My work, to say the least, is daunting. And, what has been more discouraging is working within a program that has been created as a support for teachers but at times merely perpetuates the status quo.

The wording used in our projected goal of training educators to “use high technology” and teach “critical thinking” is inherently problematic. I cannot even venture to define “high technology.” By putting the technology before the curriculum, we ignore the possibility of integrating it within practice, as a teaching and learning tool. It is irrelevant what high technology is; the technology should not be labeled. The technology will vary as do the teaching strategies and methods; and it will serve as an instrument of support, aiding both students and teachers as they work together to reach a higher level of critical awareness. Technology use is not scripted; what works in one teaching or learning situation will not necessarily work in another.

And, we must not over simplify teachers’ ability to help their students reach a new level of critical awareness. Critical awareness and critical thinking are not things that are to be acquired in lockstep fashion within a scripted curriculum. They are not things that are born from memorizing facts or repetitious preparation for a state exam. Rather, critical thinking is a process that is encompassed within a complex notion of critical pedagogy. A critical pedagogical vision grounded as it is in social, cultural, cognitive, economic, and political contexts understands schooling as part of a larger set of human services and community development (Kincheloe, 2008). To believe that we can teach critical thinking void of social and ethnic contexts or power embedded relations, is naïve and ultimately detrimental to students. And, the denial of culture that is enacted in fields

(fields being the settings in which human agency and social positions are located), furthers the detrimental effects of “schooling.”

However, I do work with colleagues that have students’ well being in mind. They want their students to succeed (i.e., get good grades, understand the material presented). But, they are unaware of their perpetuation of the status quo. As an organization, my colleagues and I work to support teachers of a system that imposes constraints and restrictions upon them. Constraints and restrictions that range from teaching within a 43 minute class-period time frame, little or no resources such as text books or class sets of novels, or curriculum coupled with “pacing guides” that don’t allow for in-depth exploration of a topic but rather a tight time frame within to teach the concept.

That, coupled with financial restrictions, creates a “do the best you can” defeatist attitude. In the past two years I have worked with small groups of classroom teachers making effective changes for them and their students at the classroom level. Unfortunately because of budget constraints my work has become a numbers game with funding support equating with the number of teachers we train; a game of quantity vs. quality. Five months ago I was asked to discontinue working with my small study groups that employed technology based teaching strategies with hands-on exploration and instead use my time to train groups of 40 to 50 teachers in an afterschool workshop. For the past year, large group, stand alone training sessions that offered little or no hands-on practice, have slowly become the norm. Ironically, as professional developers we are supposed to model for our fellow teachers “effective” teaching strategies that they are then supposed to “turn-key” in their classroom. And they do. They work with large groups of students in oversized classes, under curricular constraints. For the colleagues I

work with they do not see the harm in what we practice. They are like countless other educators that, “do not intentionally hurt students; they are merely following the dictates of their superiors and the rules of the system” (Kincheloe, 2008, p.9).

- The Office of Educational Television and Public Broadcasting (<http://www.oce.nysed.gov/etvpb/about.htm>) New York State will be a leader in applying public telecommunications resources towards educational improvement, student achievement, lifelong learning, and personal enrichment. The goal is to facilitate the creation of public broadcasting programs and services to meet State Education Department priorities. From this Web site there are links to “Your Local Public Television” where New York City teachers can find content rich resources for their classroom from Thirteen/WNET.

Several years ago I attended an education conference in which Thirteen/WNET was presenting. Excited by the wealth of educational information this conference provided for classroom teachers, I immediately went to share with colleagues. Once inside a N.Y.C. Department of Education school building, I quickly learned that much of the valuable Thirteen/WNET Web pages were blocked by the DOE’s “filtering system.” Many teachers I currently work with have decided to no longer use the Internet for instructional purposes since the DOE, in the name of Internet safety for students, has restricted access to text or resources that they deem “inappropriate and/or harmful text.” Examples of “inappropriate and/or harmful text” include, “AIDS” and “breast plate” or any words related to the topics of sports, guns or sex. The DOE’s words, void of context, connote a sense of caring or protection yet in practice, impede students and teachers from accessing valuable information. James C. Scott explains that “whenever one encounters euphemism in language it is an nearly infallible sign that one has stumbled upon a delicate subject...the imposition of euphemisms on the public transcript plays a similar role in masking the many nasty facts of domination ” (Scott, 1990, p. 53).

From the “hidden transcript” we learn that it is from the DOE’s Office of Instructional and Information Technology located at MetroTech Center in downtown Brooklyn that the decision is made as to what information can be viewed and used by a Bronx high school ninth-grader working on a Science assignment.

New York City, just like I pictured it...

-Stevie Wonder, *Living for the City*

Not surprisingly, technology use in New York City K -12 schools, still lags behind the rest of New York State because of economic differences. Nationally, research has shown that schools with the lowest level of minority enrollment had fewer students per computer than did schools with higher minority enrollments (Wells & Lewis, 2006, p. 6).

However, despite the “lag,” in recent years New York City public schools have increased their technology resources as well as their technology use and technology access. When defining “technology” for instructional purposes, I am referring primarily to computers (desktop and laptop) and the Internet but also computer-related equipment such as printers, scanners, LCD projectors, SMART Boards, software programs, DVD players and VCR players with televisions, digital still and video cameras, overhead projectors, even graphing calculators and electronic microscopes. However, I am not attempting to define every piece of technological equipment a student or teacher might use, but rather refer to a broad range of devices that aid a student in the learning and a teacher in his or her instructional practice.

At present, the technology found in DOE classrooms is a result of New York City public schools being the recipient of several funding programs the State Department administers. One in particular that has made enormous changes is the E-Rate Program.

A short video, housed on the E-Rate Central Web site, http://www.e-ratecentral.com/video/project_connect.asp, explains how E-Rate funding helped to accomplish “Project Connect” which is “New York Public Schools’ ten year effort to bring the power and creativity of the Internet to every student and teacher in every classroom.”

The video is a sleek, engaging production that begins with statistics on the New York City school system followed by an interview excerpt by Ling Tan, Director of Capital Budget and Finance Planning, New York City Department of Education. “Technology is a term that ultimately is going to be the underpinning of everything we do and use, so where do you start? Schools! That’s where the kids learn.”

The video continues with quotes from teachers and principals about technology as “part of the future,” and students who are going to be the “caregivers, the decision makers, the scientists.” The music, the quotes, and the title slides have a “tug at the heartstrings” approach with much of the video backdrop depicting bustling classrooms, their walls lined with desktop computers, while students in the same room as the desktop computers sit in groups, working on laptop computers. In over a decade of working with instructional technology in New York City public schools, I can attest that the scenario depicted in no way reflects the norm, and moreover, it is something I’ve yet to encounter.

The video continues for over five minutes with sound bites that explain the possibilities of the Internet, with teachers talking about their students videoconferencing

with other students in the United Kingdom, or accessing information from the NASA database, or using blogs as a means of class communication and “constant dialogue.”

There are also comments from principals that these world experiences enable students to move beyond New York City and their schools. I agree that the experiences mentioned are indeed positive possibilities when using the Internet for learning. However, also included in the video are references and statements regarding technology that for me, are not as impressive:

- A high school teacher explains that, “If we increase the technology in classrooms, especially in inner cities, we’re giving our kids that competitive base they need...”
- A middle school principal states, “Another piece is really leading teachers into continuously learning on their own, and technology keeps them motivated, it keeps them excited about the instruction they’re delivering...”

The use of technology for instructional purpose has enormous possibilities. But it is the *use* of the technology for teaching and learning that has the possibilities... not the technology itself. The language that the teacher and the administrator use in the video imply an indoctrinated and stereotyped view that the teacher is the all knowing expert and the student the empty void waiting to be filled with knowledge; knowledge that is created in a top-down model of lessons and activities that fail to challenge both parties intellectually. And, what should teachers be “giving their kids” or include in the “instruction they’re delivering?” “To be truly empowering, teachers must use all the instructional tools at their disposal to work with students in their problem posing, problem solving, inquiry and critical analysis of the forces that shape their world, and a reflective understanding of a variety of texts, including the texts of their social realities” (Greene,1996, p. 305).

Interspersed throughout the video of teachers and administrators' interview excerpts are slides of text that state the following:

- 10,000 miles of network cable connects 19th and 20th century schools to 21st century learning.
- Connections mean opportunity for every student.
- Project Connect creates new ways for students to communicate and collaborate...Erasing time, distance and social barriers.
- Project Connect is the infrastructure for an ever-evolving learning environment where teachers are free to innovate and learning is more student centered.
- Project Connect is a catalyst changing the way teachers teach and students learn.

The Internet does have the possibility of being a democratic space where students can find other voices, discourses, ideas and “truths.” But the Internet does not have this power; the human element is crucial. The video lacks references to students engaging with one another or teachers engaging with their students. The technology, or in this case Project Connect, is viewed as a Godsend...a vehicle to transform education disregarding the social, cultural, economic and political influences within the system.

In *Oversold and Underused: Computers in the Classroom*, Larry Cuban (2001) explains how new technologies are viewed as the new reform agent of schools:

...techno-promoters across the board assumed that increased availability in the classroom would lead to increased use. Increased use, they further assumed, would then lead to efficient teaching and better learning which, in turn, would yield able graduates who can compete in the workplace. These graduates would give American employers that critical edge necessary to stay ahead in the ever-changing global economy (p. 18).

The notions of efficient teaching, competing in the workplace and staying ahead are reminiscent of the social efficiency model of centuries ago. As critical teachers we

must resist the powers that impose a grand narrative or a dominant ideology of the “business of schooling” or the notion that technology can be our educational savior. We can do so by using technology as a tool, to teach and learn in meaningful ways. Ways that push us to contextualize, explore and question competing forms of knowledge as well as forms of oppression and exclusion.

The E-Rate/Project Connect video ends with a powerful statement and footage. The last title slide states, “The achievements of Project Connect are helping change the education paradigm...one student at a time.” The slide then fades into a shot of two students talking to the camera, “We’ll be adults...we’re the ones that NASA wants to go to the moon and Mars...”

Through a critical lens we see a mix of dominant ideologies presented through discourse: technology is changing education for the better, the value of attaining a science based position and the primary need to compete globally. This dominant discourse is reminiscent of the report, *A Nation at Risk*, which appeared in 1983, leaving a legacy of people believing that rotten schools had produced a rotten workforce and hence failure in international competitiveness. The report failed to acknowledge that the President and Congress and the Federal Reserve Board make policy with regard to international competitiveness (Ohanian, 1999). Yet we continually compare our students to those of other nations, we repeatedly prepare and administer standardized tests, and we engage in an efficient business of schooling. Without a view through a critical lens, we see undisputed truths of dominant discourses instead of varying truths, knowledge production shaped by a myriad of forces, and understanding and awareness from our culturally and socially embedded lived experiences (van Manen, 1990).

Conclusion: The Need for Criticality

Based on dominant ideologies and discourses of an education system that operates from a top-down model, technology within school buildings is predominantly used for legitimizing the status quo. Even at the classroom level, technology can be used as a means of control and regulation. Technology use in either locale is not an isolated phenomenon. It is utilized within a complex structure of not only cognitive contexts, but economical, societal, cultural, and political contexts. And, contexts that hold a history.

As T. S. Eliot explains in *Tradition and the Individual Talent*, "The difference between the present and the past is that the conscious present is an awareness of the past in a way and to an extent which the past's awareness of itself cannot show" (Eliot, 1975, p. 39). To comprehend where we are and where we need to go, we must have an awareness and an understanding of the past and present relationship.

The use of technology tools or instruments has always been a social practice; as children we develop tool-using capacities in a multitude of informal ways. Whether it is banging on pots and pans to make music, finger painting to represent a reality, or inventing games with sticks and rocks, our lives are full of technology based activities. But historically, as new goals of schooling emerged, we blurred the notions of cultivating social practice in education and moved toward a full commitment to social efficiency. And our modern technologies are often equated with this efficiency.

But in any discussion of modern technology, addressing the notion of "The Digital Divide" is essential. According to *Digital Divide.org: Ushering in the Second Digital Revolution*, "It took digital-divide researchers a whole decade to figure out that the real issue is not so much about *access* to digital technology but about the benefits

derived from access (2001, ¶ 2). These benefits correlate with meaningful and effective use. In the classroom, meaningful and effective technology use vis-à-vis critical pedagogy enables both students and teachers to work cooperatively toward social and cognitive achievements as well as gain an awareness of and a resistance to, oppressive forces. To do otherwise will merely perpetuate the status quo and the banking method of education.

Additionally, through a critical lens, we must also examine the digital divide itself, understanding it to be much more than disparities in economics and access. Divisions such as inequalities of gender, age, culture, must be acknowledged as well as the current disconnect of technology savvy students in relation to their teachers and their schools. All of these divisions exist in a complex matrix of power, economic, cultural and social domains that inherently affect the use of technology for both students and teachers.

Without this complex understanding bound by varied histories, it is easy to consent to the claims that there is an existing lack of research and evidence that technology increases academic achievement or plays a positive role in enhancing education. On the other hand, some educators view technology as a powerful force independent of history and power relations; one that can make learning easier and more efficient. What is consistently ignored is the detail that technology alone it is not the power wielder, but rather the people using it. These claims reflect the power of the dominant discourse perpetuating the notion that technology itself can produce change. But, *effective* technology use by students and teachers *can* produce change.

With a solid grounding in critical pedagogy, students and teachers can use technology to critique existing bodies of knowledge presented to them, understand the

complexity of lived experiences, and engage in inquiry, dialogic practice, and responsibility sharing.

Furthermore, the effective use of technology can aid in the shift of power from “teacher to student” to teacher and student working together, more specifically in terms of what is learned, how to learn, and who takes the responsibility for learning. From this perspective, students and teacher can also begin to make informed judgments about which technologies are best suited to enhance their own learning, teaching and critical thought. By making these critical connections, we ultimately use technology in a way that empowers.

Overview of Dissertation

Through autobiographical reflections of my own learning and teaching process as well as narrative accounts described through an auto-ethnographic lens, I will relate numerous examples and anecdotes that I have either observed or directly participated in during my work in New York City public schools. Interspersed with methodologies and grounded in a sociocultural and critical theory framework, I intend to explain and exemplify the complex relationships that affect the use of technology by students and teachers. Additionally, in the spirit of critical pedagogy, I move from the current state of ineffective technology use by students and teachers to a sharing of co-created knowledge, solution proposing and construction of emancipatory discourses that reflect effective use; one that empowers both parties to be agents of educational and societal change.

In the subsections below, I summarize the contents of each of the remaining chapters of the dissertation.

Chapter Two:

In *Situating the Research(er): Critical Teaching, Critical Researching, Theoretical Insights and Methodologies*, I position myself as a teacher and researcher and describe the preparation for my dissertation. Guided by an interdisciplinary approach of bricolage, I explain the ways in which I incorporate theoretical and philosophical insights but also recognize differing methods of inquiry. I outline the implications of using sociocultural theory, critical theory and critical pedagogy to examine the complex relationships associated with and affecting the use of technology by students and teachers. I explain the various methods of inquiry which include auto-ethnography, hermeneutics and phenomenology. In doing so, I also acknowledge my position within this complex, fluid framework.

Chapter Three:

Window Dressing the Urban Classroom presents an introductory look at the circumstances surrounding the use of technology in New York City public middle and high schools. I discuss what types of technologies exist in classrooms, how they are used, and by whom. Personal narratives and anecdotal accounts relate the instances when technology is available but not able to be used due to lack of training, broken equipment, and classroom conditions that impede effective use.

Chapter Four:

The Technology is Here!...Now What? explores the role technology-based professional development plays in the life of a New York City teacher; what type of training is provided and how effective is it on classroom practice? A framework for effective professional development model is also presented, to be used when urban teachers work toward integrating new technologies into their teaching practices.

Chapter Five:

The Classroom Office focuses on the available software used for instructional purposes that facilitate the deskilling of teachers and the “dumbing down” of curriculum. In addition to explaining the oppressive circumstances teachers are faced with when trying to incorporate various strategies for effective technology use, I also present possible alternatives to technology use that provide learning experiences that foster critical thinking, dialogue and reflection. By providing these experiences, we enable students and their teachers to better understand the relationships among teaching, learning, the production of knowledge, and the larger institutional frameworks of the educational system.

Chapter Six:

Concrete Voices: Beyond the Classroom Walls explores the empowering possibilities of the World Wide Web including the use of Web 2.0 tools in instruction. With information sharing and collaboration amongst users, the traditional student/teacher relationship is altered as divisional lines defining roles are blurred with students and teachers acting as co-producers of knowledge. However, despite the instructional potential of the Web, obstacles such as access and filtering impede effective use.

Chapter Seven:

The Need for Critical Connections

The concluding chapter is both a reflective account and critical look at the implications and ramifications as well as the empowering possibilities and potentials of using technology as an empowering tool for teaching and learning. Grounded in critical pedagogy, the effective use of technology provides ways for students and teachers to seek out multiple perspectives, critique existing bodies of knowledge, understand the complexity of lived experiences, and engage in creative inquiry and dialogic practice.

And, in doing so, traditional roles of student/teacher can begin to fuse, as they become co-creators of new knowledges.

CHAPTER II

SITUATING THE RESEARCH(ER):

CRITICAL TEACHING, CRITICAL RESEARCHING, THEORETICAL FRAMEWORKS AND METHODOLOGIES

Critical Teaching

It was a change in career that brought me to an eighth grade classroom in the South Bronx. As a new teacher in New York City I joined the ranks of 60% of new hires, White women comprising a majority of the group¹. As the newest member of the staff, I eagerly accepted my teaching assignment. Unbeknownst to me, the students I was going to teach were grouped according to academic ability with 801 as the “on level” group down through 809 which contained those reading and writing on a second and third grade level. I looked down at the paper my principal had given me to see a spattering of 809s throughout the days of the week. I didn’t know what the number meant until I visited the teachers’ lounge. Veteran teachers, as well as some teachers who were only teaching a few years, laughed and joked at my “misfortune.”

I was met with sarcastic “Good Luck” and “Oh, Sorry!” as well as plenty of: “Just give them worksheets.” “They don’t want to learn.” “They’re disgusting.” “Just fill the board with notes and make them copy it.” The “advice” varied but the message was the same. And even the students, tracked for most of their time together in the school, got the message too.

¹ *Black and Latino/a Teachers Strongly Encouraged to Apply*

Published by Teachers Unite [<http://teachersunite.net/article/December2006>]. After a series of phone calls and several written requests, the NYC Department of Education claims to have to no such data regarding age, race and gender of their teachers.

The first few weeks were trying to say the least. My students exhibited behavior that was inappropriate for a classroom or rather, not appropriate for the classroom I envisioned. So I asked them what they thought “classroom behavior” should be like. They immediately gave me a description of the one I envisioned: no cursing, no shouting out, no getting out of their seats, no hitting one another. Chuckling, I asked, “Then why are you doing the opposite?” They were quick to brag, “ ‘Cause we’re bad.” “You’re not going to teach us anything...We’re dumb.” “Yo Miss, we eight o’ nine!” “What does that mean?” I asked. They explained what the class numbers meant while I kept interjecting that I knew nothing about the grouping, that somehow they must have been mistaken. They assured me I was wrong but from their whispering to one another, head shaking and grins, it seemed to me that a part of them was hanging onto the possibility that I was in fact right.

As the weeks continued, I put together activities based on worksheets and material colleagues lent me. Despite our conversation, the behavior was not much different than the first few days. I was as frustrated as they seemed to be, but I couldn’t figure out where their frustration lay.

I was able to get the behavior manageable by implementing a “ticket system.” Those students exhibiting the agreed upon appropriate behaviors, received a ticket. The person with the most tickets received a prize on Friday. With my modest teacher salary I bought school related items such as pencils, stickers, notebooks, and rulers as prizes. Very soon, I was giving prizes to just about the entire class! The behavior was great; they loved the idea of prizes but I quickly realized there was no intrinsic motivation to take the place of the ticket. The work they were doing was to me, “flat.” I knew and they knew

that this was the same game they had played for seven years. Some sat quietly and simply chose not to do the work while others went through the motions of filling in worksheets or copying the information I presented on the board, but nothing was truly engaging. My assistant principal said I was doing great. “They are so good for you with your ticket game!” But I was no longer concerned with good behavior; I wanted them to be engaged in something meaningful. I wanted them to look forward to learning. I wanted them to express the ideas they themselves didn’t know they had.

And with that in mind, against the English chairperson’s strong recommendation, I began to use textbooks and novels reserved for on-level students. I can remember vividly dropping a big stack of new purple bound text books on my desk with a thump. “Are those for us?” “Yes,” I replied, “Make sure you put your name in the front cover.” They were dumbfounded. “But those are for 801!” Again, I said I knew nothing about this “grouping thing” and that these were books I found in the book room that contained some great stories. And so we began.

We worked a bit slower, but we got through. And, we got through quite well. I read aloud, dramatically, with great voice inflection. And then we would talk about the text. They would read aloud, slowly, stumbling through pronunciations, sometimes stopping and asking me, “Howdya say that?” before they made an attempt at a word. And then we would talk about the text. They sometimes read independently, in silence. I would watch as some would move their finger across the page, underlining the words as their lips moved without sound. And then we would talk about the text. Sometimes we would draw our favorite scene or character. And then we would talk about the text.

Sometimes we would start the class with a writing prompt, “In the story we’re reading imagine if...”

Most days reading became a welcomed event. They’d enter the room and ask if we were going to continue reading the short story, novel or play from the previous day. The only resistance was if I told them I wasn’t going to read aloud. “Aw, come on! You gotta, please!” I would give in and say that I would start them off and then they were to continue on their own. This always seemed to be a good compromise. But, an even better side effect of my insubordinate act was the incredible boost in self confidence it gave to students who were now allowed to use books reserved for “smart kids.” When they entered the classroom, their body language was more welcoming, more relaxed. They didn’t seem as angry and some of the shyer students, began to speak aloud more frequently. And, finally, they seemed engaged. They now asked questions about the things we were working on instead of shutting down with a quick, “This sucks” or “This is fucking stupid.”

The following year I had a similar experience ensue when four computers were “dumped” in my classroom following our December holiday break. I was instructed by the assistant principal that they were in “pretty bad shape” but I was welcome to fix them and use them as a reward with my “good” students, class 801, that I taught once a week. What I chose instead, much to the dismay of both the administration and my colleagues, was to let my special education class use them. “Are you kidding, they’re going to wreck them.” “Don’t reward them for acting like idiots.” “Why would you do that? Give the good kids a break.” Incidentally, I was not officially “certified” to teach special education students. Furthermore, I had no academic or experiential background teaching students

with special needs, but as a new teacher, if I wanted my job I was to work the assignment I was given.

My special education class consisted of seven 13, 14, and 15 year old boys with emotional and behavioral problems and learning disabilities. We met the last period of the day on Wednesday and Friday afternoons. By law, I was required to have a paraprofessional assist me during class time but for one reason or another, she was rarely present. For several weeks the class was a disaster; I was overwhelmed and they were out of control. At first I tried writing, then I tried reading, then I tried discipline, then I tried reasoning, and then I tried bribing—no success. Then I tried ten minutes of work followed by, “help me fix the computers.” The results were unbelievable. We cleaned the monitors, repaired keyboards, and explored software. A few students that were not interested in helping sat quietly and played a “vocabulary PacMan” game on one of the computers that was working. Within weeks of our new routine, the dean from across the hall came in because he “heard the silence” and was hoping everything was all right. Everything was more than all right. Thanks to a “high spirited” young man named Danny, I learned to use the presentation software, HyperStudio. With my HyperStudio experience, a few years later in my career I was able to make an easy transition to using PowerPoint.

For the first weeks of the school year, Danny was frequently absent. He had told me several reasons for his absence; “in jail,” “home helping my mother,” or “just didn’t feel like coming.” On a day he was in school, he happened to stay for my class. It was the week I tried my “fixing computers” idea. Within minutes, it was clear that working with computers was a natural for him. He was actually dumbfounded when I asked him to

teach me a few of the software programs. He had been playing around with one in particular: HyperStudio. I had read about HyperStudio, understanding it to be a software application that allowed one to create multimedia presentations or electronic portfolios, but I had never tried it. I simply asked him, “Wow, how did you do that?” and proceeded to sit down next to him.

From there the other students joined in, extraordinarily excited to show me what they knew or discovered. With their help, I was able to gain a sense of the capabilities of the software and began creating lesson activities that enabled my students to use the programs effectively. Instead of the recommended “reward” of using drill-software, I set up a curriculum plan in which I would teach for the first part of the class and then let the students use the computers to work on their corresponding projects; using painting software for “artistic responses to literature,” creating slide show presentations about a story’s main character, using formatting features of word processing software to add an aesthetic element to original poems, and hyperlinking words in their descriptive paragraphs to photographs and graphics.

It became clear that the technology I used in my eighth grade classroom enabled me to inspire and motivate students and turn my once traditional classroom into a community of engaged learners and critical thinkers. It affected issues of classroom management, inclusion of students with special needs, bilingual students, and struggling readers and writers. It changed my way of teaching and my students’ ways of learning.

Three years later, when I accepted the opportunity to teach at the high school level many of my previous instructional successes at the middle school level were over-

shadowed by the frustrations that are all too common to those working within the New York City system: lack of technology resources, the overcrowding student population, high absenteeism of both students and teachers, as well as the lack of parental and community involvement. Because of the ever present top-down model within schools, I was not able to implement some of the technology supported methods and curriculum based ideas that I had acquired through my middle school teaching experience. In both grade levels there was a strong push to “teach to the test” but at the high school level the curriculum I was asked to follow was scripted, with a list of topics that were to be covered on the New York State Regents Exam.

Although there is a need for assessment and evaluation in any learning process, the idea of teaching decontextualized bits of information that aim to meet a particular learning standard or reflect a standardized test exam question was futile. These forms of assessment failed to take account of the complexity of the classroom, teachers’ professional roles,, and students’ diversity. Now, because I had to fit in a given amount of topics before the Regents Exam was administered, I was not able to take the time I had in the past to read aloud, or have students read or more importantly talk about what we were reading, why we were reading it and what we thought about what we were reading. As a teacher I was expected to transfer certain pieces of knowledge to my students in the form of notes, worksheets and independent reading followed by answering a series of questions found at the end of each textbook story. My supervisor acted as if I was doing my students a disservice if I didn’t “give them everything that was going to be on the test.” I felt frustrated and unable to articulate what I knew in my heart. If the goal was to successfully read passages on the exam and answer questions in a critical light, then that

sort of activity needed to be reflected in our classroom practice; not repeatedly taking Regent exams from previous years. The love of reading, the intrinsic motivation, the self inquiry and the connections of text to our lives was long gone. We didn't have time for that. We only had time to get certain "important" pieces of knowledge. But unfortunately my superiors and my colleges failed to realize that knowledge is active rather than passive and one does not expect a final product in order to empirically determine whether or not success was achieved (Kincheloe, Steinberg, & Tippins, 1999). Or is a final product expected? It seems that a final product is exactly what those in favor of frequent standardized testing believe. But whose standards are they? Who determines what is to be learned and who does the learning? And, what is the knowledge being aligned to the standards? Whose knowledge is being generated? Knowledge in what context? And, how does this knowledge relate to power?

In an over-crowded high school, in my fourth floor classroom, which was stifling hot in the summer and freezing cold in the winter, I worked within the constraints imposed by others, surrounded by disengaged students, weary teachers and impassionate administrators. I tried desperately to incorporate technology into my classroom practices, only to be told that "another class" uses the overhead projector, or that the computer lab was reserved for the Business students. As I struggled for answers to the many questions I had, I felt powerless. My supervisors made it clear that my goals were not theirs; I was to prepare for the New York State Regents exam and maintain order by keeping the students busy.

Henry Giroux (1997) warns that there are risks involved in the struggle to teach critically. There may be "structural and political constraints" as well as "enormous

resistance” encountered and one might even “endanger one’s job” (p. 64). I felt the pressure from my department chairperson. She would smile and chat with others, but never with me. I was once told by a veteran teacher, “What do you expect? You don’t play the game.” Once when I was explaining to another teacher how I wanted to visit the school library with my class for a project, another colleague overheard and interjected sarcastically, “What are you trying to be? Teacher of the Year?”

Because of my ‘radical’ notion that we (my students and I) would learn the elements of a story, critically analyze the content, practice our reading and writing in creative ways, and acquire new vocabulary through various interdisciplinary projects; not take weeks and practice and practice and practice sample exams from previous years, retaking them over and over until the scores increased, I decided that my skills and experiences would be better utilized in a different capacity.

And so, the following academic year I began working as a staff developer for a large kindergarten through eighth grade district in the Bronx. In this position I designed and implemented professional development programs for elementary and middle school teachers of all discipline areas. Through on-site demonstration lessons, multimedia projects and presentations I was also able to work with students. The impact of technology integration on literacy and learning was evident. Once again the change in teaching and the ways my students were learning what I had experienced in my own classroom, began to emerge in others.

But in many classrooms throughout the City, positive change has not emerged for much of the same reasons I experienced as a middle and high school teacher. At present, I also have the opportunity to work with graduate level students at Lehman College, City

University of New York, teaching the course, *Literacy, Language, and Educational Technology*. This course explores the use of instructional technology to support the teaching of literacy to students of diverse language backgrounds and abilities, as well as developing projects that address the social, legal and ethical issues affecting the instructional use of technology. The course objectives are inspiring but the reality of my students' professional situation teaching in New York City public schools, leaves many of them defeated.

In both the capacity of staff developer and college adjunct, I encounter teachers who are stifled by over-bearing administrations obsessed with standardized test scores, scripted curriculum, and packaged remediation material from a "favorite" textbook publisher. To oppose these mandates, would jeopardize their job. These teachers have even greater difficulty in taking on the task of teacher co-creator of critical knowledge, rules, and values, with which they must consciously articulate and analyze in their various relationships within the educational structure. This role change concept, which Giroux (1997) refers to as "emancipatory authority" dignifies teacher work, viewing it as a form of intellectual practice and a means of privileging student voices. It is a role change that I deem essential.

Critical Researcher

It has been through my studies at The Graduate Center, The City University of New York that I have gained insights related to the cultural, social, political, economic, and ideological forces surrounding my work that have enabled me to critically view my own sociocultural constructed history and lived experiences as well as the histories and

experiences of others, along with an understanding of varying discourses that at times both enables and limits particular identities and individual capacities. My doctoral journey up until this point has been a complex one.

When I began studying at the Graduate Center in the Fall of 2003, I anticipated that my studies would enable me to explore the notion of changing current public policies from within and begin to develop definitions of reading and literacy that go beyond traditional text and include communicating in networked environments. I also hoped that I would research the issue of technology use in the classroom and how it aids in increasing student achievement.

Through my work as a staff developer and instructional technology specialist for the New York City School public school system, I have found that although our schools are lagging behind for reasons commonly equated with urban areas, there are federal, state, and city grants and initiatives that bring technology into the classroom. Additionally, there is existing research that states that the infusion of multimedia in the traditional classroom can open the door for students to develop new literacies, which include academic literacy, civil literacy, and media literacy. But for every study that generates these claims, there is an opposing one, espousing that technology use does not directly correlate with student achievement.

However, what the research from both sides of the debate fails to address are the two parties at the very heart of the matter; students and teachers. Research cannot be void of context; yet rarely are the cultural, social, political, economical and ideological forces that impact both teacher and student uses of technology taken into account. And what is

“student achievement?” How is it measured? A closer look at those defining the term is crucial.

What I have also found is that research that focuses on student use, rarely acknowledges teacher use. In the use of any new tool, there is a learning process, and teachers are not exempt from it. The arrival of new technologies in school buildings seldom has any training to go with it. Ironically technology is constantly purchased as an item to use for instruction but with no instruction given on how to do so. Many technology based initiatives or grants provide initial teacher training at the opening of the project, but the training for teachers is almost never ongoing and sustained.

In *How Teachers Taught: Constancy and Change in American Classrooms 1880-1990*, Larry Cuban (1993) speaks of incremental reforms that aim to improve efficiency and effectiveness of existing structures of schooling including classroom teaching. These technology initiatives can be classified as such reforms. But, as Cuban warns, many of these types of reforms are never institutionalized. The overall mortality rate for classroom reforms is high. Because I felt a strong desire that the integration of technology by classroom teachers may one day be encompassed within a fundamental reform; one that aims to transform or alter permanently what teaching, learning, and the classroom community looks like, within the first year of my doctoral studies, I shifted my focus to that of the classroom teacher.

My “revised” vision was that the use of computers and related technologies be included in the literacy curriculum for pre-service teachers. Adequate training and staff development should also be provided for in-service teachers so that they could effectively implement the use of technology in their classroom, thus increasing ways in which New

York City school children will be exposed to and experience new literacies in order to be successful students, critical thinkers, and lifelong learners.

But my challenge to do so was clearly multi-dimensional and at this point in my studies, the more I learned, the more I realized the monumental task that lay ahead. Van Manen explains it best, “Things turn very fuzzy just when they seemed to become so clear” (1990, p. 41). To make my vision a reality in the urban classroom I would face many obstacles; how could I help to provide and equalize adequate technology access? Or involve a majority of teachers with practical, ongoing professional development? What about the technical support needed for technology use and maintenance?

For a semester in my doctoral program, I worked diligently on a *Policy Analysis, Brief and Action Plan*, clearly outlining the challenges as well as the possible solutions at city, state, and federal levels. It was a thorough, comprehensive piece that only needed to be enacted; but after several long months of hard work, I realized I no longer believed my own policy.

How could one technology integration course for pre-service teachers, followed by in-service technology professional development, change the way teachers teach and the way students learn? Continual review of research and literature uncovered the variety of reasons why teachers are not using technology. At the surface level, teachers hesitate to incorporate technology in their classroom routine, mostly because of a lack of time and a lack of resources, or a lack of confidence in their ability to use the available technology. But the underlying dynamics, which I knew from personal teaching experiences and encounters working with teachers, rarely surfaced in data and findings, such as dynamics of culture, race, gender, economic influences and social constructs of power.

Epistemological and ontological assumptions unquestioned for so long that had calcified into “immutable truths” about pedagogy also shaped the relationship between teachers and technology. These were the occluded forces that I was beginning to identify and articulate. And with this naming and communicating I began to enter into a new zone of understanding.

As my doctoral studies progressed, I developed new insights. These insights, couched in sociocultural theory, critical theory and critical pedagogy, coupled with an understanding of the history of education, practices of pedagogy, and the instructional use of technology allowed me to reflect on my own practice. I realize now that much of my work within Bronx classrooms was, and still is, engagement in critical pedagogy. But not a pedagogy used as a synonym for teaching, but pedagogy that connects teaching with philosophy and social theory. With this belief as my grounding, I feel I have not only an obligation, but an impassioned desire to create change within a system of complexities that defines a great portion of my life. “Connected, critical researchers sensitive to the complexity of the lived world are not isolated individuals but people who understand the nature of their social-cultural context as well as their overt and occluded relationships with others” (Tobin & Kincheloe, 2006, p. 7). I will always define myself as both student and teacher, and it is from this place that I begin as researcher.

I begin this research by employing Joe Kincheloe’s notion of “bricolage.” In his book *The Savage Mind*, French anthropologist Claude Lévi-Strauss uses the term bricolage to describe the concept of putting preexisting items and materials, including

thoughts, together in new ways. Lévi-Strauss speaks of the bricoleur as one who is adept at performing a multitude of tasks, making do with whatever tools are at hand.

From Kincheloe's perspective, in the context of teacher-researcher, criticality is enhanced by a multilogicality that values diverse perspectives and the insights gained by careful analysis of their intersections. Therefore, I will use Kincheloe's overarching concept as a rigorous interdisciplinary approach, incorporating theoretical and philosophical insights but also recognizing differing methods of inquiry. In doing so, I aim to both problem-pose and problem-solve the complex relationship(s) surrounding the use of technology by students and teachers. This interdisciplinary approach will not be viewed from the outside, looking in. As Kincheloe (2008) explains, "such multidisciplinary demands a new level of research self-consciousness and awareness of the numerous contexts in which any researcher is operating" (p. 131). The process of teaching with technology, the process of learning with technology, the relationships that exist within that locality, the resources used for instruction and the decisions intermingled within educational structures are complex and fluid.

By understanding my position within this complexity of forces and relationships, I will not cease at explaining knowledge and constructs of knowledge but rather engage in the production of rigorous, multidimensional knowledge, uncovering both the visible and invisible multiple forms of power and documenting the nature of their influence on my own work as well.

Theoretical Frameworks

Sociocultural Theory

Unlike the positivist teacher-researcher who only sees one way to teach, one method of research, and a concept of knowledge as one that exists in a distinct, measurable sum, I acknowledge that human development is fundamentally cultural and develops out of social interaction.

In 1910, John Dewey's *How We Think* was originally published. At that time Dewey criticized "external results" and the destructive importance of the "correct answer," stating that no other thing, probably, works so fatally against focusing the attention of teachers upon training of mind as the domination of *their* minds by the idea that the chief thing is to get pupils to recite their lessons correctly (p. 53). We have to ask ourselves, a century later, how far have we come in our pedagogical approaches?

Unfortunately in mainstream pedagogies, we are taught to believe that the knowledge we consider official and valid has been produced in a neutral, noble, and altruistic manner (Kincheloe & Steinberg, 1997). And, we must also be aware that scientific processes that produce such knowledge are not transparent; they are comprised of culturally regional discursive resources (Harding, 1998). Therefore one scientific theory can be consistent with any given data; it depends on the powers that organize the data, the context of the research and the multi-dimensionality of the participants involved, to uncover the meaning of interpretation.

Social and cultural influences, as well as a comprehension of power's complicity are fundamental concepts I will keep in mind as I reflect on my own practice and the practice of others. I have found that my Bronx middle school and high school classrooms

have both similarities and differences from classrooms in other geographic areas throughout New York State, as well as the United States. And, although there are even classrooms throughout the Bronx that may have profound similarities to my own, differences exist.

When working with teachers, I continually recognize that technology use does not have one distinct way of being used. I offer and model possibilities of effective integration, but also acknowledge that for a multitude of reasons, what works in one classroom may not work in another. The influences of the school's culture, discourses of power, and political ideologies, have an impact on integration. And, these influences, unfortunately often leave teachers feeling discouraged and isolated.

In my current position I am afforded the rewarding opportunity of conducting training sessions that bring New York City teachers together, regardless of their grade level or discipline area, to learn that as educators working in New York City, they do in fact have comparable challenges such as over-crowded classrooms, unsupportive administration, physical classroom conditions in need of repair and a lack of resources that include text books, paper and calculators. Many who wish to use technology with their students find themselves in rooms without working electrical outlets. With this new found camaraderie, teachers are able to share their differing challenges as well as work toward solutions in their districts, their buildings, and their classrooms. However, this by no means is a simple act. Despite the bravery and determination involved in doing so, there is also a pervading acceptance of the dominating social and cultural circumstances of their teaching lives. Even more frequently, teachers I work with are often not even aware of the hidden forms of oppression that surround them.

In addition to my personal experiences, a sociocultural lens is vital when I examine data and findings related to the use of technology by students and teachers. I find it essential to take into account factors of capital, field (system of social positions) and the notion of “habitus” (Bourdieu, 1984) which is the social location that we internalize; “the suite of preferences, propensities, orientations, tastes, perceptions, ways of speaking, eating, dressing, relating to others, and making meaning in the world” (I. Shor, personal communication, 2007). Habitus is the already existing structures that mediate the way we understand the world and make choices in it. It is our ways of behaving and our attitudes. “It is the knowledge that comes to hand in action—in a structural flux that produces resonances that afford certain dispositions to act” (K. Tobin, personal communication, 2009). Habitus comprises our expectations for what kind of life to lead as well as how to lead our life. Again, no two urban classroom teachers or classroom cultures are alike. At present, the plethora of existing research that exists regarding the use of technology for instructional purposes draws heavily from quantitative studies conducted in middle class, upper-middle class and/or suburban areas and does not adequately reflect the urban classroom. The studies are positivist, with a reductionist view, disregarding cultural and social influences. For teachers attending professional development sessions that have been designed on the basis of these studies, a heightened sense of discouragement and isolation sets in.

Moreover, when looking at technology use it is imperative to view the technology itself through a sociocultural lens that is not merely defined as a hard-wired object but rather something which serves as a cultural tool that mediates learning within “zones of

proximal development” (Vygotsky, 1986) and aids in scaffolding instruction in order to articulate prior knowledge and internalize new information.

There are three ways in which a cultural tool is passed from one individual to another; imitative learning, instructed learning and collaborative learning (Gallagher, 1999). And, a technology integrated classroom can run parallel to that of the traditional classroom. A technology based classroom that engages in imitative learning will follow the same teaching strategies despite the infusion of technology. The technology does not take the place of the teaching; it is merely a tool to aid in the learning process.

Therefore, if imitative learning places the teacher as the expert that “models” an activity, providing the student with advice and examples, eventually guiding the student to do the task alone, then a technology infused lesson might use the aid of video to further model an activity. I frequently help teachers acquire free educational videos so that they can play them on a laptop computer, or on a DVD player or on a VCR. Often times with reliable Internet access, videos can be downloaded or viewed in “streaming” format. In this context the student is able to return to the mediated modeling several times if needed rather than observing the “in-person” expert only once.

After several viewings the student may need less assistance, until eventually he or she is able to complete the activity independently. Vygotsky refers to this change in an individual’s mastery level, with the support of another, as “scaffolding.” The support of another in this instance is not only a person but also technology in the form of video.

Instructed learning in the traditional classroom, is when a teacher lectures or provides the students with detailed notes and the student remembers the information and then uses it to self monitor. Information and instruction are merely presented and the

student is expected to “absorb.” Technology use in this type of classroom would probably be similar and therefore ineffective. Many teachers sit their students in front of a computer with drill software programs that present information to be regurgitated by the student in some manner such as clicking a multiple choice answer or checking a box for true or false. With the strong, top-down focus of standardized exam preparation, technology use in this context “dumbs down” the curriculum and perpetuates the deskilling of teachers.

And lastly, a cultural tool may be passed to others through collaborative learning. Technology use in a classroom that engages in collaborate learning, or experiences when students cooperate, can have monumental benefits. Research clearly indicates that cooperation, compared with competitive and individualistic efforts, typically results in (a) higher achievement and greater productivity, (b) more caring, supportive, and committed relationships, and (c) greater psychological health, social competence, and self-esteem. The positive effects that cooperation has on so many important outcomes makes cooperative learning one of the most valuable tools educators have (Johnson & Johnson, 2005, ¶ 2)). Technologies such as wikis or blogs or simple presentation software can serve as the supportive tool of cooperative learning, acting as the medium that students use with ease.

By using the cultural tool of technology in effective ways both students and teachers can begin to create new forms of knowledge that expose the dominant ideologies and discourses that shape their lives as well as “process of unlearning what has been transmitted to us as truth” (Kincheloe, 2008, p. 138).

Critical Theory

Critical theory usually refers to theoretical tradition developed by The Frankfurt School, a group of scholars connected to the Institute of Social Research at the University of Frankfurt. However, none of the Frankfurt school theorists ever claimed to have developed a unified approach to cultural criticism (Kincheloe, 2008). It is this central tenet that draws me to critical theory as a guiding force. Similar to that of social theory which questions, explores, and explains social life, critical theory is concerned with relations of power, race, class, gender, dominant ideologies and discourses, economics, culture and political spheres. It is this ever evolving, perpetuation of theoretical insights that enables me to understand the interconnectedness of forces that shape everyday life and lived experience, particularly experiences involving the use of technology in classroom practice.

Currently, in the field of educational technology, there are two preeminent authorities; Will Richardson and Alan November. I have looked to both to guide my work in instructional technology, explore innovative ideas, and see the educational potential of media in the classroom.

Will Richardson was formerly a teacher at a high school in Flemington, New Jersey. Richardson is the author of the blog *Weblogged* and the book, *Blogs, Wikis, Podcasts, and other Powerful Web Tools for Classrooms*. It was his use of blogs in the classroom that won him notoriety in the classroom. And according to the information posted on *Weblogged*, Richardson is also “The sole operator of Connective Learning, LLC (est. January 1, 2006) through which I contract paid appearances to speak, conduct workshops, or consult with individuals, schools and districts” (<http://weblogged.com/about>).

Will Richardson speaks about the potential of the “Read/Write Web” as a collaborative space for students to access information and ideas from different sources, connected only through hypertext. Students can also use this space to contribute their knowledge to people in places outside their daily scope. He also places an emphasis on the fact that the classroom is no longer restricted to four physical walls.

Richardson’s style is engaging and direct with specific anecdotes of technology’s amazing potential when used effectively for learning. He speaks from personal experience of students collaborating with students from other countries on a blog, students creating their own Web pages to discuss and present course content, and creating oral histories and interviews through podcasting. His view of technology’s potential is related to students’ engagement in critical thinking, but critical thinking in the sense of responding in thorough and thoughtful ways, the processes of analysis and evaluation, and inquiry as well as an exploration of questions posed and solutions possible. But Richardson’s reference to critical thinking does not relate to any analysis that questions and challenges dominant sources or works to heighten critical consciousness so students are better able to question the beliefs and the nature of their historical, educational and social situations.

Although Richardson’s work is a step in the right direction from the banking method of education, it still falls short of empowering possibilities. The students that he depicts as engaged are not seeking out or sharing subjugated, multicultural, and indigenous knowledges; they are merely informed and working within a Eurocentric educational framework. They are not collaborating, problem-posing, or thinking critically

as active agents of their own learning. They are merely using a learning tool they are comfortable with.

What I find most disconcerting is that the schools Richardson refers to are almost always in middle and upper-class areas or in urban schools with administrators that value technology as an instructional tool and thus support its integration at all levels. Never in his message does he acknowledge “digital divisions” or the complex web of power laden forces that affect the use of technology at the classroom level. He does make reference to that fact that schooling hasn’t changed significantly in the past century; classrooms are teacher centered and the textbook is the only source of information, with paper as the only means for communicating. He comments on the continued resistance to change, but never ventures to address the reasons for this scenario within a political, social, economic or cultural lens.

As critical teachers and researchers we need to use the emerging technologies Richardson presents to us and determine empowering ways in which to move toward a critical consciousness. By doing so, we are better able to address the issues inherent in the overarching digital divide, and begin to work toward solutions. Yes, students can find a voice when using technology in effective ways, but it is what we intend to do with our new found voice that is important.

Richardson’s counterpart, Alan November has a strong, upbeat, humorous style that speaks directly to the classroom teacher. He offers strategies for students to validate information on websites, has written a guidebook that helps teachers and students effectively find, sort, and evaluate information, speaks of 21st century empowered learners, authored a book, *Empowering Students with Technology*, inviting teachers,

administrators, parents and students to embrace technology as a learning tool. Much of what November offers can be viewed as effective strategies and used at the classroom level but it tends to be presented as a “one size fits all” model. However, he does touch on graver issues such as the need to shift control from the school system to the learner, identifying schools as "Reality-Free" zones that inadequately reflect the technology and media adolescents use in their personal lives and fail to use technology to create a new teaching and learning culture, because the teachers work within a lock-step hierarchical management system, and because the textbook publishers and testing companies dominate and control most of what is taught in American schools.

But what is disheartening about November’s message is that he refers to these situations with mere sound-bites. He gives us snippets of “this is how it is” but never proposes ways in which we may facilitate change. The avoidance of new discourses, solution posing and participatory action perpetuates the status quo. Teachers’ acceptance of these “facts” is likened to students passively accepting official words and grand narratives. Educators such as November who fail to act on unjust realities, remind me of the students Shor (1992) speaks of in *Empowering Education*, “...year by year their (children’s) dynamic learning erodes in passive classrooms not organized around their cultural background, conditions or interests” (p. 17). The business of schooling has had the same detrimental effect on teachers.

Additionally, November refers to students using technology and media with a class bias. The pieces of hardware that he deems common place for school age children would most likely be found in middle to upper class homes; iPods, Xbox Live, and a computer with high speed Internet access in order to make video calls with Skype™. I

have yet to see these technologies used in the daily lives of the inner-city students I work with. And merely “giving” students technology does not equate with empowerment. With several forms of “digital divisions” at play, once again we see the use of technology as a complex, evolving phenomenon. By looking at its use in contextualized settings we are better able to study the invisible while addressing the known.

Although the messages of both men are often times inspiring, exciting and motivating, as a critical researcher I acknowledge that they lack the reality that urban teachers face when they return to their buildings; ignoring the traditional notion of the digital divide, deep in economic disparities, or the digital divisions of capital (economic, cultural, social and symbolic), gender, age, and cultural bias, technology using students vs. their teachers, or the complexity and complicity of constructs of power.

However, with their ideas helping to inform my work, I strive to develop new theoretical insights, connecting notions of power and oppression, joined also with an awareness of cultural and societal structures as they shape the use of technology at the classroom level.

Critical pedagogy

By re-constructing my work in instructional technology through the lens on critical pedagogy, I am able to facilitate the empowerment of teachers as well as students. For me, empowerment is having the knowledge that the status quo must be changed as well as the teaching and learning tools to do so. By means of “the praxis” (Freire, 2005), my action and reflection upon the world in order to transform it, can be achieved in my coexisting roles as teacher and researcher.

Without critical reflection, I become one of many who inadvertently accept and perpetuate the status quo. I have found that both students and teachers are so conditioned to leave their personal lives at the door of learning. We are indoctrinated to make the classroom a neutral ground, void of culture; a place in which to receive information. But I have also found that there are teachers doing compelling, meaningful work. Similar to myself when I was teaching in the secondary classroom, they do not always realize the powerful implications of cultivating their students' intellects. They do not realize that this cultivating of intellect, empowers both themselves and their students, to move toward changing unjust social practices they have come to accept.

With the tenets of critical pedagogy as a foundation for my research, I hope to identify classroom practice that reflects empowering acts; teachers risking disciplinary action for "hacking" through their school's Internet filtering system so that their students can read and view information labeled "inappropriate" by dominating forces; students creating videos to teach one another concepts usually reviewed by taking practice standardized exams; teachers using blogs to give their students a medium in which to share, question and construct knowledge; students creating digital nonlinguistic representations to understand complex concepts; students and teachers video conferencing with people and places, throughout the world.

I do not wish to label these or any other pedagogical occurrences in positivist light, but rather explore alternative meanings and discourses of teaching and learning. When reflecting on my personal experiences, or reviewing research on instructional technology, or analyzing pedagogical practices, I intend to go beneath surface meaning (Shor, 1992), theorize my own experiences rather than articulate the meaning of other

peoples' theories (Giroux, 1997), embrace the performative aspect of teaching (hooks, 1994), and learn how to negotiate across boundaries of age, ethnicity, and social class (Tobin, 2005).

Like critical theory, critical pedagogy is continually evolving and creating new critical discourses; discourses that reflect my classroom experiences. It is of profound importance that I am familiar with the multiple intersections of knowledge production so that my research process can ultimately lead to action; an action that will entail the cultivation of ways that will bring others together in order to work toward common emancipatory goals.

Methodologies

Auto-ethnography

According to John van Maanen, "An ethnography is written representation of culture (or selected aspects of culture). It carries quite serious intellectual and moral responsibilities, for the images of others inscribed in writing are most assuredly not neutral" (1988, p.1). Because I intend to look critically at my own experience, I define my method of research as auto-ethnography; cultural accounting of my experiences as well the experiences of others. From this perspective, I must also analyze the ideological forces which frame my self image as a teacher, my self image as a researcher, my world view and my definition of effective instructional technology. Essentially, my reflections will be constructed from personal and observed scenarios and resituated in written form.

Resituated, because I am aware of the limits of language and the non-neutrality of my words. "Word meaning is a phenomenon of thought only insofar as thought is embodied in speech, and of speech only insofar as speech is connected with thought and

illuminated by it” (Vygotsky, 1986, p.212). My representation of acts such as computer use, or wiki writing, or technology training may be a cultural account but one shaped by my own narrative and rhetorical conventions. Despite the limitations, my words and representation ultimately give way to my own insights, ingrained in theory, of technology use by students and teachers.

By using the method of auto-ethnography I aim to describe the everyday occurrences of technology use, as well as the authorities that construct it. I will describe myself and my fellow teachers and students in ways that engage with the representations others have made of us. In doing so I seek create a representation “in response to or in dialogue” with the discourses of the dominant (Pratt, 1991).

With a critical focus on contradictions and inconsistencies within personal and observed circumstances, I will challenge the hegemonic consciousness and dominant ideologies of educational life and seek to unveil a multitude of hidden transcripts (Scott, 1990).

Hermeneutics

Traditionally, hermeneutics is described as the development, study, understanding and interpretation of texts, however within a broader, critical scope, hermeneutics involves the interpreting aspects of knowledge and knowledge production vis-à-vis a literacy of power. Through a hermeneutical analysis of personal stories, ethnographic narratives, current research and findings on technology use in schools and classrooms, and the writings of current educational technology experts, I aim to uncover and clarify sociocultural and critical complexities, and in doing so, continually study “the parts in relation to the whole, and the whole in relation to the parts” (Kincheloe, 2003, p. 247).

Technology use is not an isolated act. Through continual interpretation of my interactions with both people and texts, I aim to gain a greater understanding of this phenomenon. With a knowledge that technology use cannot be understood without reference to the people using it, the context in which technology is used, and the purposes for which it is used, I aim to narrate the story of a multidimensional act within cultural, historical, and social contexts.

Jürgen Habermas explains that, “the unity of knowledge can no longer be lodged objectively in a world that fits together into a system by itself. Instead it must be grounded subjectively, in a systematic procedure of the investigator” (1968, p. 75). Converging with my auto-ethnographic approach, I understand my limitations. With this complex fallibility in mind I employ this critical self-reflective methodology, working to re-know “what I thought I knew” (Shor & Freire, 1987, p. 9).

Additionally, in a critical light, my hermeneutical approach will challenge the notion that “facts speak for themselves.” And although no absolute and final interpretation exists, I believe that from my multitude of knowledge producing sources, I will be able to make meaning from both the unfamiliar as well as the familiar. And, as a hermeneutically informed critical researcher, I aim to “transcend the inadequacies of thin descriptions of decontextualized facts...and gain the ability to produce thick descriptions of social texts...” (Kincheloe, 2003, p. 246). In the struggle for change, this approach is an essential tenet of my critical research as I continually produce new knowledges and pedagogies that aim to benefit oppressed peoples.

Phenomenology

“Phenomenological research is the explication of phenomena as they present themselves to consciousness” (van Manen, 1990, p. 9). As humans we derive meaning to and from the world—we and the world around us are co-constructed. As researcher, when I translate my own lived experience, as well as the lived experience of students and teachers into written accounts, my description of such is mediated by my own words; words that will never be an exact representation, but will aim at unearthing meaning, experiences and themes. Because the use of technology as an instructional tool has a multitude of applications and implications on teaching and learning, I will avoid developing mimetic positivistic representations but rather create a reflective configuration of lifeworld experiences bound by economic, cultural, political and social influences.

My phenomenological approach will help begin a dialogue that discounts “one truth” about the act of using technology as a learning tool. Much like the top-down curriculum driven model that teachers operate within, technology use has acquired a scripted sense about it as well. Teachers using desktop and laptop computers tend to stay within the “safety zone” of typing word documents or looking at preselected websites to later paraphrase for essay writing. But there are complex reasons for their choices of use and a need to uncover them within a contextualized view is essential in order to conceptualize new insights and formulate strategies for change.

By using critical phenomenology as a method I will unmask the hidden assumptions commonly made about the nature of reality. Rather than seek to learn the meaning of a particular act of technology use, I will instead seek the meaning of

technology use for a certain individual or group, thus translating their lived experiences with this instructional tool. Here I will ask the fundamental phenomenological question in this context: what is it like to use technology in the urban classroom? By doing such, I will gain new understandings and unique perspectives on how students and teachers give meaning to their world amidst dominant forces, the status quo and the social and cultural spheres they both reflect and help produce.

Narrative Inquiry

Narratives can reflect lived and told stories. Because of his insights on human experience and social life, John Dewey is said to inform the field of narrative inquiry. Tied closely to the notion of experience, narrative inquiry is more than story recording. It is a form of research that can serve as a powerful tool in the sharing and constructing of knowledge. It is bound to cognitive issues of memory; those that are constructed and perceived. It is a unique way of getting at “worlds within worlds.” As researchers we are located within a time and place, culturally and socially bound. But yet we are also located within an interwoven range of stories. Narrative inquiry, from this point of view, is one of trying to make sense of life as lived. To begin with, it is trying to figure out the taken-for-grantedness of social life (Clandinin & Connelly 2000). In the spirit of the bricolage narrative inquiry interacts with and synergizes the other methodological and theoretical tools in use.

It is a welcomed challenge to tell my story and the story of others, interwoven with sociocultural and critical theory, to uncover unjust educational designs that have been accepted as adequate and all too often have perpetuated the status quo to the detriment of students and teachers alike.

One of the more misguided perceptions or grand narratives of technology use is that technology is inherently “good” for students, “good” for society, and “good” for progress. Teachers are usually quite excited that they are incorporating technology in their classroom practice but do not realize that often the way in which they do so is reminiscent of Freire’s banking concept of education. Teachers use PowerPoint to lecture, utilize the Internet to access online Regents practice exams, and employ an enormous amount of instructional time for students to type their papers using word processing software.

I have found that one of the best ways to help a teacher envision better and more effective uses of technology is to communicate a story of such use. By relating accounts of other teachers using the same technologies for problem-posing instead of “depositing information,” the possibilities of empowering students to critically perceive their world(s) can be visualized. Thus, the narrative expands; the original narrative, intersecting with another, creates a new story. It is vital that we work with present narratives, in order to create new ones that reflect technology rich educational practices that empower students as well as teachers.

By doing so we produce new knowledges that uncover multiple emancipatory insights. “Because living in truth represents a fundamental threat to a system of lies, it is not surprising that academic discourse goes to great lengths to develop a discourse based on euphemism” (Macedo, 1994, p. 39). As a critical researcher it is imperative that stories be told. By creating multiple dialogues and critical narratives of diverse truths, I can support the creation of modes of resistance to dominant powers. In the light of criticality, I envision modes of resistant to reflect new ways of thinking and new forms of

consciousness; all in the quest to alleviate human suffering and the ways it manifests itself in schooling.

The ultimate wisdom of the photographic image is to say: 'There is the surface. Now think- or rather feel, intuit- what is beyond it, what the reality must be like if it looks this way.' Photographs, which cannot themselves explain anything, are inexhaustible invitations to deduction, speculation, and fantasy. Photography implies that we know about the world if we accept it as the camera records it. But this is the opposite of understanding, which starts from not accepting the world as it looks. – *Susan Sontag*

For some, both research and photographs reflect one vision, one truth. But research, whether qualitative or quantitative, cannot explain a lived experience, a phenomenon, or a pedagogical practice. In a reductionist view one might claim to produce an objective reality but through research bricolage, complexity is embraced, interrelationship is exposed. With this belief, I have chosen multiple theoretical perspectives as well as methodologies to guide me. And, in a layered and interwoven fashion I have explained my insights; doing otherwise would be analogous to separating the technology from the people that use it.

The process of learning with technology, the process of teaching with technology, and the process of researching the two locales, is multifaceted and forever changing. The chapters that lie ahead serve as starting points to examine the world of technology use in educational settings, acknowledge inconsistencies in truths, and create new knowledges that challenge the status quo—or rather, it can be said that remaining chapters are the story of a student/teacher/researcher who does not accept “the world as it looks.”

CHAPTER III

WINDOW DRESSING THE URBAN CLASSROOM

You gotta look sharp
And you gotta have no illusions
Just keep going your way looking over your shoulder.
-Joe Jackson, *Look Sharp*

When I enter the third floor room it seems unusually bright; as if someone took a picture and the flash of the camera washed out the vibrant surrounding colors. I quickly realize that it is because there are no shades on the windows and the April sunshine is strong, reflecting off the white aluminum siding of the adjacent building. I am meeting with a high school teacher who, mid-semester, because of scheduling changes, has been moved into a room that has three new desktop computers. In this particular high school, teachers move from room to room but those with an “advisory” period are given a classroom for the semester. Advisory is the name for what was a “homeroom” in years past. In most schools, advisory is a full class period, reserved for attendance taking and carrying out other administrative activities, but also a time for teachers to address both academic and social needs of students. The teacher I am meeting with does not have an advisory period so the reason for the move is unbeknownst to her. When she asked the question, the answer she received from her Assistant Principal one morning was, “I don’t know why but that’s where you’re going now.” She is accepting of the change, commentating “Well, I think I’m short a few chairs and I still can’t find a full class set of textbooks, but I got new computers...at least that’s good!”

I offer her a suggestion as to what I did almost a decade ago when I too had no window shades in my room. We joke about the glare, saying one could pretend they were

teaching while vacationing in sunny Florida. I reminisce about the white gravel roof my middle school classroom overlooked; how it reflected the light, making the inside air close to the windows hold the heat in a heavy blanket. Because of that, no one was able to sit on one side of the room, making our overcrowded class appear even more so, as desks and chairs were moved closer together in the middle of the floor.

Before we even discuss the computers, we search together, rummaging through a closet in the far corner of the room for a large piece of paper, but we are without luck. Instead, the teacher is able to locate some scotch tape and we begin to attach used pieces of $8\frac{1}{2} \times 11$ paper to make our shade. While we do so, we talk about the computers and the possible ways she can incorporate their use into her teaching and design some ways her students can use them in their learning process.

The tale we're told

When taking a reflective step back, the layers in this scenario unfold. The school and its administration “look sharp” as they boast to parents and regional support personnel such as superintendents, content coaches and staff developers about the new equipment speckling a few of their classrooms. Even the teacher herself is looked at by some fellow teachers as fortunate to have the upheaval of a room change. “Aw, you’re a lucky shit! How’d ya’ get those?” the teacher in the room next door asks as we sit taping our shade together. “I know, I hope I’ll be able to use them. That’s what Kate’s here for.” She smiles and introduces me. “Hell, I’ll take them if you don’t want them.” We all chuckle aloud, but I have to wonder if he is better prepared than she to use computers with students in a way that truly enhances teaching, using the technology as an instructional

tool to work on activities that are a central part of the content specific curriculum or as a communication channel for accessing pertinent information. The possession of symbolic capital, of having technology, sets a distinction or an acknowledged status that these classrooms are somehow “better” than those without, thus adding to the narrative that technology can be education’s knight in shining armor- or in this case shining metal and plastic.

This narrative that can be heard throughout the schools’ corridors can also be heard far from the city’s streets, in the grand narrative of our nation. In 2004, the U.S. Department of Education published The National Education Technology Plan, “Toward a New Golden Age in American Education: How the Internet, the Law and Today’s Students are Revolutionizing Expectations.” The plan was officially released in January of 2005.

The plan itself can be found on its own Web site, <http://www.ed.gov/about/offices/list/os/technology/plan/2004/site/edlite-default.html>. It is here that one can “Download the Plan” or “Browse the Plan.”

The wording and the tone of the document are reminiscent of the ominous, *A Nation at Risk* published over twenty years before. *A Nation at Risk* warned us that the mediocrity of our education system was threatening our future as a nation; that our children were not being challenged by high quality instruction. In fact, in The National Technology Plan’s section “A Nation on the Move,” *A Nation at Risk*, is even referenced! In similar style, we are warned that, “We have not realized the promise of technology in education” and that we need “systemic change” and we must “understand the national crisis.”

The section goes on to explain, “Essentially, providing the hardware without adequate training in its use – and in its endless possibilities for enriching the learning experience – meant that the great promise of Internet technology was frequently unrealized. Computers, instead of transforming education, were often shunted to a “computer room,” where they were little used and poorly maintained. Students mastered the wonders of the Internet at home, not in school” (U.S. Department of Education, A Nation on the Move section, 2004, ¶ 7).

I have several issues with the above statement. First, the acknowledgment of hardware without training and computers in labs instead of classrooms is a positive one. But it ends there. The remaining fifty pages of text offer no concrete solution and no tangible plan for “systemic change.” Instead, we are presented with words and recommendations such as, “strengthen leadership,” “consider innovative budgeting,” “ensure” teachers have training opportunities, “encourage broadband access.”

In regard to the statement that, “Students mastered the wonders of the Internet at home.” What? How did they do that without Internet access! As I referenced in Chapter One, Americans at low income levels and those in rural and urban areas had less access than Americans of moderate income and those living in suburban areas (U.S. Department of Commerce, 1999, pp. xv-xvi).

The discourse of The National Technology Plan is embedded within an ideology; an ideology that Göran Therborn explains in a “very broad sense” as the “... aspect of the human condition under which human beings live their lives as conscious actors in a world that makes sense to them to varying degrees. Ideology is the medium through which this consciousness and meaningfulness operate (Therborn, 1980, p. 2).

This dominant authority has created a document that guides us in how we should think and feel about technology in education. Using Therborn's "three fundamental modes of ideological interpellation" (1980, p. 18) we can begin to understand how ideologies, embedded in discourse, can both subject and qualify subjects by "talking to them, relating to them, and making them recognize: what exists, what is good, what is possible" (1980, p. 18).

Using Therborn's framework and The National Technology Plan, we know that our education system is in crisis when it comes to using technology (what exists), we are aware of "the marvels of technology" and know that technology can save us (U.S. Department of Education, A Nation on the Move section, 2004, ¶ 4) (what is good) and we know that "... students, teachers and technology are driving a return to educational excellence" (U.S. Department of Education, A Nation on the Move section, 2004, ¶ 10) (what is possible).

Even though we can learn from a national level about the possibilities of technology transforming education, at the school level, on a daily basis, the complexities and the challenges of effective technology use still prevail. In this chapter I begin to uncover some of those complexities and challenges as well as the reasons why.

"Looking sharp" within the matrix of power

Despite her possession of symbolic capital, the teacher depicted in this chapter's opening scenario is a "docile body" functioning within institutional authority; authority that produces and perpetuates obedient teachers through a normalizing process in which teachers accept bureaucratic control. Briefly, there was a questioning of authority: "Why

was my room changed?” But, the teacher was ignored. She accepted her Assistant Principal’s answer, with acceptance being the appropriate response for her in this hierarchical place. In this scenario the exercising and acceptance of power is continuous and normalized. Foucault reminds us:

And, although it is true that its [power’s] pyramidal organization gives it a ‘head’, it is the apparatus as a whole that produces ‘power’ and distributes individuals in this permanent and continuous field. This enables the disciplinary power to be both absolutely indiscreet, since it is everywhere and always alert, since by its very principle it leaves no zone of shade and constantly supervises the very individuals who are entrusted with the task of supervising; and absolutely ‘discreet’, for it functions permanently and largely in silence. (Foucault, 1995, p. 177)

This regulating discipline the teacher experiences is not necessarily in the form of overt punishment (in the case of a teacher, overt punishment might be a letter in her professional file describing her insubordination to administration). Power in this sense has a double role; it punishes and rewards. And despite the discreet operation of power, the teacher is ultimately pleased with the reward of something “shiny and new.”

However, shiny and new desktop computers are fairly uncommon in the high school classrooms I visit. The time scheduling in high school buildings does not lend itself to one or two computers in classrooms. I have found that there are more desktop computers in use in elementary and middle school classrooms because the students’ movement from classroom to classroom is much less than at the high school level. The greater amount of time in a given room, the greater chance the teacher will incorporate the computer into an instructional activity. Students in kindergarten through fifth grade, commonly stay in the same classroom. At times, the same scheduling design can be found at the middle school level, with students in sixth through eighth grade either staying in one classroom throughout the day, with the teachers rotating from room to

room, or if the middle school students do move, it is minimal movement as in across or down the hall. Rarely, if ever, are classes scheduled on different floors as they are in high schools.

A former New York City District Director of Technology told me that in his experience, unless teachers are in the same room for more than three periods a day they seldom want to invest the time into using the computers. As a result, existing computers sit unused. He added, “And who’s taking care of them if they break?”

Much of scheduling of classes and the movement within a building is related to the fact that students in grades kindergarten through eight remain with their same classmates throughout the day. Even if a class physically moves to another room, the students of that class move as a group. In high school, students are continually divided each class period. Students at the elementary and middle school level are together as a “locus of multiple exchanges, individuals merging together” but at the high school level “that configuration is “abolished and replaced by a collection of separated individualities” (Foucault, 1995, p. 201).

A brief history of the New York City classroom computer

It was “Project Smart,” a 1996 Board of Education technology initiative that brought the model of four computers into the middle school classroom. This project was considered a “Board” initiative but it should be noted that in the year 2002, the city school system was reorganized. Control of the school system was given to the mayor, who abolished community school boards, renaming the Board of Education to the Department of Education.

When speaking with the former Director of Instructional Technology for New York City schools about Project Smart, he explained, “I inherited that project. It was originally a project administered under The Division of Financial Operations. It was poorly planned...4 computers to a classroom? That was not thought based! That was them saying, “OK we have this much money, and this many classrooms we want to equip.” He further explained that the main reason Project Smart began to fail is that the teachers were given training in the use of the computer when they “had no clue about students collaborating ...The shame of it is that there was the rhetoric about collaboration and kids working together when it wasn’t even part of a Social Studies or Math or Language Arts teachers’ teaching.”

He added that “for the most part the project ended up successful. We had to inject PD on collaboration but even that looked fragmented. The collaboration concept wasn’t always welcomed. It depended on the teacher, the school, the district...but the idea of Project Smart was great. Imagine kids having fun while learning? Or excited that they were learning how to learn?”

Prior to Project Smart (first known as Project Smart Schools) the only initiative for city elementary schools was in a Bronx Community School District and one district in Manhattan. The Bronx District initially installed four networked computers, one printer, and one scanner, in one third grade classroom in each of their 19 elementary schools. The second year, the District expanded to an additional third grade classroom in every school and by the third year when all the third grade classrooms had computers they started on the fourth grade classroom. Their funding came from excess Title I and Title II funds at the end of the budget year. (The U.S. Department of Education and No Child Left Behind

provide money for Title I and II funding). But before the fourth grade classroom could be equipped, the money ran out and neither the district nor the City was interested in looking to fund it from additional resources.

At the high school level, prior to and during the 1996 Project Smart, there was no technology initiative taking place. During that time, laptops were not available for purchase for students or classroom teachers because “they might take them out of the buildings” or use them for a “personal nature.” The Directors of Technology throughout the City argued this, asking that laptops become available for classroom use. But even when a change began to happen and laptops were made available for purchase, a strong top-down model prevailed. A former District Director of Technology explained that there were always disagreements with The Office of Purchasing Management about what equipment should go into the classroom. “They were making decisions on equipment that didn’t make sense for a classroom ... whoever was developing the specifics was not in touch with the needs or the reality of the classroom.”

For example, if a building wanted to purchase laptops for students or teachers, then they were sold only the laptop. Software was not installed and had to be purchased separately from another vendor, a laptop cart/charging station had to be purchased separately from another vendor, a printer had to be purchased separately from another vendor, and if the school was interest in training for their teachers, that also had to be purchased separately from another vendor.

In 2009, it would be unlikely to see a Project Smart computer in a middle school classroom. With age and use (and abuse) they broke and the Project did not provide for repair. When money became available to schools, some principals did decide to replace

them. Again, the scenario varied from school to school, district to district; some classrooms still have the four computers per classroom model and some have only two computers. A middle school teacher recently told me, “Yeah they finally threw out the broken computers. My principal replaced them with two new ones. They’re the cool ones with the flat screen. But I have 34 kids! What the hell am I going to do with them? I think he bought them so they’d be there for open school night.”

I’m learning to fly
But I ain’t got wings.

-Tom Petty, *Learning to Fly*

It is mid June and the *Mathematics A Regents Exam* I am proctoring is in a fourth floor classroom. Students sit in the wooden desks, the surfaces scratched deep with graffiti and their inkwells filled with used gum. When new, the desks were occupied by students taking classes in the school’s opening year of 1919. The heavy metal frame, bolted in the floor, is small and many of the young men, whose height exceeds six feet, turn sideways in the seat, their legs draping into the narrow aisles.

It is a half hour into the exam and the temperature is approaching 80 degrees. Having rained the night before, the humidity leaves the entire room with a dank, musty smell. Despite the unpleasant conditions, the students are quiet and focused. They understand that they must obtain a passing score on this exam in order to earn a New York State graduation diploma. Prior to the exam I explain the specific instructions and regulations for the test. They are familiar with the rules: no talking, no leaving the room, no exchanging papers. As a proctor, I am required to sign an oath stating that I have followed the instructions and regulations. And the students, at the end of their exam, are

required to sign an oath stating that they have not “received assistance in answering any of the questions” on the test.

On the exam’s cover sheet there is a text box that states the following:

Notice...

A minimum of a scientific calculator, a straightedge (ruler), and a compass must be available for your use while taking this examination.

As I watch many of the students fan themselves with folded pieces of notebook paper, the jagged edging littering the floor, I remember I have to hand out the calculators. The students already have a ruler and a compass. Some of them brought these tools and others received them before the exam from a “testing assistant.” The testing assistants are teachers who have not been given a proctoring assignment and monitor the halls to help with any issues proctors may have.

As I begin to give the calculators to each student, I realize that we are five calculators short. I immediately go to the door to see if I can find a testing assistant. Within moments one appears and I explain my situation. He says he will go to the Math department to see if they have more. While he is gone the students begin to let me know there is another problem, “Yo Miss, this thing ain’t working.” “Mine’s dead.” “This sucks. The buttons don’t do nothin’.” The silence begins to disappear quickly and I try to keep things quiet and calm, “OK, OK, when the man gets back I’ll ask him for a few more. In the meantime, skip those questions.” Disgruntled muttering disturbs the silence. “Guys, you have to be quiet.” I remind them. Then two more students learn that their calculators do not work. While I am looking at one, trying to see if it is a battery problem or a faulty On/Off switch, a girl in one of the first few seats announced, “It’s so fucking

hot in here.” This sets off a barrage of comments ranging from the temperature in the classroom to the broken calculators to the uncomfortable chairs. My response to her is “I know, I know! Listen, if you’re feeling hot and cramped in your desk, just stand up for a minute and stretch.” I model a quick exercise move, bending at my waist and pushing my arms out in the air, to the side of my torso. “You’re wacked Miss!” They begin to laugh and the room begins to rumble with amusement, complaints and physical movement. I laugh, too, “Shhh, let’s try to keep it quiet. I want to be able to keep the door open. Every little bit of air helps.” They begin to settle back into working when the testing assistant comes back.

“Sorry, they don’t have any more.”

“What do you mean, *‘they don’t have anymore?’*”

“They don’t have any more calculators.”

“What are we supposed to do?”

“I don’t know.”

Stunned, I watch in silence as he walks away.

Now I’m angry.

“This is ridiculous. Let me try to find someone else.”

I step out into the middle of the hallway, in front of the classroom. Now some of the students come to the doorway.

“Miss, I don’t think you’re allowed to leave.”

I explain that I’ll be gone a minute. Before I reach the English department office which is four doors down, an Assistant Principal meets me.

“Is there a problem? You’re not supposed to leave your room.”

“I know that,” I explain, “But we don’t have enough calculators.”

“Well please get back in your room and I’ll go see what I can do.’

Needless to say with an hour remaining in the timed exam, no one ever returned to our room. What ensued was a room with testing conditions that would surely make a reviewer from Board of Regents of the University of the State of New York cringe. Despite the high temperatures, I closed the door and reminded the students to be as quiet as possible. I began to determine who had a calculator that worked and we began to share them. I told students that were frustrated with the difficulty of the exam to “get up and take a break for a minute.” Some took a little walk around the perimeter of the room, some sat in their seat, using their fans. I reminded them that we were running out of time but to try their best and stay focused. Some pleaded, “I wish you could help us.” I replied, “I wish I could too. I am sure you’re doing fine. Just think, you know this stuff. You can do it.” Inside I felt angry and helpless. Outside, I stayed upbeat, reminding them of the time, telling them to take a guess at a question if it was really something they didn’t think they knew, and asking them to share their calculator if they were done with it. When the exam came to an end, we all signed our oaths and waited for a testing assistant to pick up our exams.

Later that day when sharing my disturbing experience, I was informed by the Math department chairperson, “Ah, don’t worry too much about the calculators. Even if they had ‘em, there was no way they still would have done OK. Their teachers didn’t have enough time this semester to even get through the material.”

The weak economic capital of urban schools has a clear impact on the availability of instructional resources for students and teachers. However, operating with inadequate

resources seems to be an accepted practice. In my research of urban education, I waded through news briefs, research reports, journal articles and books that present situations similar to my own but there is never a solution presented as to how to make the situation different, let alone better.

The failure of urban schools and the children they serve, is not problematized, rather it is expected. New programs and policies are adopted with some regularity, but there is little willingness to address the fact that urban schools are inextricably linked to and affected by the economic and social forces present within the urban environment...But individual outcome measures (e.g., grades, test scores, graduation rates, etc.) are used to gauge progress, while more nebulous indicators: school climate and perceptions of safety, the morale and collegiality of teachers, the quality of relations between a school and the parents it serves, are ignored. (Noguera, 2004, Problematizing failure section, ¶ 5)

Looking back now (and then) to my proctoring experience, I realize I could have done something different to make my voice heard. But even in hindsight I am not sure what. At the time, I was doubtful my story would make a difference. And more important, I didn't have any solutions. From shared stories of colleagues that also taught, I knew my scenario was commonplace in classrooms throughout the City. I talked myself out of being so upset. This was not an unusual situation; this was the norm. This was the life of a New York City school teacher.

In *Teachers as Cultural Workers: Letters to Those Who Dare to Teach*, Paulo Freire reminds us that, "The dominant ideology veils reality; it makes us myopic and prevents us from seeing reality clearly" (p. 6.). I can distinctly remember that that day; I was near tears with frustration. Part of me knew my experience was "just the way it is" and yet part of me knew that it wasn't the way it should be or the way it had to be. At the time, I had not begun to take "critical ownership" of the formation of myself which "socially and gradually, over time, becomes active and conscious, speaking, reading, and

writing (p. 24). Admittedly, I also remember being tired; emotional, physically and mentally. The thought of the approaching “last day of school” was the only spark of encouragement I had to keep going.

So take me from the wreckage
 Save me from the blast
 Lift me up and take me back
 Don't let me keep on walking...
 Walking on broken glass.

-Annie Lenox, *Walking on Broken Glass*

In addition to the lack of instructional resources in urban schools, the failing physical condition of both the technology equipment and the school building itself greatly and gravely impact teaching and learning. As I have explained in earlier chapters, New York City schools *do* have technology resources, but it is often times the condition of those resources that impedes effective use as well as the surrounding environment which often times, is not conducive to the technology use.

Besides desktop computers and laptops, the teachers I work with use or rather *attempt to use* overhead projectors, SMART Boards, LCD (liquid crystal display) projectors, document cameras, photo and document scanners, televisions, VCR players and DVD players. Problems arise when the equipment is broken, or a part needs replacement. I often visit schools with relatively new equipment sitting unused because of a minor repair or replacement of parts. But since the school bears the responsibility of the repair cost, priorities are given elsewhere such as the purchase of copy paper, full sets of textbooks and novels, or toner for working computer printers.

And if there isn't an issue with the equipment itself, then it is the classroom in which the technology *could be used* that has the problem. For example, many classrooms are without working electrical outlets which are a necessity for the use of any electrical device. If there is only one working outlet in a room then an extension cord is needed. Again if the extension cord is not purchased by the school, then the teacher must bear the expense.

If a repair in the room is needed, the teacher must fill out a "work-order" that is then sent to the principal for approval. Once signed by the principal, the order is taken care of "in-house" by the school custodian or sent to the DOE's School Construction Authority.

Depending on the issue, the School Construction Authority may contract an outside company to do the repair. When asking a principal how long a repair might take after the order is submitted, she shook her head and said, "Anywhere from two months to two years." When I asked teachers who had submitted the forms what they thought was the delay with repair, one veteran teacher replied, "I think they throw them out. I'm not kidding. Over the years I've submitted so many. Nothing ever comes of it."

If a teacher is fortunate enough to have a room with working electricity, then often the lack of window shades is the issue. The rooms without window shades are far from ideal when projecting a movie or still images. Unless the schools have a portable screen or the teacher buys a white bed sheet, sunny rooms coupled with the black surface of slate chalkboards, usually make the incorporation of multimedia something not worth the while in a high school classroom.

And, I have also found that many of the classrooms I visit simply do not have the square footage to have a laptop cart, SMART Board, or even one desktop computer. Adequate space is reduced by placement of 35 to 40 chairs.

The meanings of “voice”

These scenarios are for some teachers “the way it is” and they go about their work without complaints or speaking out. But for others, the Internet has provided a new venue for their voices to be heard. As a classroom teacher I was able to privately share my stories with family, friends and colleagues. But with the invention of “blogs,” a new dimension has been added to the concept of “audience.” Blogs are Web logs or online journals. They are created by an individual and are viewed as a Web page with regular entries of text, pictures or video, posted in reverse chronological order.

About a year ago when I was on the Internet, I came across a New York City teacher’s blog. The blog itself was linked to several other teacher created blogs, which were then linked to several others, and so on. The blogs are anonymous but their “About Me” section explains that the authors range from first year teachers to teachers with over 30 years of experience.

The following excerpts exemplify the conditions I have experienced while working in New York City secondary classrooms.

From the blog *NYCeducator*:

I couldn't find a working printer in my school last week.

I needed to type and print out a letter of recommendation for a student who was applying to the Presidential Scholars Program at the Fashion Institute of Technology. She needed

the letter by March 9th and she had given me plenty of notice to write it, but due to various circumstances I had let the task go until the end of last week.

I typed up the letter, wrote her a glowing recommendation for the program (she really is a terrific student and an all-around nice person) and pushed "PRINT" on the computer.

Nothing but an "ERROR" message came from the printer in the computer lab on the 9th floor. I spent a few minutes trying to figure out the problem, but I had to teach in 20 minutes so I couldn't play computer technician forever. I saved the letter and ran down to the 7th floor computer lab.

It took me about 10 minutes to get my account logged in because the computers are ancient and overloaded with software - the systems run as rapidly as dial-up works for downloads - but finally got logged in and hit "PRINT".

Again, nothing. Another teacher in the lab told me that sometimes the printer will spit out your print job about a half an hour after you hit "PRINT," but you can't be sure, because sometimes it won't.

Now I was down to 5 minutes before I teach. I could go to the College Office where 8 fairly new computers bought with post-9/11 grant money sit and print the letter there. But my school has 425 seniors and there is always a waiting list for the computers as the kids jostle to check their CUNY application statuses, financial aid information and various other things.

Instead I went back to my classroom and said to my student, "Give me your email and I'll email the letter to you. I can't find a working printer to print the thing ..."

And now I have to end this post because I have an 11:00 allergist appointment to take care of my eczema. Can't wait until Bloomberg and Klein and Weingarten conspire to raise health care costs for teachers.

I mean, who wouldn't love to have to pay extra to go to the doctor for health care conditions caused by the crappy environmental conditions at your job?

From the blog *They call me teacher*:

my class size increased by 25% because of changes in the grade level. the students are pissed off about being put in my room and therefore defiant and miserable and sharing it with the rest of the class. not only do they bring us down in the room, but we also are officially packed in tighter than sardines.

A comment posted by *pissedoffteacher* on the blog *jd2718*:

No one seems to care about working conditions in NYC. I teach in a trailer, with a door that does not close properly. I had an intruder walk in from the street to use the bathroom. Administration said there is nothing they can do about it. There are too many things wrong with my trailer to go into here. I carry everything I bring to school, including my coat with me all day long, as I have no spot to leave anything in. I often have to sit on floor in hallway if I am tutoring a student. I could go on and on, but you can get where I am going with this. I agree with the post that workign [sic] conditions do improve education.

My first reaction is that the use of blogs broadens the “listening area” for teacher voices but then I thought, are only colleagues in similar situations reading them?

Apparently not. According to an article in the *New York Sun*, The New York City Department of Education has created a new office unit to “scour a group of 24 education Web logs, e-mail Listservs, and Web sites in a hunt for factual errors and misinformation. Department officials are calling the unit the Truth Squad” (Green, 2008, ¶ 1, 4). Here we see the the hidden, offstage transcript of the dominated, collides with that of the public transcript. The teachers’ blogs are essentially “social spaces where the hidden transcript grows are themselves an achievement of resistance; they are won and defended in the teeth of power” (Scott, 1990, p. 119).

To date, the DOE has not commented on the teacher blogs, but the blogger’s respond humorously to the *New York Sun* article.

From the blog *Chaz’s School Daze*:

It is good to know that the DOE is spending precious education money to have it's [sic] staff reading our blogs... What is this group at Tweed called? Why, it's the "truth squad". It sounds like an oxymoron to me. How can an organization that twists, spins, and perverts information on a continuous basis know anything about the truth? How much extra money is assigned to this ridiculous group?

In response to Chaz's School Daze post, hours later there are comments from other bloggers:

A voice in the wilderness:

Well, let's face it. If they're working for the DOE they're probably checking the wrong blogs. By the time they realize that they are checking the wrong blogs, the bloggers will long have retired.

NYC educator:

I've gotta agree. They're probably reading blogs about gardening and donuts and patting themselves on the back for the great work they do.

Proof of life:

I am shaking in my flip-flops!
Love your comments!!
I would laugh if it weren't prohibited.

To my knowledge no significant, institutional changes have been made in New York City classrooms so that the environment is more conducive to teaching, to technology use, and to learning. Whether classroom conditions, school operations, or lack of resources, it appears that those at the head of this "top down" venue are aware of the situation but feel there is no urgency for change.

The DOE's awareness of the situation (poor working conditions) is reminiscent of Foucault's description of the role of the 19th century architectural structure for surveillance, the Panopticon, with its known principal based on periphery; and annular building with a tower at the center. The panoptic mechanism arranges spatial unities that make it possible to see constantly and to recognize immediately (1995). The panoptic mechanism of the DOE, "recognizes" the conditions of New York City schools, in their bi-annual "walk-through" visits, through submitted work-orders, from teacher blogs, and from the N.Y.C. School Surveys yet rarely act on these recognitions. But rather, similar

to the architectural figure, each individual involved in with the DOE is “in his place...he is the object of information never a subject in communication” (1995, p.200).

The N.Y.C. School surveys, which were first distributed in 2007 to parents, teachers and students in grades 6-12, offer an opportunity to give feedback on their schools. The DOE advertises the survey with the slogan, “Your School. Your Child. Your Voice.” The DOE explains that, “The voices of parents, students, and teachers count in two important ways. Survey results are reported to school leaders and the public through Survey Reports, which are instrumental in improving schools. Survey results also count for 10% of schools’ yearly Progress Report grades” (The New York City Department of Education, (n.d.), ¶ 2). The remaining percentages are as follows: 5% for attendance, student performance on standardized exams accounts for 25%, and student progress, or improvement from the previous year’s standardized exams is 60%.

The distribution of 10% works to the DOE’s advantage. If in fact the parent, student, and teacher surveys produce negative results, that information can ultimately be disregarded if the school is doing well on state exams. On the other hand, if the parent, student, and teacher results are positive, that information is overlooked if the school’s test scores are not increasing each school year.

Despite their claims that “voice” is important, the DOE continually ignores the opinions of those who are teaching and learning in their schools. And with reason: an individual’s opinion and expression thereof, is greatly related to accumulation of capital (economic, symbolic, cultural, and social). Teachers begin to voice their opinion beyond their personal world, to far reaching spaces and places over the Internet. Because *they are* classroom teachers, they have the high cultural capital but against the DOE’s economic

and social capital they are ignored. Their acts of protest, their blogs, come from their own sense that they are “legitimate agents” (Bourdieu, 1984) because it is they who experience the conditions on a daily basis. “Everything takes place as if the most ‘legitimate’ agents, that is, those competent in both senses, were and felt more legitimate - i.e., inclined and called upon to express an opinion-the more ‘legitimate’ the problem posed” (p. 400). Although the teachers are legitimate agents because of their competency and experience related to the problem posed, the difficulty is that they were never “called upon” to express their opinion. Their voluntary view is not deemed legitimate or recognized by the societal power of the DOE. In order for the teachers’ words and works to be recognized as legitimate, they must be perceived as worthy.

And although disheartening at face value, the collective voice of teachers is important as means of promoting change. Freire (1998) acknowledges that at times fear of what is difficult can paralyze teachers, but stresses that we must not allow that fear to persuade us to quit, or to face our challenging situation without an effort or without a fight.

Freire (1998) also presents an effective strategy for overcoming a particular obstacle. First one must objectively ascertain if there are real reasons for the fear and if in fact reasons do exist, they must match them against all available possibilities for overcoming them successfully. But, if a given obstacle cannot be overcome right away, one must determine what steps need to be taken toward overcoming it in the near future.

In addition to the above strategies which can be implemented at a personal level, teachers should also choose to unite and seek established organizations in which to share their story. By joining organized opposition groups such as *Rethinking Schools*, *The*

Coalition of Essential Schools, The Council of the Great City School, The Campaign for Fiscal Equity and *National Coalition of Education Activists* teachers can be part of a movement of educators dedicated to equity and a democratic vision of public schooling.

At the school level, teachers as critical educators can emphasize the notion of context and the act of contextualization in every aspect of their work. When challenges, problems, and difficulties arise, teachers need to frame the issue in a multitude of references, connected to a variety of causes. Armed with the insight and understanding that “context may be more important than content” (Kincheloe, 2008, p. 33), teachers can change the way in which they approach their work.

The *content* described in this chapter is presented to us in a national document telling us what exists, what is good, what is possible. Yet, in the *context* of a New York City classroom, that content our government relates to us is false. We hear, “the technology that has so dramatically changed the world outside our schools is now changing the learning and teaching environment within them” (U.S. Department of Education, Executive Summary section, 2004, ¶ 3). Is technology changing the learning and teaching environment? Maybe, but not always in the positive ways implied. As this chapter explored, technology can be used for oppression. It can also be a reminder of the capital that both students and teachers either possess or lack. Teachers need to begin to understand the ideology behind discourses they encounter so that they can respond to it in ways that uncover multiple interpretations and intentions.

And while in their classrooms, teachers can begin working with their students to create bodies of knowledge that move the learning from the mere memorization of “facts.” Instead of presenting information, the critical teacher can pose the same issues

and challenges they themselves face (i.e., not enough time to explore and work hands-on on a concept, classroom conditions not conducive to technology use, lack of technology resources) to their students. Teachers can then work with their students to problem-solve and brainstorm solutions. The act of problem-posing focuses on power relations in the classroom, in the institution, in the formation of standard canons of knowledge, and in society at large (Shor, 1992, p. 31). Problem-posing can be employed by teachers moving to change the traditional roles of teacher as expert and the student as the empty receptacle, to be filled with universal knowledge deemed official and neutral. And technology, used as an instructional tool, can be central in the process of problem-posing, as teachers and students critique the existing knowledge that is presented to them as facts and doctrines to be acquired without question.

CHAPTER IV

THE TECHNOLOGY IS HERE! ...NOW WHAT?

In the previous chapter, existing technologies in urban schools have been described as well as the corresponding conditions that often obstruct the effective use of those technologies. However, one factor central to the effective use of technology in classroom practice is teacher education. This chapter explores the role technology-based professional development plays in the life of a New York City teacher; what type of training is provided and how effective is it on classroom practice. A framework for effective professional development model also is presented, to be used when urban teachers work toward integrating new technologies into their teaching practices.

I've got your number
 But so does every kiss-and-tell
 Who dares to cross your threshold
 Or happens on your way
 Stop laying blame
 -R.E.M., *Bang and Blame*

Teachers have long been targeted as the reason for the problems plaguing American education. "Failing schools" are often equated with "bad teachers." In an editorial in *USA TODAY*, American Federation of Teacher President, Randi Weingarten, writes:

Let's stop making teachers an easy scapegoat. There are many factors that affect student learning that are beyond a teacher's control, including a school's resources, class size, availability of special education, the performance of other teachers, student mobility and attendance, and parent support. (Weingarten, 2008, ¶3)

Although an accurate argument, Weingarten fails to mention the bureaucratic, hegemonic forces as well as the social and cultural factors that mediate teaching and learning. We need to look at the ways culture is enacted in fields; ever changing, expressed in our behaviors, practices and communication. Within a hegemonic framework, the culture of a teaching and learning experience may look different building to building, even from classroom to classroom. That phenomenon is rarely addressed when we look at student learning, and particular to this chapter, teachers' learning.

An introductory look at teacher education

“Teacher researcher pedagogy suggests that teachers teach and, properly situated, construct new knowledge in their classroom” (Anderson, 2005, p. 68). But suppose a New York City school teacher is properly situated, with ample resources, available technologies and ideal working conditions; is the teacher solely responsible to learn new teaching methods, acquire new instructional strategies, and construct new knowledge? The teachers I work with operate within a system that reduces “teaching to a technical craft in the employ of government officials who appear to wish to limit the curriculum and the purposes of schooling to simple information and basic skills” (p. 68). Given that, what options do teachers have for professional growth?

The term “professional development” has traditionally represented opportunities for further development of practicing teachers, with a focus on instructional skills and strategies (Pinar, et al. 1995). For the teachers I work with, The New York City Department of Education After School Professional Development Program (ASPD) does offer such opportunities. The ASPD offers teachers “high-quality, convenient, low-

cost alternatives” to college courses. These courses can be then applied toward salary differentials and New York State professional development requirements. “Courses are designed to improve student achievement through the professional development of teachers” (The New York City Department of Education, (n.d.), ¶ 3).

In the last decade, New York State changed its certification requirements. Effective February 2, 2004, the State no longer issues “permanent” teaching certifications. Instead, all teaching certifications are considered “professional” and teachers in a public school one are required to complete 175 hours of professional development every five years. By doing so, the validity of the professional certificate will allow an employed teacher to continue to teach in a public school.

The idea behind the State requirement is that by continually taking courses, teachers in New York City will enrich their professional capacity, and according to the City’s vision, the teachers will, in turn, improve their students’ achievement. However, will 175 hours of courses every five years determine one to be “professional” thus improving student achievement?

According to *Principles for Professional Development*:

Professional development is an essential element of comprehensive or “systemic” reform. The nation can adopt rigorous standards, set forth a visionary scenario, compile the best research about how students learn, change textbooks and assessment, promote teaching strategies that have been successful with a wide range of students, and change all the other elements involved in systemic reform—but without professional development, school reform and improved achievement for all students will not happen (The America Federation of Teachers, 2002, p. 2).

The above quote from the teachers’ union stresses the importance of professional development and equates it with the enormous undertaking of improving “achievement for all students.” But if the students fail, we blame the teachers, not the professional

development! Yet if professional development is supposedly so integral to teaching why is it so often presented as something distributed to teachers, neatly packaged, void of context; void of the realities of the urban classroom?

In *Classroom Teaching: An Introduction*, Joe Kincheloe (2005) speaks of teachers being alienated in both the cognitive and ontological sense, with cognitive alienation undermining our ability to discriminate or distinguish anything about the world but the most exterior empirical perspectives presented, or ontological alienation which weakens our capacity to gain insight into the forces that have helped construct our identities. As teachers we are given professional development that fails to present opportunities to reflect on our own thinking, our own teaching, as well as the structures and discourses that shape what it is to “teach.” I knew that the technology professional development I was going to provide teachers needed to be more than what it had been previously.

I’ve been here before

And I deserve a little more

- Adam Duritz of the Counting Crows, *The Rain King*

In New York City if schools are given equipment by the Department of Education it is rare, if ever, that professional development in the use of such equipment is also included. If technology based professional development for teachers is provided, it is at a monetary cost to teachers, and most often is a workshop or series of sessions that teach participants basic skills about the use of a particular piece of hardware or software.

And even when technology equipment is purchased by Teacher Center, the professional development strand of the New York City United Federation of Teachers, to be distributed to Teacher Center school based sites, few opportunities are afforded. On

occasion, there may be some small groups or one on one professional development opportunities but they exist in terms of learning basic skills of software use or skills of hardware operation.

Within months of being hired by Teacher Center, I began to voice my concern that the professional development being provided was focused too much on skills, complete with manuals the Technology Specialists created. (When I first began working at Teacher Center the word “Instructional” was not part of the title.). Of course I acknowledge the value of basic skills, but these skills, I explained to them, could be acquired as a person works on a specific project or creates content curriculum. The professional development provided needed to be hands-on, curriculum embedded. The technology had to be used as an instructional tool.

As the months continued and I offered these suggestions, modeling examples along the way, the reception from my fellow Instructional Technology Specialists was for the most part positive. However, some colleagues defensively told me, “That’s not what teachers want.” or “I used to give my trainings that way but then they told me to fix computers.” or “Yeah, I know. I do that too,” when in fact they weren’t “doing that.” They were only teaching basic skills, occasionally mentioning an example within a discipline area. I was met often times with strong opposition and negativity as I took the initiative to create small professional development groups based on the needs of my school based staff and their teachers: “Oh look at you trying to be Superwoman.” “Don’t try to show off, they’re not going give you anything but more work.” “Why are you creating work for yourself?” In this instance, my colleagues acted as judges; judges of what my role as an Instructional Technology Specialist should entail. “...the activity of

judging has increased precisely to the extent that the normalizing power has spread” (Foucault, 1995, p. 304). Although ideally we should be supporting one another, with team-like spirit, judgment in this case serves as an invisible mechanism of discipline which is a major function in our society.

In addition to the above negative comments by colleagues, I also encountered resistance when I suggested the inclusion of classroom teachers in our professional development sessions. The Teacher Center employs a “train the trainer” model for all site staff professional development opportunities. I recommended that the site staff also invite a teacher with them to our sessions so that they could have a colleague with whom they could collaborate as they worked to implement the instructional technology strategies they learned. I was informed that Teacher Center did not have the funding to include classroom teachers and “that’s just not what we do.” I stressed the small number of teacher trainers I would be working with and knowing that the organization claims to offer “research-based” content-rich work sessions, I revised my required professional development proposals, and included references to education data and research analysis on the benefits of teacher collaboration (i.e., diminishes the sense of isolation felt in the classroom, encourages joint responsibility for student success, increases instructional options, provides support when learning new teaching methods, strategies, or skills). And after some discussion, it was agreed that classroom teachers could join each one of the school based staff at my professional development sessions. Later, when working on a larger professional development initiative, “SMART Board Communities of Practice,” I would soon come to find out that that decision was temporary.

Getting started within the structure(s)

In the past few years the new technology pervasive through elementary, middle and high schools is the interactive whiteboard. The brand in particular that can be found in the urban classroom is the SMART Board, made by the Canadian company, SMART Technologies.

The interactive technology of the SMART Board begins when you connect the board to your computer and digital projector. By doing so, it will project your computer's image. The board's surface is a touch-sensitive display from which you can then directly control your computer applications, write notes in digital ink, save them to share or view later, or use SMART's Notebook software. The Notebook software enables a user to create interactive lessons and activities through a variety of tools and resources.

In the Spring of 2006, New York State Teacher Centers and Tequipment, the contracted New York State and New York City vendor of SMART Boards, entered an agreement to purchase SMART Boards and SMART Board training at a reduced rate. As a New York City vendor, Tequipment lists their products on the New York City Department of Education FAMIS Portal. The FAMIS Portal facilitates the ordering of goods and services from contracted vendors. The DOE has two classifications of vendors; approved and contracted. Approved vendors are limited to how much business they do with New York City Schools and contracted vendors have no limit. The DOE's Department of Division of Contracts and Purchasing determines which companies receive which classifications. It is not clear from the staff developers, principals, and the Assistant Principals of Operations I spoke with how the classifications are determined. It

is surmised that is done through an application process but the criteria were not publicly disseminated and for the most part the people I spoke with did not know what they were.

A principal with 19 years experience explained to me, “I’m not sure how it all works, all I know is that the way it’s always been done. Not too many choices on who to buy from. Going through FAMIS is pretty much standard procedure when we need to order supplies and equipment for the kids and teachers.”

These standard procedures and accepted practices within the New York City school system perpetuate the power laden existing state of affairs. “Given that it must ensure the institutional conditions for the homogeneity and orthodoxy of the work of schooling the educational system tends to equip the agents appointed to inculcate with a standard training and standardized, standardizing instruments” (Bourdieu. & Passeron, 2000, p. 58). Despite better choices in quality and/or price for instructional supplies, the administrators of schools are bound by the bureaucracy of the larger system. They are limited as to what they can and cannot purchase.

And so, I began to follow through with my liaison’s request to coordinate an initiative with Tequipment in which we (New York City Teacher Center) would purchase SMART Boards as well as provide our staff with training. If I was interested in purchasing another interactive whiteboard, it would be a long process to gain DOE approval. And at the time, Tequipment was the only contracted whiteboard vendor for the DOE. I was to work with New York City Teacher Center Field Liaisons to select school based site staff in each borough that would be good candidates for receiving a SMART Board and subsequent training.

“Liaison” is the term my employer, New York City Teacher Center, uses to define those who oversee “cohorts” of Teacher Center school based staff. The school based staff are teachers that act as the coach or professional developer for a school building. There are two or three Field Liaisons per borough. Every borough also has an Instructional Technology Specialist. I am an Instructional Technology Specialist. As an Instructional Technology Specialist, I support Field Liaisons and school based staff in Manhattan and Bronx high schools with responsibilities that also include working with teachers and Teacher Center staff of grades K-12 throughout New York City.

What is interesting to note is that Teacher Center defines itself as a professional development model in which members are all teachers, providing training and instructional support to other teachers. At face value, there appears to be no hierarchy. Other than Randi Weingarten, the President of The New York City United Federation of Teachers United Federation of Teachers, and Teacher Center’s (the professional development program within this union) Director and Assistant Director, we are all classified as teachers. Other than the director titles, all other members of the program are considered Central Staff teachers or School Based Site Staff teachers. Central Staff is comprised of Coaches, Content Specialists, Instructional Technology Specialist and Field Liaisons.

Despite the same title, there is an unspoken hierarchy. The power within the Teacher Center structure is not necessarily from above. The power is within, shifting, fluid, with individuals constructed or positioned by discourse and knowledge creation. The power, or more specifically those in power, changes given the situation. But, although we are “all teachers” some teachers have more influence, and as Teacher Center

functions, so does a “continuous gradation of the established, specialized and competent authorities” (Foucault, 1997, p. 299).

For example, in Teacher Center the words “supervisor,” “boss,” “manager,” or “director” are not allowed to be used in written or spoken word. Whenever it does appear, we are reminded that we are “all teachers” and that “no one is anyone’s boss.” As a result, the forbidden use of a leadership term has brought about great frustration to some of the Instructional Technology Specialists who have been asked to “lead” or be “in charge” or “organize” certain initiatives, professional development sessions, conferences or collaborations with corporate companies or educational organizations. With so many Teacher Center initiatives and projects taking place throughout the City, we felt it was important to be clear as to the person solely focused on a particular project.

One afternoon, when working with a few of my colleagues, our liaison’s name came up in conversation. We were discussing what needed to be taken care of while she was at a meeting in Washington, D.C. “We really don’t need to run everything we do this week by her- she’s *not our boss*,” someone said with a touch of sarcasm in his tone.

The reply from another colleague, “Just don’t do something she wants you to do, then tell me she’s not your boss.”

I still smile and remember that statement whenever I suggest to my liaison how something should be done or question the current way of “doing business.” And although not the “boss,” ultimately my liaison gets the final say. It is clear that these euphemisms, these “tailoring of descriptions and appearances by dominant powerholders” (Scott, 1990 p. 54) set the stage for the public transcript that Teacher Center is of, and for, teachers. But, after many laborious discussions with our liaison about the issue, it was agreed that

we could use the term, “point person” when describing the individual that coordinates, organizes and communicates information regarding a particular instructional technology project, program, or initiative.

And so, as the newly appointed SMART Board point person, I began to think about the instructional framework my colleagues and I could provide alongside the hardware of a new SMART Board.

Technology, current professional development practices, and the bigger picture

The SMART Board initiative was the first time I was asked by Teacher Center to take the lead on a project since the start of my employment, a year earlier. After meeting with the appropriate people from New York State Teacher Center and Tequipment, I was clear what hardware, software, and training were involved and I was also clear as to the positive instructional impact it needed to have.

New York City Teacher Center had enough money to purchase approximately 30 SMART Boards at a “special” rate. This purchase would also include training for the Technology Specialist, which now had the word “Instructional” in the title. I am not sure the reason for the change. When I asked, I was told, “Because that is what we do. We support teachers with their instruction.” Although I knew that was not always the case: often we still offered training that addressed skill building void of curricular content or were still asked to repair computers at school sites, but I also knew it was a step in the right direction. Now, in a sense, we could “defend the title.” We could work collaboratively to create training sessions that did in fact focus on the content first, then later pair the appropriate technology to support instruction. We could also purchase

hardware equipment that included a service contract. This would mean a higher cost but by doing so we would be able to spend our time in school buildings on staff development, co-teaching, and modeling instructional practices that integrated technology rather than repairs.

It was the expectation of my liaison that I would help determine which school based site staff would be selected for this initiative as well as coordinate the free training from Tequipment, and take responsibility for all proceedings related to purchasing and delivery of equipment. I was more than happy to oblige, but I knew it needed to be more. The organization was spending a great deal of money purchasing the most recent, and quite popular, technology to be used in the classroom. I wanted to make sure that the implementation and use in the classroom had a positive impact on instruction. If it did not, the familiar comments would surface; “Why should we use this?” “Does it help increase test scores?” As I witnessed the SMART Board’s increase in popularity, I found myself asking the same questions. “Why should we use this in the classroom?” However, I wasn’t as concerned with the increase in test scores as is often the case when one looks at the benefits of using technology.

With the January 2002 legislation of the No Child Left Behind, high-stakes testing has become not only more routine, but also increasingly focused on specific content knowledge. With more prescriptive teaching, there is little room for variation in teaching strategies and methods, let alone the integration of a new instructional tool such as technology; more specially in this case, a SMART Board. In the world of education, technology is many times looked at in a simple cause and effect relationship: technology + teaching and learning = high test scores. What is omitted from the equation is the

human element. And, the overall picture is void of context, missing how the technology is used and for what purposes.

In fact, in 2007 the United States Department of Education released a study “of the effectiveness of education technology. Mandated by Congress, the report uses scientifically based research methods and control groups to focus on the impact of technology on student academic achievement” (The National Center for Education Evaluation and Regional Assistance, 2007, ¶ 1). What the study failed to address was both the context in which the technology was used, how the technology was used, and for what purpose. Was it in relation to a curricular context? Was it used for remediation? Was it the sole instructional tool? Did teacher training and experience with technology play a role in the success or failure of improving test scores?

And, the key element of the study is that the focus was on one aspect of technology; education software. As discussed in Chapter One, this type of software, referred to as “drill and practice” fails to engage students in problem solving, critical thinking, student productivity, collaboration and authentic learning experiences. By using technology ineffectively and treating it as a separate subject instead of an integrated tool that mediates both teaching and learning experiences, we continue to promote decontextualized notions of education and support a neutral curriculum. Neutral in that we keep hidden multiple realities hidden by dominant ideologies. It is the very use of technology, that we are told does not increase test scores, that can operate as the tool to engage both students and teachers in critical exploration of the world around them.

And, although not drill software, I began to think about the ways in which the SMART Board could bring a beneficial dimension to teaching and learning. When I

asked teachers and administrators what was “great” about the SMART Board, they never had a concrete answer related to curriculum embedded context or a learning situation that involved higher order thinking. They were, however, impressed by the “bells and whistles” of the board. “You can move things around with your hand!” “If you draw a big circle around your work, then you tap in the circle, you can erase everything!” “It is so awesome! You can write with the marker and it can change your handwriting to text.”

Again we can see how the arrival of something “shiny and new” in an often times old and physically neglected school can shift the perceptions of capital; economic appears to increase with the schools’ attainment of the most recent technology; symbolic capital increases for those who personally possess the equipment; cultural capital is elevated for those who are taught how to use the particular piece of technology and social capital is at play in the decisions of who gets access to the technology and when.

The notion that the technology in and of itself is the great educational savior echoes what was discussed in Chapter 3: the ideological interpellation of technology as what exists, what is good, what is possible. SMART Boards now exist in urban classrooms, SMART Boards are good since they are one of the “the marvels of technology” (U.S. Department of Education, *A Nation on the Move* section, 2004, ¶ 4) and we know what is possible; “students, teachers and technology are driving a return to educational excellence” (U.S. Department of Education, *A Nation on the Move* section, 2004, ¶ 10). With an awareness of this discourse, I set out to make SMART Board’s beneficial impact on teaching and learning possible, but with knowledge of situating it within a larger sociocultural context.

It's in the way that you use it
 It comes and it goes.
 It's in the way that you use it
 Boy don't you know.

-Eric Clapton and Robbie Robertson, *It's in the Way that You Use It*

Of my own initiative, I began to research learning communities, more specifically communities of practice. Social learning theorist, Etienne Wenger and anthropologist, Jean Lave, coined the term communities of practice while studying apprenticeship as a learning model. Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly (Wenger, 2009).

I believed the communities of practice model was ideal for learning this new technology. With the notion of teacher work and teacher training reduced to “simple information and basic skills” I felt that tenets of the communities of practice concept could concretely guide us. I envisioned the chosen group of teachers to work independently but to come together for discussions, to brainstorm together, to problem solve, to help each other, and to share information around the use of the SMART Board, ultimately discovering how its use could impact teaching and learning in valuable ways. I explained this idea to my liaison. Although unfamiliar with the concept, she liked the idea. We talked about the plan to select participants and decided that it would be useful to minimize challenges up front and choose teachers that were already using technology and were comfortable with integrating it into their classroom instruction. As a result of our conversations, I drafted up a letter introducing the project to the Field Liaisons. Once the letter was proofread and approved (there were no changes except for the date), I was then

asked to change the “I” to “we,” include my liaison’s name, and send it out in May of that year.

As anticipated, we received the requested information. And so with the names of site staff and the inclusion of the Instructional Technology Team, a group of 37 teachers formed our “SMART Board Communities of Practice.” In keeping with the projected plan, in late June I created purchase orders for SMART Boards by September they had been processed and contacted Tequipment to schedule training dates.

Although the project was beginning to take shape, I still needed to write and submit a proposal so that there would be documentation of the funding for New York State. The proposal was to be a simple outline describing what the money was to be used for.

But instead of a simple outline, a record of the use of funds, a paper trail for the money spent, I felt it necessary to write a proposal that clearly reflected a solid instructional base, blended with collegial support. I decided to work diligently to relate an idea for what I envisioned as an opportunity to make a difference in the way the professional development was provided, a difference in how teachers used the technology in their classrooms in meaningful ways and a difference in how this new technology affected the way students learned.

With my ultimate goal of using technology for teaching and learning in a critical sphere, using it in ways that it served as a tool to illuminate the relationship(s) among knowledge, authority, and power, I looked at this citywide project as the first step in the journey. In this instance, the journey would begin by shifting the technology from a medium that served to continue the banking method of education, with students passively

receiving information and with teachers using the technology in ways that further negated the individuality of the student as well as their unique styles of learning, to one in which the technology was used in ways that redefined the traditional roles of teacher and student.

In this first step, the technology could be used to enhance the instruction in ways so that both the teachers and students share in the creation of knowledge, understanding and connecting knowledge and learning, within the context of real-world examples, even drawing on experts' advice and accessing information from individuals and resources not reflected in students' textbooks. And even though I was already taking this first step of the journey in the small professional development sessions I was conducting and doing my best to incorporate this philosophy in the larger scale trainings I was assisting in planning, I felt the communities of practice project was an opportunity to have instructional technology have an impact on a large scale, from the ground up, with my vision, couched in critical pedagogy, as the continual guide.

For the most part the proposal I wrote was rather straightforward. The cost of the boards and the training rate for teachers was included as well as a timeline of professional development which included initial training of the Instructional Technology Team by Tequipment, the initial training of the school based staff group by Tequipment and my follow up monthly in-person group meetings, supported by email correspondence. However I felt it was important to explain the context for use. For the "rationale" section I wrote the following:

Rationale

Currently Teacher Center staff members throughout New York City are supporting teachers within buildings that have SMART Boards. At present, there is a need for

additional support in the use of the SMART Board including the strategies needed to integrate its capabilities into the curriculum, across academic disciplines. In order to do this, site persons must be provided with the appropriate hardware, professional development, and an opportunity to share best practices in both “in-person” and “virtual” communities of practice.

According to Jean Lave and Etienne Wenger, learning involves a process of engagement in a community of practice. “Communities of Practice,” however, is a concept that involves much more than the technical knowledge or skill. In Communities of Practice members develop a set of relationships over time and thus a learning community develops around a particular topic that is important to each member. The fact that the group is organizing around some particular area of knowledge and activity provides members with mutual engagement, allows for collaboration and shared identity. Through the activities proposed, a Community of Practice will develop around the use and integration of the SMART Board into the curriculum, across grade levels and across disciplines.

For any community of practice to be effective, and this one in particular, it needs to generate and allow for a shared collection of ideas and commitments. It also needs to develop various resources such as documents, routines, vocabulary, lessons and activities that in some way carry the accumulated knowledge of the community. To begin creating a learning community around the use and classroom integration of the SMART Board, a Teacher Center elementary, middle, and high school site person from each borough will be given the opportunity to collaborate.

Equally as important as the project’s rationale were the project’s goals and objectives. Too often teachers use technology simply because it is available to them, “It’s in my room this semester” or because they themselves feel it is important to use, “The kids need to be using technology in the classroom” or perhaps their superior informed them that they need to use it, “I have no idea what to do with this (computer). He (the assistant principal) wants us to use it.” These isolated practices, void of specific instructional goals rarely have an impact, if any, at the classroom level.

My main objective was to provide on-going professional development and support in the use and implementation of the SMART Board. This support would be both in-person and in virtual communities. And in doing so, I aimed to create a community of practice that would generate and allow for a shared collection of ideas and commitments

related to the SMART Board. I envisioned teachers creating and sharing resources, documents, routines, and standards based lessons, thus reflecting the accumulated knowledge of the community.

The Instructional Technology Team was clear on the goals of the project. There were minor displays of opposition (“Why don’t you just send them to the training at Tequipment and be done with it?” or “People are going to get tired of meeting every month.”) but for the most part everyone seemed excited by the concept as well as the potential. It was also a welcomed change to work on an instructional based project opposed to fixing computers.

Prior to the arrival of the SMART Boards in school, I wanted to notify participants of delivery dates. The letter would also further explain the goals of the communities of practice project and give details regarding professional development.

Because of the popularity of SMART Boards, I knew this new technology would greatly increase the social capital of the Teacher Center site person. With power fluid and shifting, the Teacher Center site person would now be viewed by others in his or her school as someone who could obtain and have access to the latest technology; this honor would also grant the Teacher Center site person the power to determine who in the building could use the technology that was granted to them.

And, simultaneously, the new SMART Board would bring an accumulation of symbolic capital to both the Teacher Center person and the school giving both “the acquisition of a reputation for competence and an image of respectability” (Bourdieu, 1984). In regard to all forms (economic, social, cultural, symbolic), capital is a key factor in defining the position and the possibilities for an individual. Even my liaison proudly

announced that this initiative showed the schools that Teacher Center was “cutting edge.” Never mind that we weren’t sure what we would do with the technology once we received it but at least we were able to provide our schools with the newest equipment!

To my knowledge, because this was the first time an instructional technology professional development initiative was ever explicitly framed in theory, I wanted to explain to the group the premise of communities of practice with the idea for the project directly correlating with the high need amongst Teacher Center site staff to support teachers in their schools to effectively use the SMART Board and integrate its capabilities into the curriculum, across academic disciplines. I explained that in order to achieve this, I felt it was crucial they be provided with the appropriate hardware, professional development, and an opportunity to share best practices, ideas, concerns, standards based lessons, and integration strategies, in both “in-person” and “virtual” communities of practice.

My letter included an overview of the professional development opportunities as well. In the past, the Instructional Technology Team had provided stand-alone sessions or at most, a series of three or four 2 hour workshops on the use of a particular item of technology. Again, to my knowledge, the previous professional development provided was not curriculum embedded; participants were taught the skills to work a specific piece of hardware or the strategies to use a certain type of software.

I explained that this particular professional development would be unlike many they had attended in the past; it was not going to be a series of specific sessions and there was no “end date.” It was going to be a continual process of engagement in a community of practice in which they as a member, would hopefully develop a set of relationships

over time and thus join a learning community around the use and integration of the SMART Board. I also explained that this initial group of members will have continual support from the UFT Teacher Center Instructional Technology Team in both in “in-person” and “virtual” meetings.

And so we began. Our initial training at Tequipment went well. I know that as the professional developer in their school building, the selected communities of practice participants had numerous responsibilities, but I stressed that it was crucial to the success of the project that they attend all three trainings. I hoped that this training would be given priority so that we could all begin with the same, solid background not only in skills and knowledge but in camaraderie.

I also shared my vision for future months with them; with the continual support of the Instructional Technology Team, they would begin to conduct professional development opportunities in the use of the SMART Board for the teachers, coaches, mentors and liaisons in their building.

But my vision of future months was just that—a vision. As the months progressed so did our communities of practice; but not necessarily in the way I had anticipated. As a group, participants were not comfortable with the idea of conducting their own professional development session for their school community. They felt they needed to be “experts” in order to share what they already learned. In our initial months, the communities of practice group itself was in need of continual support. They were thrilled to share successes and more importantly, at times, work through their challenges but, there were problems specific to the hardware of the board (i.e., connecting speakers, calibrating the touch screen updating software), which required time to repair and had an inherent

learning curve. And so, the help of the Instructional Technology Team was requested often. As a result, as the second half of the school year got underway, the Instructional Technology Team's time to visit school sites in person was limited. As a team that also provided professional development opportunities for all of New York City's teachers, we were continually in the process of designing and implementing a technology conference, workshop sessions, instructional networks while simultaneously providing one-to-one mentoring with site staff, helping them increase their technology skills as well as helping them plan technology based professional development for teachers of all discipline areas. In conversation with colleagues, whenever I mentioned how busy I was they would say, "Well, I don't know why you're going to schools? Just tell your site people to go to one of the conferences or to a workshop." My liaison also suggested that if my workload got too much, that the site visits were something I needed to cut back on. "You don't have to meet with site staff or teachers. They'll have other opportunities to develop skills."

Again, there was the focus on acquiring skills rather than a true understanding and hands-on experience using technology as an instructional tool in a particular discipline area. It was also important to me that a component of the support I provided teachers be ongoing and sustained. Research has shown that successful professional development has certain features which include being grounded in participants' questions, inquiry, and experimentation; it is sustained and intensive; and it is supported by modeling, coaching, and problem solving around specific problems of practice (Darling-Hammond, 1999). An underlying belief I had related to this concept is that not only novice teachers, but all teachers, require assistance and support as they develop ways to make meaningful use of new tools-and technology tools in particular.

No one told you when to run, you missed the starting gun
 And you run and you run to catch up with the sun, but it's sinking.
 -Pink Floyd, *Time*

As the year progressed, my time became limited and the communities of practice participants were experiencing much of the same. Collectively we found that the time needed to practice the skills for using the SMART Board or exploring the repository of pre-installed interactives or beginning to make curriculum connections to then share with colleagues, was becoming more and more difficult to find. Site based staff struggled to balance their time to learn the SMART Board with their site responsibilities of coaching new teachers, assisting in lesson planning, coordinating city and state testing, mentoring teachers of all disciplines providing them with current and content specific resources, ideas, methods, approaches, educational information and instructional materials.

By late Spring our monthly meetings continued but full participation was not possible. Because of other commitments, many members were not able to attend. Members explained, “Oh, I wanted to come today (to the meeting) but I am swamped! I’m running around like a lunatic. We have a review board from the DOE coming next week. I want to practice using the board but if I do, then I’ll never catch up with the rest of the stuff I have to do. My principal is really coming down on me.” or “I’m so sorry! I can’t believe I missed another meeting! I just so busy. We had two teachers quit this past month and I’ve been covering their classes. I got a million things on my plate...I promise I’ll get there next time!”

I began to feel a great sense of disappointment. I began to feel like I had worked so hard for something to be successful but the constraints, limitations, and realities of the given situation had caused me to fail. But as I determinedly moved along, planning and

facilitating our monthly in-person meetings, I realized that the SMART Board communities of practice had not failed, but in fact were still thriving; it just appeared different than I originally anticipated.

Our face to face meetings were not attended on a regular basis by all, but our communication and interaction with one another still occurred. Ironically, as our in-person time together waned, the one thing which at times is frequently viewed by teachers as “one more thing to learn,” was now what was holding our group together; technology.

Through the technology of electronic mail, sent to the entire “community,” we were able to problem solve one another’s technical issues (“Why don’t my speakers work?”), share curriculum integration ideas, (“I found a great math interactive for the kinesthetic learner!”) and request assistance in using the software (“How can I save my work in SMART Notebook?”). The in-person meetings still existed and were an integral part of the project’s success. The intimacy, the spontaneous dialogue, and the comfort found in the simple human contact of social interactions could not be replicated by anecdotal emails. But, I was however, able to share ideas, send articles and research, provide hyperlinks to web activities and lessons, and relate troubleshooting tips through this electronic medium.

In *Communities of Practice: Learning, Meaning, and Identity*, Etienne Wenger (1998), describes the facets of participation and non-participation in communities. In the absence of practice and the rest of the community, isolated representatives cannot fully act and function as they do when engaged in actual practice. But, had it not been for group emails, participants who were not able to attend our in-person meetings would be

isolated, and although not ideal, the emails enabled engagement in practice on some level.

Wenger speaks of “boundary encounters” (p. 112) which can take on various forms, such as a meeting or conversation, and serve different purposes. “The boundary of a community of practice is reified with explicit markers of membership such as titles, dress, tattoos, degrees, or initiation rights” (Wenger, 1998, p. 104). The boundary of our group was reified by our titles of teacher and SMART Board owner. When we held our monthly meeting, we had a boundary encounter or an event that provided and deepened connections for the community of practice participants. It was our email correspondence that now offered opportunities for boundary encounters that thus provided connections to and for the larger community of practice.

What also became clear as our communities of practice continued both in person and online, was a shift in the belief that the participants themselves had to be “experts” before they conducted their own professional development sessions for their teachers and/or administration. Original comments such as, “Oh this is so overwhelming; I’ll never remember all of this” were replaced with, “I bet I could work with a few of my new teachers. They’d be great at helping me with a lot of this (SMART Board) set-up stuff.”

Through in-person meetings and online discussions, we explored the possibilities of introducing this new technology in schools using the same learning model we were currently part of. With school based communities of practice implemented on a smaller scale, group members could now work with teachers in their building, identifying and implementing technology infused strategies on the SMART Board. The advantage of all this was that the focus on the teaching and learning processes would be unique to their

teachers, students and classroom practice. However, despite the valuable possibilities of this learning model, the drawback to both the citywide communities of practice as well as the emerging school based communities of practice was the element “non-participation.”

When engaging in learning communities, experiences of non-participation are inevitable. In *Communities of Practice: Learning, Meaning, and Identity*, Wenger (1998), presents readers with a real-world scenario to exemplify the concept of non-participation:

It is often the case that, rather than being direct boundary relations between communities and people or among communities, relations of non-participation are mediated by institutional arrangements. This is true for claims processors. The low status of the job in the company, the meager salary, the lack of encouragement of initiative, the perception of repetitiousness, the pervasive use of standardized reifications to connect with the real world, and the organization of work in terms of narrow procedures all contribute to an experience of non-participation (Wenger, 1998, p.169).

In the previous quote, Wenger describes the circumstances of a claims processor, but in reading his description, I immediately think of teachers as he describes the low status of the job, the meager salary, the lack of encouragement of initiative, the perception of repetitiousness, the pervasive use of standardized reifications to connect with the real world, and the organization of work in terms of narrow procedures all contribute to an experience of non-participation. It is these very constituents that impede the participation of teachers in worthwhile professional development opportunities that foster collaboration and reflective practice. The teachers that I work with are frequently overwhelmed by the multitude of demands imposed on them. It is common to hear of a teacher new to the profession or a veteran teacher referred to as “burnt out.” Research studies have found that “factors such as time, leadership, professional development, access to resources, and teacher empowerment all exert a significant influence on the

degree of satisfaction teachers feel in their jobs” (The Center for Comprehensive School Reform and Improvement, ¶ 1, July 2007).

As a determining factor in job satisfaction, it is likely that teachers must feel that professional development be valuable in order to have a positive impact on their teaching, thus increasing their job satisfaction. But, regardless of how valuable the content, I also found that a short series of training sessions rarely leads to any impact at the classroom level. Yes, teachers often leave professional development sessions with ideas and suggestions but when engaging in effective implementation at the classroom level, they fall short. As a result, as stated above, when faced with a multitude of factors that impede participation and job satisfaction, teachers many times avoid quality professional development opportunities altogether.

With this knowledge, I decided to use technology to my advantage and extend teacher education opportunities beyond stand-alone sessions. As my smaller professional development groups concluded, I continued corresponding with participants via email. I frequently send articles or Web site addresses or any content related material to groups that I worked with months, even years ago. Whenever I do this, I receive many grateful replies. “Thanks, Kate! This is so helpful.” and “You are a lifeline! This is perfect for a training I am doing for Math teachers!” At times I am even given tokens of appreciation; a thank you card, a writing journal, a hand-made bracelet.

At first the gratitude expressed by the teachers I work with surprised me. This was my job--I was hired to support teachers as they work to integrate technology into their daily teaching practice. But what I began to realize was that my work with New York Teacher Center was unique in that I was a New York City teacher teaching other New

York City teachers. I was not an “expert” in any given area, but rather I had a set of skills to be shared and was able to collaborate with other educators who had strengths in different areas. Working together, we were able to create our own technology integrated curriculum, create our own knowledge specific to varying classroom situations. We had begun to be “creative intellectuals rather than technicians serving out daily portions of someone else's packaged or downloaded materials” (Christensen, 2006, ¶2). In my experiences as a both a classroom teacher and a staff developer, New York City educators are rarely provided with opportunities to work together and much of the professional development they do receive is by someone outside the urban school system; either a trainer from an education corporation or if an educator, then one who teaches or supports teachers in rural or suburban areas. One high school teacher I work with reflects a common sentiment of her peers: “We never have any type of PD. Then when we do it’s this ridiculous all day thing where we have to listen to someone who is teaching in the Midwest with 20 freaking kids in her classroom. Ya know? And, I bet her kids can read! What a joke. I really need to be spending the day trying to get materials and plans ready for the upcoming semester. But I guess he (the principal) thinks he’s doing something good for us. [sighs] Really it sucks.”

When speaking with principals, about the quality of professional development their teachers encounter I have heard a similar tale, “Listen, I get pressure to get students to pass tests. I want to do a good job –and the same goes for my teachers. I’m going to try to get us as much help as I can—whether teachers think it’s good or not.”

Within the schools I work with, I have found there are plenty of principals trying to do “something good” for their teachers. And they are doing so at the suggestion of a

higher power. On July 2, 2009, the United States Secretary of Education, Arne Duncan spoke at the National Education Association's yearly conference. He stressed that, "states and districts should be able to identify effective teachers and principals" (Duncan, 2009, ¶22) and when explaining the future goals for supporting teachers he stated, "In struggling schools, we (President Obama and Arne Duncan) have tried boosting support for teaching staff and making other changes around curriculum, school day, etc.—and sometimes it has worked. I always favor more support, collaboration, mentoring and time on task." (Duncan, 2009, ¶ 45).

But what exactly are effective teachers and principals? And what are struggling schools? Wouldn't New York City, the largest district in the United States with close to one million children be a good place to find a struggling school and start supporting collaboration, mentoring and time on task? How did we slip under the radar? Or did we?

Often, "rhetorical promises of educational equality are regularly transformed into policies of educational inequality" (Au, 2004, ¶2). That is precisely what is happening here. In June of 2009, Arne Duncan addressed the fourth annual Institute of Education Sciences Research Conference (The institute is an organization within the U.S. Department of Education since 2002). Duncan warned, "Believe it or not, several states including New York, Wisconsin, and California, have laws, they have laws that create a firewall between students and teacher data. Think about that, laws that prohibit us from connecting children to the adults who teach them" (Duncan, 2009, ¶ 50). So who wouldn't want effective teachers and principals? Of course we want our teachers to collaborate, have mentors and have more time on task. How sensible that we look at the progress of our students by connecting them to those who teach them; imagine having a

law that forbids it? But in a critically reflective way, the concept of “symbolic violence” permeates this scenario.

For Pierre Bourdieu, symbolic violence, is an unconscious mode of cultural and social domination in which, “Every power to exert symbolic violence, i.e., every power which manages to impose meanings and to impose them as legitimate by concealing the power relations which are the basis of its force, adds its own specifically symbolic force to those power relations” (2000, p. 4). The symbolic force of the federal government has trickled down to the state and to the city. It is symbolic because it is not physical but rather situated in fields as a material force; part of everyday life in the urban classroom. The environment of scripted curriculum and standardized tests is symbolically violent because there is domination and power as the basis of these practices. However, the outward dialogue is one of equity, effectiveness and high achievement; imposed meanings that are legitimated and perpetuated. The public transcript, the interactions between dominators and oppressed (Scott, 1990), says we support teachers and provide them with professional growth opportunities. In the hidden transcript teachers are dissatisfied by stand alone skill based workshops, or training sessions by those who know very little about the teachers’ classroom community. But the hegemonic web is elaborately woven. The teacher quoted earlier, from the symbolic forces around her, conceded that her principal was “doing something good.” But the good often times is misplaced. Unfortunately the federal government has advanced an agenda that includes an over-reliance on high-stakes tests for students, teachers and administrators. As Arne Duncan noted, how horrific it would be to prohibit making connections from students to their teachers. But at what length do we make those connections? Do teachers teach and

students learn, void of context with a neutral curriculum? Or are we shaped by political, social and ideological forces?

At present I suppose we could say we are letting teachers collaborate every time they are sent to a professional development session conducted by an “outsider” who has been asked by a superior to help teachers increase their students’ test scores. I suppose we are mentoring teachers when we allow veteran teachers to model for teachers new to the profession how to cover all the content that will be on the test, and we as teachers are most definitely spending time on task, continually administering practice standardized exams throughout the instructional school day. However, without critical reflection the hegemonic web becomes hard to unravel.

Things can change
 There's always changes
 And I wanna try
 Some rearranging
 -Joan Armatrading, *Drop the Pilot*

How do we begin to move beyond the perception of blaming teachers for our failing schools? How can we begin to provide meaningful professional development opportunities around the use of technology? How do we begin to work within historical, economic, political and sociocultural structures to use technology in effective ways, curriculum embedded, as a teaching and learning tool? As teachers we need to take deliberate action, making a collective effort as colleagues to work together, in reflection and practice, to grow critically so that we can become “capable of inventing our existence” (Freire, 1998, p. 94). By building professional relationships, bound by critical reflection on both our successes and challenges, we can begin to define ourselves as well

as our situation. However, this will go against what we have historically faced as teachers; being reduced to “docile bodies” filled with “simple information and basic skills.”

“Too infrequently are teachers in university, student teaching, or in-service professional education encouraged to confront why they think as they do about themselves as teachers—especially in relationship to the social, cultural, political, economic, and historical world around them. Mainstream teacher education provides little insight into the forces that shape identity and consciousness” (Kincheloe, 2003, p. 47). As Kincheloe goes on to explain, the notion of a critical ontology for teachers includes but is certainly not limited to, a concept in which we develop new forms of self-awareness and an understanding of consciousness construction and see that the self is not pre-formed as it enters the world—that it *emerges* in its relationships to other selves and other things in the world.

But as teachers when are we afforded the opportunity, the time, or opportunities to collaborate in which we can reflect and develop new forms of self awareness? The grand narrative told is that teachers hold the official knowledge. When we are “effective” we are admired and supported. But we must now fit in the narrowly conceived federal definition of “effective.” Like robots, we must transfer knowledge to our students, in a neutral, context void means, in a limited amount of time, with a limited amount of resources.

If our notion of self is continually emerging, continually forming, it is essential that we must distinguish the power relationships that play a role in the construction of self or more specifically, the construction of teacher. By doing so we move to a critical

consciousness that allows for an impetus for change. Our awareness can be an impetus for action; to speak out about the constraints and challenges we face daily in our profession, even offering solutions. But when silenced by dominant power, this is not an easy task.

Freire speaks of teachers who work in “solidarity” (1998) or “meet in cooperation” in order to “transform reality” (2005), yet New York City teachers are rarely allowed to do so. Looking back to my SMART Board communities of practice project, I recall the decision that classroom teachers were not allowed to join a Teacher Center Site Staff member at my professional development group. I was told that there was not enough money to train a collaborating teacher as well. I argued, trying to explain the benefits of two people working together in the same building overcoming the challenges that would be particular to their given situation. The answer was still, “No, not for this project.”

I was told classroom teachers were not allowed was because of economic reasons. But I believe if that were the case, and they saw the value in teachers working together, then there would be a way to find the money to compensate the additional persons. What I believe did play a part in their decision was to set Teacher Center site staff apart from teachers in the building by enhancing their cultural (skills, training) and symbolic (status, respectability) capital.

For my superiors, Teacher Center, in the eyes of the school community, would have an elevated status, equated with respect and a need. School principals pay the salary for Teacher Center Staff with the knowledge that they will have an in-house professional developer, sensitive and accommodating to the school’s needs as well as a provision of

educational resources which include technology. The well-equipped Teacher Center helps to increase the capital of the school, giving it a prestige that sets it apart from a school that does not have one.

Additionally, the fact that classroom teachers were not allowed to join the initial phase of the SMART Board Communities of Practice, perpetuates the dominant role of keeping teachers (trainers and/or classroom) isolated and in their place. Freire explains the concept of “divide and rule” as an action as old as the oppression itself. “As the oppressive minority subordinates and dominates the majority, it must divide it and keep it divided in order to remain in power” (Freire, 2005, p. 141). The oppressor has an interest to keep the oppressed isolated so as to deepen, even create rifts among them. In a repressive method, the oppressors “manipulate the people by giving them the impression that they are being helped” (p. 141).

As critical teachers we must begin to form an alliance with one another, to construct a larger group that supports collaboration with mutual goals that prevent domination and isolation. I am not speaking in terms of a “department committee” or even a “teachers’ union.” Although these groups aid in giving teachers a collective voice, often times their top-down model unintentionally prioritizes issues not central to the classroom teacher. The alliance I envision is at the ground-level, in a school, from the classroom, with fellow teachers of all grade levels and discipline areas coming together to speak out and make changes within their building.

And despite the fact that as teachers we seek opportunities to better ourselves professionally, perhaps by going to workshops, reading education journals, or attending conferences, our growth cannot merely focus on our teaching profession or our particular

content area. We must become critical, liberating educators. But the “liberating process is not a professional growth only. It is self and social transformation, a moment when learning and changing society are joined” (Shor & Freire, 1987, p. 50). This process of liberation does not only include the teacher but the students as well. The liberating teacher moves toward criticality and an “atmosphere of comradeship” (p. 172) in their classrooms. This does not mean that the teacher is an equal to the students, offering no expertise or direction, but rather, the relationship of teacher-student becomes a “dialectical relationship instead of a manipulating one” (p. 173).

The use of technology as a tool for creating a critical, liberating process within classroom practice is invaluable. Similar to the use of electronic mail in the communities of practice project, technology itself can be used as a tool that aids teachers in forming alliances and uniting through the use of Web sites, blogs, emails and listservs. But perhaps more importantly, using technology as a tool is a welcomed medium for students. And, to use the technology in engaging ways is welcomed as well.

A recent study found that students felt that the “quality of their Internet-based assignments was poor and uninspiring. They want to be assigned more—and more engaging—Internet activities that are relevant to their lives. Indeed, many students assert that this “would significantly improve their attitude toward school and learning” (Levin & Arafah, 2002, p. iv). A high school student in Manhattan further explained, “Yeah we use the computers but just to type stuff. I wish we could do somethin’ real...ya know, like research somebody in the world or somethin’.”

With the use of technology as an integral learning tool, both teachers and students can gain new experiences and insights, as well as make new connections, collaborate and

create new knowledge(s). In doing so, we leave the classroom as an isolated setting to one of a lived world experience.

CHAPTER V

THE CLASSROOM OFFICE

Listen, how can you tell us something
 Just to keep us hanging on, yeah
 Something that just don't mean nothin'
 -Van Morrison, *Wonderful Remark*

The temperature must be rising because the snowflakes that are falling appear much larger; heavy clumps blanketing the sidewalks and concealing the dirty ice formed along the curb from last week's storm. Happy that the alternate side street parking is suspended, I park directly in front of the school. The grand, concrete stairs to the large brick building have been salted. As I enter the foyer, the custodian is seated next to the security desk. His canvas jacket wet from snow, his wool cap beaded with water. A half empty bag of road salt sits next to his boots.

He smiles and says, "Comin' down pretty good, huh?" He is a familiar face to me as I am to him. I have worked with teachers in this particular building for the past few years so as I pass him and the security guard on duty, I give a wave and a witty reply about needing snowshoes. They both laugh and wish me a good day.

I am making a visit to help a Social Studies teacher with a PowerPoint presentation he has been working on but to also visit a teacher I have heard quite a great deal about. She is an English teacher and is known by her colleagues as the one who "uses a lot of technology" with her students. I spoke with her briefly the week prior and she welcomed me stopping by. The "a lot of technology" that she uses are laptops from the mobile cart. I wanted to get some new ideas as to how she incorporates the laptop cart and the corresponding software in classroom practice. As discussed in Chapter 4, New

York City educators are rarely provided with opportunities to work together and share ideas. In fact, much of the professional development they receive is by someone outside the urban school system such as a trainer from an education corporation or teacher from a rural or suburban area. I thought this would be a great opportunity to see effective use in practice.

Laptops, stored in mobile carts, are becoming more readily available for classroom use. As mentioned in Chapter 3, although they still exist, fewer schools are creating computer labs in which desktop computers sit in rows, in a separate room, with a select group of students, usually honors level or business students allowed access and use. And although it still varies as to which group of students have access to the mobile labs, for the most part if the technology is available, then the determining factor simply seems to be if a teacher wants to begin incorporating the use of the given technology into their daily instruction.

In most schools I visit, it appears that the teachers new to the profession use the laptops more so than the veteran teachers. Research has found that,

Although newer teachers are generally familiar and comfortable with working with technology, they have not been exposed to applications of technology in the classroom. In most cases, the schools these teachers attended as K-12 students were not yet equipped with a substantial amount of technology or the technology was not regularly integrated into the curriculum by their teachers. Thus, their models of teaching based on their own experiences as students do not include the integration of technology into instruction. In addition, these teachers have more recently completed teacher education programs, many of which focus on how to use technology rather than on how to teach with technology and integrate it into everyday teaching. (Russell, Bebell, O'Dwyer & O'Connor, 2003, p. 13)

Sadly, research findings were further concretized when I visited the English classroom. The mood was upbeat, some chatting interspersed with laughter from about 25 tenth-grade students. The students were sitting at desks, each working on their own Dell

computer. The teacher was thrilled to see me, “Oh I’m so happy you’re here! They’re working on their essays.”

She further explained that they were working on a practice Regents essay. The students were to write an essay in which they discussed two works of literature that they have read, from the particular perspective of a provided statement. The statement is a quote from an author or well-known historical figure. The Regents refers to this statement as the “Critical Lens.”

What I observed was far from critical; the students sat, typing away, painstakingly. A few students appeared to be typing with ease, but most were tapping, key by key, with their pointer finger. What I had envisioned as a vibrant, engaging English class, with creative expression and rich dialogue amongst students, was really reminiscent of a required typing class I took 30 years ago. The 43 minutes of class time ended soon and as the sound of the bell rang in the air, so did the complaints of the students, “Ugh. Fuck this! I got two paragraphs typed and now I just deleted something.” The teacher’s loud voice covers the complaints, “Please save your file and shut down. Place your laptop in the correct (cart) slot when you leave. Hello? Are you listening? Make sure it is in the correct slot! Match the numbers from your computer....We can work on this again tomorrow.”

What I witnessed is a common sight in high school classrooms that “use technology.” They do use it, but not in meaningful or effective ways. And in recent years, the technology of availability that is used ineffectively and even to the detriment of the development of students’ higher order thinking skills, is the laptop computer. However the mention of using a laptop does incite great interest in students. A ninth grader sums it

up, “I love when they (teachers) tell us we are using the computers. Even if we have to share, it’s better than the boring other way. The class (time) is much better.”

Unfortunately computer use doesn’t necessarily equate with something “better.”

However, there are ways in which computer use can effectively enhance the teaching and learning process, but in New York City there are limits to doing so.

Schools wishing to purchase computers for their schools have limited options. They must go through the DOE FAMIS Portal which facilitates the ordering of goods and services from contracted vendors. As explained in Chapter 4, the DOE’s Department of Division of Contracts and Purchasing determines which companies will be given the opportunity to sell their goods to schools. Regardless of which brand of laptop computer a school buys (Apple or Dell or HP), the computers themselves are sent to school “pre-imaged” or installed with standard package of software; Microsoft Office.

Microsoft Office is a software suite of interrelated applications. The audience and context for the product is clearly stated in the product’s name. The DOE images their computers with Office which is considered tool software; no curriculum based software or computer assisted instructional software is included. Imaging a computer is to clone it or make an exact copy of a harddrive, complete with operating system and software. Instead of installing several software programs on thousands of computers, the DOE creates one image and installs it on all computers purchased by a school. Typically DOE computers are imaged with the basic version of Microsoft Office which includes Microsoft Word, Microsoft Excel, and Microsoft PowerPoint. In recent years DOE computers images have included additional Office software such as Publisher which is

software for creating newsletters, business cards, flyers, and greeting cards and/or Picture Manager which is basic photo editing software.

After class the English teachers explains, “I know it’s frustrating for them just typing but I have to review for the Regents and I hate to see the laptops not be used...So it’s let them sit in a closet and collect dust or let the kids use them to type Regents essays.” We talk further about alternative uses of Word such as a medium for creating writing journals, pattern or shape poems, timelines or graphic organizers. She clarifies, “Yeah, I’ve done a few things like that but could I do that this time of year? (laughs) No way! These guys have to score better than last time or we’re all in trouble.”

In addition to the simple use of Word for word processing in the classroom, I have seen another Office application, Excel, being used for instructional purposes to mundanely make spreadsheets in which the teacher creates a formula and students input numbers. It is often the case that the students are not clear as to what the numbers represent, why the numbers are input into certain cells or even what the purpose of the activity is. One ninth grader explained to me, “I don’t know what the hell he’s [the teacher] even doing. [laughs]. But at least we get to use the computers instead of hearing him talk so much. Sometimes if he’s helping someone I just play that card game that’s on there.” The Math teacher further explains the exercise, “It is the greatest? No. Do I have time to think of something else? Nope, not with the Regents coming up.”

In the previous scenarios both English and Math teachers focus on covering the material found on standardized tests. Similar to their colleagues, they express an interest in using various forms of technology to enhance their instruction, but succumb to the reality of their instructional day in which they must prepare their students for

standardized exams. When I see students, sitting in rows, not speaking, with blank looks staring at a computer screen, I think of the social efficiency model of the late 1800s, based on Frederick W. Taylor's model for American workers; giving them narrowly defined assignments that are to be completed at a specific rate using predefined procedures. Over a hundred years later we apply Taylor's ideas in "modern" classrooms, regardless of technological advances such as the laptop computer.

In today's classroom the social efficiency model can be seen in test prep, surveys, and tracking; all of which are used in light of improving student achievement, setting high standards and establishing measurable goals. However, as Lawrence Cremin describes in *Popular Schooling*, "Standardized tests measure at best a fraction of what young people have learned in school, and they measure that imperfectly ...far too much teaching is uninspired and unimaginative, with consistent over-reliance on lectures, drills, and workbooks and under-reliance on a wide range of alternative pedagogies and technologies" (1990, p. 40). Cremin could also add an over-reliance on Microsoft Office software to his list.

What often happens as teachers begin to use technology in their classroom practice is that they merely replace an older type technology for a more recent one and expect their lesson to miraculously get "better." If the older technology (chalk board, text book, lecture notes) was ineffective in engaging students and fostering critical thinking and dialogue, then the modern replacement most likely will be just as ineffective. Once again, the technology itself is not an educational savior but rather how the teachers and students use the technology that has an impact on the teaching and learning process. The

mere use of technology by teachers will not make learning better; it may in fact just leave students with nothing but an empty promise.

Someone to claim us, someone to follow
 Someone to shame us, some brave Apollo
 Someone to fool us, someone like you
 We want you Big Brother
 -David Bowie, *Big Brother*

As discussed in Chapter 4, there are numerous challenges that impede teachers from gaining professional development in the area of instructional technology so that they can learn new ways to effectively use the tools they are provided. However, even if teachers decided to take it upon themselves and use alternative software on the laptop computers, most times they are not able to do so. A tenth grade English teacher explains, “I wanted to install book publishing software I bought them (the students). I thought they could each have a role in the design and compilation of poetry and short story books...The kids worked so hard on the writing. I even got a scanner as a donation so we didn’t have to type any of the stories.” The software she bought would also enable students to create corresponding graphics that they felt reflected the theme of their writing. The writing itself came from the teachers’ unit on “genre,” with students exposed to a wide variety in their readings, then moving to creating their own pieces, based on their favorite type. But, regrettably “unauthorized” installation of software is prohibited by the New York City’s Department of Education. And so, the software purchased with the teacher’s own money, for the benefit of her students, goes unused.

As part of the DOE image, there are three logins for access. After booting up, the desktop displays a login for “student,” “teacher,” and “admin.” The student login requires

no password and gives students access to limited applications; namely Microsoft Office and an Internet browser. The teacher login allows the freedom to download security updates or access additional programs and accessories such as Adobe reader, or the calculator, or a solitaire game.

Regardless of their educational value, teachers or even administrations are not allowed to download or install any program that is not authorized by the DOE. Despite the name, the “admin” login was actually created for the people who have to work on the computers, not administrators in a school building. A former New York City district level Director of Technology explained, “Essentially it is a controlled environment set up by people who created the image...they have nothing to do with instruction—they’re just the repair people.”

When it comes to using computers in their classroom, the dilemma for teachers is that their instructional decisions are now superseded by the DOE; and a division of the DOE that is not related to instruction.

Most teachers do know the admin login and do install “unauthorized” material. One high school teacher explains, “Yeah, I download stuff for my students. I don’t care. It’d be a blessing if they fired me. If they don’t want me put a Science program on the computers, a program that’s gonna help the kids, then they’re a bigger bunch of idiots than I even thought.”

Problems arise when teachers install software or applications on their own. If the computer is still under warranty and in need of repair, it is the DOE that makes the repair visit. Because the broken computer contains the unauthorized program or application, the DOE will merely reimage the computer, thus removing the unauthorized program and all

related work, instead of fixing the isolated problem. Many teachers are not aware of this procedure and after a “repair” learn that all of their students’ work has been erased. One angry teacher described a common experience, “I was teaching at the time the guy (the DOE technician) came. Who the hell knew he was going to erase everything! I was so pissed. I asked him why the hell he didn’t tell me he was going to do that. He says it isn’t my property. I’m so pissed. The guy didn’t give a shit.”

Again we see teachers attempting to teach within a hierarchized and continuously functioning power structure, with disciplinary actions seamlessly integrated in to the system. We often think of discipline and control in a top down model but as Foucault explains, a network of power relations can also be “from bottom to top and laterally; this network ‘holds’ the whole together and transverse it in its entirety with effects of power that derive from one another” (1995, p. 176).

Regardless of where one believes teachers are located in the educational hierarchy; below a computer repair person or technician, above a computer technician or lateral in position, the teachers are part of a structure that limits what they can and cannot do. Often teachers are aware of the structured parameters in which they work and are accepting of it. “Oh, God. Some days are just so freaking frustrating. But, what can you do? That’s life with the DOE.”

As docile bodies, teachers often do as Cremin notes; teaching in ways that are “uninspired and unimaginative.” Even the scheduling of the secondary school day is tightly structured, with students given small blocks of time, moving from room to room, “learning” pieces of information in different content areas, taking in as much information as possible so that they can pass a mandated city and state exams. In depth exploration of

a particular concept, area, or theme is not encouraged and rarely possible given the scripted curriculum or required topics to be covered rather than understood.

For teachers, this “dumbing down” of the curriculum to isolated facts and simplification of concepts, undermines their professional expertise and passion. Being dictated as to what must be ‘covered’ in their classrooms every day, makes the teacher the lowest common denominator in the hegemonic structure of public schooling.

We tried to speak between lines of oration
 You could only repeat what we told you...
 You're watching movies trying to find the feelers,
 You only see what we show you.

-Pete Townshend, *The Punk and the Godfather*

Lastly, one of the most popular and widely used Office applications that lends itself to such a “dumbing down” of teaching (and learning) is PowerPoint.

After visiting the English classroom, I stopped by the Social Studies department to meet with a teacher about a PowerPoint presentation he had been working on. He was the other teacher in the building who uses “a lot of technology.” The “a lot of technology” in this case, is PowerPoint. For the past two years, this particular teacher was creating most of his lessons or lesson activities in PowerPoint. The presentation slides he designed were typical of those I commonly see; slides containing text boxes that are filled with paragraphs of pertinent material or slides with bulleted lists of facts to be learned.

“The kids love when I use ‘em (PowerPoint lessons). They come right in, sit down and start copying.” And, he was right; the students did prefer them to the lecture format: “I like looking at the words on the slides instead of figuring out his wacked writing.” “I guess I like the PowerPoint. Sometimes he makes them look pretty or puts in

a noise or something. Yeah, that's kinda funny when he does that. (laughs). Yeah, I guess I like them better than the regular way."

With this common use of PowerPoint, the teacher simply uses a more modern technology to facilitate a teacher directed class. Unlike copying from the chalkboard or from a mimeographed worksheet or from a photocopied textbook page, the students have an endless supply of slides, filled with attractive fonts, to copy. By doing so, classroom management issues are at a minimum. However, the lack of talking or intellectual engagement is interpreted by colleagues and the administration as "doing a great job." The classroom becomes a place in which an expert spills out important information for the students to soak up.

The Social Studies teacher explains, "Oh sometimes I change the slide background just to mix it up a bit. I even throw in a sound or two just to wake 'em up!" I have also found that many teachers add fancy transitions, sounds or animated effects that have no evident purpose, use, or benefit to the material at hand. The students' "interest" in the bells and whistles of the presentation is based on the novelty of the medium rather than an intrinsic desire to learn. When teachers rely on this software in their lessons they create another "dumbing down" scenario in which students are not afforded the opportunity for exploration of material, discussion, debate, critical thinking or application of knowledge that can lead to liberation.

Freire speaks of liberating education as praxis—or the action and reflection of students' upon their world in order to transform it. But how much action and reflection takes place in a classroom that uses technology in ways that oppresses, silences, and pacifies creativity? Freire explains, "Liberating education consists in acts of cognition,

not transferrals of information” (2005, p. 79). It is not until we as teachers, work together as professional colleagues, exploring ways in which not only ourselves but our students can move toward a critical consciousness. And, by doing so gain a greater understanding of the hegemonic practices that take place around us. Often times as teachers we may inadvertently, despite our best intentions, maintain the status quo. By praxis, we can begin to better understand the relationships among teaching, learning, the production of knowledge, and the larger institutional structures of the school we work in.

And so, in this Social Studies class, instead of maintaining the status quo, how were we going to work with the material at hand so it became more interesting, engaging, and thought provoking? How were we going to use technology to foster critical engagement? To do so was by no means a simple act, but it was definitely a step in the right direction; a starting point with possibilities. Several months prior to my recent visit, the Social Studies teacher asked for my help with “timing” one of his presentations. I asked him why he wanted to time or automatically advance the slides. He explained that the slides contained questions and he wanted to give the students a certain amount of time to answer each. “Like a PowerPoint quiz...they’ll love it.”

I envisioned students taking this “quiz presentation” like hamsters on an exercise wheel unable to get off. The questions would come at them continuously regardless of whether they answered correctly or guessed correctly or did not understand at all. Where was the understanding? Where was the critical engagement?

My opinion about his use of technology in the classroom gave way to a conversation about his instructional goals, what he wanted for his students, what he felt was the driving force behind the content of his classes. His responses were similar to

most teachers I work with: he wanted his students to understand the content and he wanted them to be successful in their academic lives. By doing so he felt their academic success would directly result in successful personal lives, with regard to attending college and earning money at a profession they enjoy. He also felt like the content he chose to address was directly related to the topics found on the Regents exam. “There’s a lot more I’d like to do with them, or even stuff I wish we had more time for, but I can’t. I’m in deep shit if they don’t do good on the Regents. My AP is already freaking out about it and we still have two months before they take it.” In our conversation I also learned of his genuine interest in his students’ well-being. “I want them to feel like they’re heard. I want to get to know them as individuals. I think I do that...or at least I try to.”

What I find so often is that teachers do have their students’ best interests at heart and they want their students to be successful in their coursework, to understand, to score high on standardized exams that ultimately assess both the students and the teachers themselves. But unfortunately, what seems to be happening at the classroom level is a scenario that Wiggins and McTighe (2005) discuss in their book “*Understanding by Design*.” They describe how often teachers try to cover material in their curriculum opposed to teaching for understanding or better yet, teaching to help their students to think critically, analyze, question and “learn how to learn” (p. 59). Wiggins and McTighe do acknowledge even when material is merely covered by a teacher, that there are learners who “get it,” understanding the course work “by good fortune” (p. 4). But is it good fortune or cultural capital at play? In other words, students and teachers operate within a field that is laden with power relationships and dominant ideologies. Dominant ideologies place value on what constitutes knowledge, how knowledge is to be achieved,

and in this case what one needs to know in order to pass state exams. Students with high cultural capital already have knowledge, skills and capacities which they gained through experience—experience outside school. Before these students enter a classroom they are already at an advantage on how to succeed within the parameters of the current school system. But what about the other students who are not as fortunate?

With all this in mind, the Social Studies teacher and I began to talk about the ways, within the time constraints of the 43 minutes class period, and the upcoming Regents exam, to use PowerPoint so that it can be a tool that helps his students understand, comprehend, reflect, and critique the information presented. I suggested using PowerPoint as a medium for visual literacy, using images and very few, if any, words on slides. The concept of visual literacy in education relates to comprehending, making meaning, and interpreting images or multimedia.

What we decided to create was a series of presentations that consisted of one to four slides. On the slides we inserted pictures taken from the Internet or from a scanned book related to the topic at hand. Many of the images were photographs that represented the concepts previously listed in the “quiz presentation.” I suggested that the first few presentations contain slides that displayed one picture, without the inclusion of text. This would provide the teacher with an opportunity to discuss and learn students’ interpretations of the image. By copying, saving and scanning, we began to collect pictures related to U.S. and Global history; suffragists, signs reflecting Jim Crow laws, geographic maps, political timelines, newspaper headlines, presidents, dictators, military leaders, propaganda posters, and the list went on.

After designing presentations without text, I then suggested including a corresponding question or two with the picture on some of the slides so that students could work independently or in teams, answering. I have found that many students find whole class discussions intimidating and rarely share their opinions. By writing responses first, I felt this afforded more opportunities for students to be “heard.”

What types of question(s) should be on the slide? We talked at length about the types of questioning that would be effective. “I get what you’re saying. I shouldn’t ask like, ‘What color is the jacket the guy’s wearing?’ but something that will make them think...yeah, yeah, this is really gonna get them into it!” At first I was surprised how my idea of critical questioning would be so foreign to him, but the more I talked with high school teachers of students on the Regents track, the more I began to realize that the teachers were bound by such tightly structured curriculum, with a main focus on covering a certain amount of material, in a certain amount of time. With such a rigorous pace, the teachers themselves move through their days without taking a moment to reflect. Or if they do reflect, they prefer not to face the reality of their circumstances. A ninth grade Science teacher once explained, “It’s so ridiculous. I’m covering so much required material so fast I don’t even know what I’m talking about and these poor kids are expected to keep up? Ugh, what am I going to do? I dunno. Whatever.”

And so, drawing on the concept of Bloom’s Taxonomy, the six classified levels of proficiency, the Social Studies teacher and I selected images for each presentation and created corresponding questions that asked the students to look at the images through a critical lens, analyzing, distinguishing, comparing, predicting, and justifying.

The day before the teacher was going to use his first visual literacy PowerPoint presentation, he had another revelation. “This is so awesome. Ya’ know what this is great for? Their DBQ! My AP is gonna love this!” The “DBQ” is the historical or primary source “document based question” on the Regents. High school students are first asked to analyze six to eight documents on a particular theme and answer questions about each. For the second part of the DBQ, students must use at least four of the documents as well as prior knowledge in an essay response.

What happened was amazing to witness. As the teacher worked with technology as a medium for his lesson, he began to see it as teaching tool that could enhance students’ understanding and thus improve their test scores. Although preparing for the exam was required of him, the effective use of the technology helped to impart the information in a way that was not rote based, isolated pieces of information to be deposited into the minds of students.

And initially the students had difficulty with exercises in which they were asked to look at a picture critically and offer their opinion or insight; “What the hell are we supposed to write? There’s nothing on there (the slide) to copy?” “I don’t know what you want me to do. Look at a picture? Yeah so what? How my gonna know when it was taken? Ain’t no date on it!” Despite the initial resistance, the teacher persisted, “Wait you guys, listen, you can do this...” He then guided them in looking for context clues in the graphics themselves, critiquing what was shown, speculating who the creator was, who was the intended audience and so on.

Amazingly, within days they were beginning to discuss the material presented and in doing so, with the help of their teacher, question and challenge the perspectives,

values, viewpoints and beliefs that lay beneath their surface. Even the teacher himself became alive. He went from someone who was merely transferring required information and facts to his students and unable to even use questioning techniques that encouraged analysis, synthesis and critique to a teacher with passion and insight. His passion for the subject shone through as he pushed his students to analyze and question; in prior lessons he already did the analyzing and questioning and had the answers ready for them to memorize.

But what happened in this Social Studies classroom was by no means an overnight sensation. It was, however, the starting point of a new teacher/student relationship, a new and meaningful way to use technology, and a new way of approaching criticality.

The key element in the above scenario was the use of technology in meaningful and authentic ways. In a 2009 online article in *Science Daily*, “Is Technology Producing a Decline in Critical Thinking and Analysis?” researchers have shown that as technology is increasingly used in our lives, our critical thinking and analysis skills have declined. But, according to the article our visual skills have improved. The article goes on to state that, “Schools should make more effort to test students using visual media by asking them to prepare PowerPoint presentations, for example” (2009, ¶ 6). What? If there is a decline in critical thinking through the use of technology shouldn’t we evaluate how we are using that technology instead of merely eliminating the technology? And although it is a benefit that visual skills have improved through the use of technology, shouldn’t we look to ways that technology can be used to improve reading and writing? Aren’t reading and writing the basic communication skills of the dominant culture?

When the article makes reference to PowerPoint I can't help to feel that there is that continual underlying message that somehow technology use in school can be our educational panacea. Even with the inclusion of pictures in PowerPoint, there is great deal at stake in determining if a student truly understands the concept at hand as well as the contextual perspective and origins of the associated "facts." By merely using more visual media it cannot be assumed that students will process information better or be able to better analyze that information. The students in the above the scenario were fairly good writers—the problem was they were not able to, as their teacher said, "Remember anything for the test." And they couldn't "remember" because they were not engaged, they were not co-creators of the knowledge in their classrooms, they were not able to make connections to their own lives, they were not able to question and understand. They were empty receptacles expected to be filled with information that needed to be covered.

And you may ask yourself:
well...how did I get here?

-David Byrne and Brian Eno, *Once in a Lifetime*

It is almost a month after my initial visit to the English and Social Studies classrooms and the snow has completely disappeared. The lingering piles of gravel filled snow sitting along the grass near the concrete edge are long gone. This winter has been warmer than most and the mid-day sun has melted them, leaving behind pieces of garbage; candy wrappers, cigarettes and broken pens, in their place. As I walk up the huge stone steps, I glance back at my double parked car. I am in the neighborhood and only stopping in for a quick 'hello'. I know from email correspondence that the use of technology in both classrooms, much like the snow, has completely disappeared. The

approaching state exams have caused the laptop cart to be locked up tight and placed back in the closet. The PowerPoint presentations are on hold. The projector is stored in the lower desk drawer of the assistant principal.

The technology use, whether good or bad, has been replaced with photocopied Regents exams from previous years. This visit, I witness the students sitting quietly in rows taking the practice exams. Amongst them, fellow students sleeping, heads resting on the tops of wooden desks. When I see the Social Studies teacher he tells me, “It really stinks. We were doing great stuff. You’d love it. I taught myself how to embed video clips.” The English teacher, laments, “I tried to see if we could do a practice test every other day and still work on our essay drafts ‘cuz the kids started working in groups discussing possible answers and even editing each others work, but my AP didn’t like that too much. She (the AP) wants me to give them the practice exams until the real one. I’m not bothering to argue. It is what it is.” As her voice drops off, she smirks and shakes her head.

Often times, when I leave a New York City School building, I too shake my head, asking myself, “What’s happening here?” I do know that these scenarios are not isolated incidents. Teachers are increasingly directed by district and school administrators to focus on raising test scores rather than teaching for understanding (Hursh, ¶ 19, 2001). But the answer as to why does not come from the school or the district level, or even the city level for that matter. The answer lies in a greater framework of power relations.

It is the macrostructure of neoliberalism which defines much of what we can and cannot do within the four walls of an urban classroom. According to David Harvey in an April 2009 *Democracy Now!* interview, neoliberalism is a political project which formed

in the United States in the 1970s to “consolidate and reconstruct class power. And it did it, if you like, through a whole kind of set of mechanisms about privatization, about free markets, individual responsibility, withdrawal of the state from social provision.”

Since that time, national and global neoliberal economic policies have increasingly and significantly contributed to redefining our current ideology in social and educational spheres. With a neoliberal emphasis on economic growth and deregulation over social welfare and personal rights, education is now viewed in terms of producing economically productive citizens. Education is no longer valued for developing critically thinkers or ethical or aesthetic citizens but rather looked at as promoting knowledge and skills that contribute to economic productivity. In other words, educating students to be compliant, productive, docile bodies.

It is through a neoliberal ideology that a great focus on the use of standards, assessments, and accountability emerges; a focus that is depicted in the previous classroom scenarios. This overemphasis and preoccupation with standards, assessments, and accountability restricts both teachers and students to particular kinds of thinking; thinking void of criticality.

For example, the federal policy, No Child Left Behind, is based on “Four Pillars.” A broad overview, found online at <http://www.ed.gov/nclb/overview/intro/4pillars.html>, depicts one pillar as “Stronger Accountability for Results” which states, “Under No Child Left Behind, states are working to close the achievement gap and make sure all students, including those who are disadvantaged, achieve academic proficiency” (U.S. Department of Education, 2004, ¶1).

“Academic proficiency” in this case is passing one of the many standardized exams given to students. New York State requires 3rd through 8th graders to take state standardized tests in Math and English Language Arts. At the high school level, students wishing to receive a diploma must pass Regents exams in English, Math, Global History and Geography, U.S. History and Government and Science.

Joe Kincheloe explains the impact of No Child Left Behind, "as a legal tool to reconfigure the federal government's role as the promoter of equality and diversity in the educational domain. Though it was promoted as a new way of helping economically marginalized and minority students, such representations were smoke screens used to conceal its mission of recovery of traditional forms of dominant power" (2009, p. 23). What is written on the pages of No Child Left Behind and what is heard in neoliberal discourses, plays out very differently in the daily lives of teachers and students.

“Neoliberalism holds teachers accountable for their students’ learning. Because neoliberalism is a global hegemon, it permeates all of social life and saturates our sensibilities. Hence, holding teachers accountable for their successes and failures becomes a matter of common sense” (Tobin, in press).

But how *can* that make sense? Students are not commodities or isolated beings ready to be molded by an all knowing teacher. Well, perhaps not all knowing, but rather a teacher with a scripted curriculum. Students and teachers do not interact and engage with one another void of context. There are social, political and power embedded relations underlying. The dynamics of the classroom itself, the field in which student and teacher are located, enacts culture as well. Given that, how can teachers be solely responsible for a student’s learning? It seems absurd but as Harvey reminds us, neoliberal discourse and

practices provide “a benevolent mask of wonderful-sounding words like freedom, liberty, choice, and rights, to hide the grim realities of the restoration or reconstitution of naked class power... (2005, p.119).

Ironically, neoliberalism, alongside the traditional criticism of the State intruding into the lives of individuals, has actually created and deployed a variety of organizational forms of control and methods to limit freedoms. As teachers, the way we resist the hegemony of neoliberal discourses and practices is that we must first be aware of them. We need to take a closer look at what we teach, how we teach and why we teach the way we do. We also need to view computers and related technologies in a critical light. Does our technology use perpetuate the status quo? Or, can we use computers and related technologies in our classroom as instructional tools to help not only ourselves as educators but also our students toward a critical awareness of the micro, meso and macro structures that impact our academic lives? We need to look to ways in which technology can help us to “make power visible, to challenge the ideological circuitry of hegemonic knowledge” (Giroux, 2008, p. 113). By doing otherwise, we become central players in the game of deskilling teacher and dumbing down both students and curriculum.

CHAPTER VI

CONCRETE VOICES: BEYOND THE CLASSROOM WALLS

Guess I've got that travelin' bone
 'cause this feeling won't leave alone.
 But I won't, won't be losin' my way
 long as I can see the light
 -John Fogerty, *Long As I Can See the Light*

The third floor hallway I am walking down is dim and quiet. It is early morning and the aroma of coffee drifts out of some of the department offices. The halls are empty; most students are in classrooms, a few scattered throughout the corridors, walking quickly to where they need to be. “Hurry up guys. I can’t give you a late pass,” a dean on patrol calls to them.

It has only been a few days since school has been in session after winter vacation. From the slick, clean floor, it is obvious that they have been waxed over the holiday. The rising sun enters through metal barred-window at the far end of the building, sending a beam of light down the corridor. The reflecting glow off the polished tiles reminds me of religious drawings and paintings that reference “seeing the light.” Ironically, I will see the light in the classroom I visit. However, the light shining in this instance will be the radiance of engaged students, researching, debating, analyzing information found on the Web.

From the outside of the room, I hear bustling, as I enter, I clearly hear 10th grade girls arguing with one another, “No, that’s not it. Read it again!” one says, “You’re way wrong. Look, if you click here they even give you a picture of it. See?” “Alright chill!” the other replies,

“I got it. Yeah, this graph thing is better.” The two are pointing to a laptop monitor,

reading through a hyperlinked document. The live links take them to additional sites, documents, charts and diagraphs, also found on the Web. Around the room, classmates sit in pairs or in groups of three, working together at computers. Beside them, loose leaf notebooks and pens. Some seem to disagree as to what gets written in the notebook. I watch as they playfully argue, appearing to be proving their point by referring to something displayed on the monitor. They move seamlessly from Web page to Web page to hyperlinks to new Internet browser windows to handwritten notes, to text book, back to Web page. In the front of the room, projected on a small torn movie screen, is a brightly colored page that includes a picture of Jerome Park Reservoir and a picture of a water treatment plant. Above the graphics are varying styles of font and a boldface title:

WebQuest: Is Our Water Really Clean?

The teacher of this class greets me with a smile and a hug. We have worked together for several years, meeting first when I was a technology staff developer for a U.S. Department of Education Technology Innovation Challenge Grant, *Project TIPS: Teaching Interdisciplinary Problem Solving through Educational Technology*. The TIPS project was adapted from Syracuse University's Project LEGAL; a teaching method in group decision making, problem solving, and public policy skills. I worked exclusively with Bronx high school teachers, helping them to create WebQuests in the areas of social studies, language arts and science.

Since I am not working in her school this particular semester, she expresses how pleased she is that I was able to take the time to visit. I explain that I gladly make the time to travel from school to school when something as exciting or engaging as the work she and

her students are doing can be witnessed. In fact, it is experiences such as those that occur in her classroom that keep me hopeful, inspired and enlightened.

I am particularly fond of WebQuests. I believe they are a valuable instructional strategy that can make effective use of the technologies available to urban classroom teachers. The WebQuest is an inquiry-oriented activity in which most, if not all, of the information the learner works with is Web based. The WebQuest model was developed by Bernie Dodge at San Diego State University in the mid 90s. A well written WebQuest enables students to collaborate, investigate, question and create. But, the WebQuest is only as good, or rather effective, as the quality of its creation. Again, as stated many times in previous chapters, the technology is not the answer to all our problems in education. However the WebQuest, when created with a critical perspective in mind, can offer an alternative to the traditional banking method of teaching. So often teachers unwittingly perpetuate the status quo with curriculum that reflects “the notion of a single norm of thought and experience” which they are encouraged to believe is “universal” (hooks, 1994, p. 35). The WebQuest can be a framework in which to explore differing viewpoints and question grand narratives.

Teachers can design a WebQuest by using Web site authoring software or in the case of the teachers I work with, I suggest the use of Microsoft Word. For New York City teachers, using Department of Education imaged computers, this software will be free and accessible. And as discussed in Chapter 5, Microsoft Word need not be used in a deskilling way for word processing exercises. Instead, a nicely designed WebQuest can be created in Word as a document with background color, images, and hyperlinks. The document can be easily be uploaded to a school or teacher Web site. If neither is

available, then the Word document can be saved on a computer with Internet access, with students and teachers then retrieving information from the Web through live hyperlinks embedded within the document page.

When creating a WebQuest, a particular format is followed. The WebQuest begins with an *Introduction* that provides the learner with background information and motivational scenarios; *Task*, the artifact or product that represents what has been learned; *Process*, a description of the steps the learner goes through to accomplish the Task; *Resources*, web sites that the learner accesses in order to complete the Task; *Evaluation*, a rubric that corresponds with the learner's artifact; and *Conclusion*, a reflection or summation.

When following the format and creating the *Resources* section, the selection of Web sites by the teacher is crucial. Carefully chosen Web resources should expose students to alternative views and perspectives. Information found on the Web site must aid the student in completing their Task. And, the *Task* must be something that requires higher level thinking and not just simply summarizing the presented information or having students "receive, memorize, and repeat" (Freire, 2005, 72) what they read online.

The WebQuest itself must encourage synthesis, analysis, comprehension, questioning, problem-solving, creativity and judgment. The topics can be issues not typically found in standard text books. Or if the WebQuest subject matter coincides with textbook material or content on standardized exams, the teacher can create a WebQuest that encourages students to re-examine the subject at hand through a critical lens. Teachers I have worked with have created thought provoking WebQuests for their students in a variety of topics: "Gender Discrimination in Shakespeare," "Environmental

Racism,” “School Prayer,” “Free Speech Under Fire,” “Human Cloning and Genetic Engineering,” “Where Does Your Garbage Go?” and “Holden Caulfield’s Truant America.” And much like what I had witnessed one morning in the high school science class, WebQuests are a valuable technology based strategy that foster student collaboration, inquiry and knowledge creation.

And it's a hard, it's a hard, it's a hard, and it's a hard
It's a hard rain's a-gonna fall

Bob Dylan, *A Hard Rain's A-Gonna Fall*

Like many quality initiatives and grants in New York City, all good things must come to an end. The funding for the TIPS Grant finished after 5 years, and despite letters from students, teachers, and principals, and positive documentation provided in annual reports from both the internal grant evaluator and the U.S. Department Education’s Grant Reviewer, the district chose not to employ my services and let the project come to an end. Several years later, I meet teachers I used to work with and I hear, “Is TIPS still around? That was so great. I have a friend who would have loved to be part of it.” Or, “What ever happened to TIPS? I bet it was too good so they had to kill it!” And from teachers I never worked with, “Hey! Aren’t you the WebQuest lady? When are you doing more workshops? I’d love to learn how to do one.” As a District Director of Technology once told me, “New York City technology is always a pilot and never an imperative.” And when talking with administrators, teachers, and staff developers, the consensus is that unless the use of technology is somehow viewed as a tool that aids in students’ learning, and right now in New York City that means an increase in test scores, then it will be simply viewed just one more thing to try with no clear connection to teaching and

learning. As one Literacy Staff Developer put it, “Unless the powers that be see a direct correlation between using that computer (points to a laptop) and increasing the ELA (English Language Arts) scores, it ain’t happening.”

Despite a continued interest from teachers, as a result of the project ending the use of WebQuests by teachers I work with has diminished in the past few years. From what I am told, there are few, if any, professional development opportunities about WebQuests. Teachers can venture to learn the format on their own, even attempting to implement it in their classroom practice, but the benefits of being part of a grant with collegial support are non-existent. As described in Chapter 4, teachers that work together through successes and challenges of technology use have greater success in effectively implementing technology in their teaching. Yet, the climate in New York City is not geared toward teacher collaboration; sharing ideas and supporting one another in a professional environment. Instead it is more like “divide and conquer,” or “each man for himself” as teachers work under constraints of ominous accountability tactics based solely on test scores.

A teacher posts to the blog *Gotham Schools*:

I was fired (among others) because I would not raise my student’s [sic] grades (pass everyone). First, they tortured me everyday - wrote me up, bad mouthed me, told me I was no good, then wrote me up some more, threatened my job, my license.

Then, realizing their illegal actions, offered me my job back if I signed a contract saying I wouldn’t sue anybody for things said and done to me.

Finally, I was exsessed. My principal and local superintendent received \$10,000 bonuses for doing such a good job of “boosting” grades.

As described in Chapter 5, a neoliberal shadow is raining down on what promising light is left in the halls of New York City school buildings. Despite our current

President's campaign pledge of "change," those of us in education are seeing a change we didn't expect. "The discourse of standards and assessment dominate the Obama-Duncan language of reform, and in doing so erase more-crucial issues such as the iniquitous school-financing schemes, the economic disinvestment in poor urban schools, the ongoing reduction of teachers to testing technicians..." (Giroux, ¶ 2, 2009). And the pressure for teachers to teach to the test has been even greater since the accountability drive for administrators. Under a new performance pay program based on school progress report results, principals and assistant principals are qualified for bonuses of up to \$25,000. This money is not awarded to the school but rather to the administrator personally. The teachers taking my graduate education course often share their anger and frustration with me, "I bust my hump and my principal gets to go to Hawaii? It's bullshit." Another teacher, with her voice quivering describes her situation, "I am so mad. My kids and I work hard. And then there are a few (students) that do nothing. But it doesn't matter. She (the principal) goes and changes the grades at the end of the day. Then they all pass—the kids that work hard, the kids that do nothing and she gets the credit." Many nod in agreement when a teacher new to the profession explains, "As far as I know, nobody's changing scores [laughs]. We're doing pretty awful [grins]. But we're all so sick of hearing about the test, the test, the test. I want to do stuff with art or music. I want to listen to podcasts. The whole thing is so discouraging."

When it comes to technology use, the light seen in the opening scenario in which students working in their science classroom, using the Web to investigate, question and create, gets even dimmer. With few opportunities provided to learn how to incorporate technology in meaningful, authentic ways, and the pressure of having a restrictive,

quantifiable goal as the only standard for defining “learning,” teachers use technology in ways that not only “dumb down” the curriculum but also perpetuate the status quo.

Teachers frequently use the Internet available to them for test prep, spending most of their instructional time on Web sites such as www.regentsprep.com or accessing practice exams from previous years at New York State Education Department, Office of State Assessment (<http://www.nysedregents.org/testing/hsregents.html>). If teachers decide to allow students to use the Web for reasons other than test prep, then the Web sites accessed contain information rarely more insightful than the perspective and content of their textbook. Most times the Web sites that are “allowed” are unfortunately not by the choice of the teacher, nor the student. As described in Chapter 1, the Department of Education employs a strong filtering system for those in the classroom seeking out information on the World Wide Web.

So when you look at me, you better look hard and look twice
Is that me baby or just a brilliant disguise?

-Bruce Springsteen, *Brilliant Disguise*

I recently overheard a conversation between two college professors about the dreadfulness of Internet censorship in the People's Republic of China. As I listened I could only think, what about the censorship in New York’s public schools?

The image of America, leader of the free world, is of democracy, bound by the first ten amendments of U.S. Constitution, a Bill of Rights for all citizens. Given that, who could imagine censored, blocked and restricted information, in educational institutions? *In The Condition of Post Modernity*, David Harvey explains how the Age of Enlightenment was replaced by “a new organization of space dedicated to the techniques

of social control, surveillance, and repression...the difference lies in the way state power in the modern era becomes faceless, rational, and technocratic..."(1990, p. 213). In a rational light who doesn't understand the worth of protecting our children? But in its facelessness, power in this instance clearly impedes learning, discovery and inquiry.

The past several years I have worked predominantly in the Bronx, which is known as the poorest of the nation's Congressional Districts. One would think given the high poverty level of the community, what greater resource is there than Internet access in all neighborhood schools for students and parent alike to seek out information that could help them in their personal, academic and professional lives? Information that could help to build cultural capital and economic capital.

But as previously discussed, access in New York City schools does not avail itself to all of the World Wide Web's data bases, portals, Web sites, streaming videos, blogs, wikis, or simply the democratic potential of the Internet. The DOE has set up their network in a way that each school building has two servers or two distribution centers for Internet. One server and broadband line is for instruction and is wired to all classrooms. The other, the administrator line, is wired to all school administrator and non-instructional staff offices. The administrator side of the network is virtually unfiltered, with most sites accessible except those related to social networking (i.e., Facebook, MySpace, LinkedIn) and some streaming video such as YouTube.

The two tier school filtering system, in a sense, acts as a "disciplinary apparatus" that "hierarchized the 'good' and the 'bad' subjects in relation to one another" (Foucault, 1977, p. 181). The DOE has determined that the teachers are 'bad' or at least bad at exercising any professional judgment as to what instructional material they wish to use in

their classrooms. If the fear is that students may view inappropriate material, then that is a reality but also one that is part of classroom management strategies, discussions as to what is appropriate material, learning about the dangers of Internet sites in a supposedly safe and nurturing environment of school.

Instead, the message sent to both teachers and their students is; you cannot be trusted. But what about the “good” administrators? Are they trusted and thus are more deserving of more access? Not necessarily. One high school principal explains, “Yeah, I guess I get more (Web sites) than they do in the classrooms but really, I’m here working so late every night, all I want to do is check my (personal) email! [outstretches his arms in the air]. Most times it’s blocked. But then other times it’s not. Who the hell knows what they’re (DOE) doing...”

Don't let them fool ya,
Or even try to school ya! Oh, no!
-Bob Marley, *Could You Be Loved*

The Department states that, “It is intended that Internet access will improve the processes of teaching and learning...” (New York Department of Education, 2009, Preamble). The word “intended” is key here. This reminds me of an expression my father uses, “The road to hell is paved with good intentions.” In New York City schools the intention may be to improve teaching and learning through the use of the Internet, but the reality of limited access due to filtering has produced an outcome that would surely not be defined as “progress.”

As a result, in the past few years, it seems as if more and more teachers have become frustrated with the situation and are refusing to accept the restraints imposed on

them and their students. Even with the knowledge of consequences, teachers have taken advantage of a variety of free Web based tools that in a sense, “beat the system.” Most teachers I speak with understand the need for blocking offensive material. The DOE explains that “inappropriate and/or harmful text on the Internet... Objectionable words and concepts are pre-determined by the Department. When the (filtering) software finds any such objectionable words or concepts, it denies the user access to them based on the level of access assigned to the word or concept by the Department” (New York Department of Education, 2009, section D). But for teachers, this translates to valuable information, which the teachers themselves “pre-determined” as imperative and useful, to be restricted. One teacher explains, “Trying to do research on the Internet in this school is a joke. Anything I think is *really* important for them (students) to read is blocked. What I do is take a screen shot of the Web page and then show it with the projector. We just read it from there. Totally ridiculous, right?”

The idea of taking a screen shot, or a picture of what is on a computer monitor, is one “work around” as I like to call it. The use of screen shots is just one of a few ideas that resisting teachers have. Teachers wishing to watch a video found online at a DOE blocked video site can use one of many free downloader applications that allows one to take videos from YouTube, Google Video, Yahoo Video, and others, and convert them to a QuickTime or Windows Media file to be then saved to a computer’s hard drive and viewed offline. This process however, must take place outside of school, on an unfiltered computer because the teachers’ access on the computer itself, as explained in Chapter 3, does not allow for downloadable files. The video file, once downloaded, would then have to be brought to the school’s computer on some sort of storage device.

Another option for teachers wishing to directly access a Web site within a DOE building, is to use a circumventor software patch. One of the more popular that New York City teachers use can be obtained from an organization called Peacefire.org. “Peacefire.org was created in August 1996 to represent the interests of people under 18 in the debate over freedom of speech on the Internet” (Haselton, ¶1, 2009). This patch allows users to “circumvent” blocked sites and accesses them without any restrictions.

Some teachers also use “WebWhacker” which is software that allows for downloading of complete Web sites to be viewed offline. This software is not free. The cost is about forty dollars, but many teachers sign up for a free trial and are then able to download a few sites prior to the trial expiration. These “work arounds” serve their purpose but are an added burden for teachers wishing to use the Web with their students. A science teacher without a lab explains it best; “It’s not like I’m *not* gonna go through the trouble of getting the videos. They need ‘em. Crazy to have them listen or read about an experiment. Bad enough they can’t do it themselves...might as well watch it...Yeah, at first it was a pain, now it’s just part of my lesson planning. I download the YouTube video of the experiment at home then bring it in on my flashdrive. Ah, [sighs] all part of my life as a New York City school teacher [laughs].”

Even as docile bodies working within the largest public school system in the United States, there are ways that New York City educators can move beyond “the way it is” and begin to develop a criticality that ultimately becomes transformative.

When discussing teachers’ and students’ use of the Web within the framework of critical pedagogy, we can look to ways in which teachers can help their students not only

develop the basic skills to live and work in society but also develop knowledge about the social forms through which we live. This would include knowledge about power and how it works. Ironically, it is a power laden system that blocks the very information needed to begin a critical journey of discovery about that very system as well as its surrounding social and political contexts. And unfortunately, this restrictive act at the school level helps to expand the digital divide in students' personal lives. When Web sites are blocked in the classroom, teachers often times suggest that students view the material outside of their school day, on a non DOE computer. This is problematic and further widens the gap of access for students who do not have the Internet at home and who must access the Web through public computers either at a library or a community center.

Additionally, extensive filtering in schools undermines the educational practice of teaching students how to responsibly use and evaluate the Internet. As educators, we need to help our students develop skills associated with critical literacy. And, perhaps more important, do so ourselves. This again need not be a "teacher as expert" scenario. Students and teachers can work together, using the Web as a resource, developing the ability to read texts in an active, reflective, and reflexive manner. By doing so, we can further enhance our understanding of the perspectives and the power relationships behind the messages we encounter.

And finally, the very fact that information deemed "inappropriate" by the DOE is blocked, suggests a great starting place for teachers and students to begin discussion about the social and political forces that shape their own, at times restricted, experiences.

Crawling, crawling, crawling from the wreckage
 -Graham Parker, *Crawling from the Wreckage*

This past September I accepted a position at New York Institute of Technology, School of Education. My students are New York City teachers, enrolled in a program to earn a Master of Science in Instructional Technology. As a group and as individuals, they are candid, informative, insightful and above all, they have given me hope.

Our class meets weekly at 4:30 PM and after a long day in their schools, the atmosphere is usually low-key. However, today the room is alive with discussion, and sharing, and accessing self created Web sites, their students' work posted on blogs, online presentations, collaborative documents and digital stories. These teachers are the epitome of those described in an article I recently read. According to a recent research, the use of Web 2.0 tools in K-12 instruction is being driven not from the districts, but from teachers and students. Teachers in the study cited three reasons for adopting Web 2.0 technologies; "addressing students' individual learning needs, engaging student interest, and increasing students' options for access to teaching and learning" (PRWeb, 2009, ¶18).

The teachers I teach and the teachers I work with in the New York City schools are well versed in their subjects. They teach a certain discipline area and with the use of technology, they create conditions for student learning. They do not use the technology as a mere replacement for another medium nor do they use the technology as a tool to perpetuate the status quo. Instead, they use technology, the Web and Web 2.0 tools in particular, to provide students with opportunities to research, collaborate, create, communicate, question, and problem solve.

The Web 2.0 is known as the second generation of the Web. With the inception of the Web 1.0 there were either readers or writers of content; static HTML pages were created by Web masters and readers accessed pages via a Web address, retrieving information. Now the Web has allowed users to go beyond simply finding and using information. The Web has become a participatory, collaborative space in which content control and creation are vast.

In secondary classrooms scattered throughout New York City, teachers use free, Web 2.0 tools with their students in meaningful and empowering ways:

- Tenth graders in Queens blog about issues presented in American literature. They make real world connections to a particular piece of literature, often supporting their opinions with picture or embedded videos within a post. A blog, or a Web log, is more than its common description of an online journal. Instead, it is a medium of virtual space, whose content is determined by the creators. The blog can be “closed” with only a select group such as a class of students posting, or it can have open access, for anyone to post. The blog administrator can even create settings in which posts can be reviewed before being published. The posting feature of blogs allows for immediate feedback from the teacher and peers and also allows for continued discussions outside the classroom. Student “voice” can be heard by a larger audience and take on new meaning as students gain a sense of ownership about their thoughts and words. A teacher clarifies, “You would not believe how much they blog. I never have to remind them to post. Even the ones that don’t have a computer at home, they usually use family members or a friend’s. I think blogging has really increased their writing skills—and critical thinking. We get to discuss stuff not necessarily on the Regents. But...well, indirectly I guess it is. Real things, you know. Drug use, dropout rates, teen pregnancy. Important issues that effect their lives (chuckles). They should have a say in that.”
- A Special Education class in Hell’s Kitchen uses VoiceThread to review for the Global History Regents Exam. VoiceThread is an online discussion tool using multimedia. A “thread” can consist of images, text, video and audio, or any combination of. The teacher created a thread by using a series of pictures reflecting people, places and things associated with “topics to be covered” on the upcoming Regents. For each picture she created a voiceover in which a question was asked. The students were then able to answer and participate in a discussion for each of the pictures by commenting. Comments can be created by recording one’s own voice, by

typing, by Web cam, or by calling in via a cell phone. Discussants can even draw on the picture as they comment. VoiceThread can capture an entire discussion and share it online, for free. “I absolutely love this...and they do too,” he explained, “Believe it or not (sarcastically) we don’t get a heck of a lot done in 42 minutes! But when we have the double period I’m able to really get a solid start on this and it just took off. They comment again and again on it. A couple of them are shy so they type but most love to hear themselves (laughs) so they record using the internal laptop mikes. Outside school they call on their cell phones. What a cool way to review, right?—even cooler is that they created the review themselves.”

- Further north in Washington Heights, students work on a group research project creating a collaborative piece about global warming using a wiki. Wiki, from the Hawaiian phrase for “quick,” is a fully editable Web site that allows multiple users to create, modify and organize the content. The wiki has the ability to track changes, so who edits what and when can be reviewed as well. Interestingly, wikis allow for interaction that is also characterized by successful communities of practice. As discussed in Chapter 4, communities of practice help to foster a sense of identity, interaction, and participation, allowing participants to make connections to a broader subject field, and building of relationships over time. And because of the collaborative nature of wiki use, students are able to create meaning and construct knowledge through “discussions” with their peers and teachers, and through reflection. A student working on the global warming project noted, “I never talk much in class but I’m the one in my group who writes the most on the wiki! I like it. I like that my group can write right away too. We help each other out.”
- Beyond the Brooklyn Bridge, ESL (English as a Second Language) students listen to podcasts, audio or video recordings, which their teacher downloads and saves to the one computer in the back of their classroom. Podcasts can be played on any computer, iPod, iPhone or Mp3 player. The students listen to radio excerpts from a variety of stations about the same topic, analyzing the differing perspectives as they learn the skills needed to acquire a second language.
- Math students in the Bronx collaborate in “real time” using Google Docs to create documents, spreadsheets and presentations which can then be shared with easy access from any computer. For students who do not own the Microsoft Office software, Google Docs offers a free alternative. Their teacher comments, “Some kids do not have a computer and some have older computers that go online but then have no software. Using Google Doc lets them access programs remotely and then save right online. Years ago I had to buy everyone a floppy disk. Not now. Their work is always there.”

- A group of seniors in Staten Island visit a social bookmarking site, accessing a list of Web resources that their teacher created. At the site they are able to share, organize, search, and manage the listed sites. The benefit of social bookmarking is that teachers can organize lists of valuable Web sites, arranged by topic or theme, for their students to access. It is a valuable way to organize digital resources for research. It should be noted that the social bookmarking sites themselves are not filtered, but many times the sites saved within are. But as one teacher explains, “If a site I want them to reference is blocked, then they access it outside school. What’s easy is they don’t have to write any long web address by hand and then go type it in somewhere. That’s a disaster. Inevitably they miss a letter or put a period instead of an underscore and they never get it. It’s frustrating and then they give up. This way, they just go to my site and all the links they need are right there.”

At present, the teacher and student created blogs and wikis are not filtered by the Department of Education. And, surprisingly, if a Web site link or video is embedded within the blog or wiki, the DOE filtering system seems unable to “catch it” and thus does not block the content. And, in addition to student use of the Web 2.0 tools, teachers have managed the lack of professional development opportunities by joining together through the use of podcasts, blogs, and social networking sites, collaborating both locally and world wide, sharing ideas for effective practices in technology, studying research, and creating knowledge around the topic of new media.

A cautionary word, however, that Web resources and Web 2.0 tools are no more effective than any other technology. It is how we use them that define their effectiveness; their impact on teaching and learning. They are set apart from other media because they are free and relatively accessible and they are the tools of emerging literacies; information, visual, critical, media, and digital literacy. They are the new paper and pen and they are an avenue for developing a critical perspective.

Freire reminds us that, “It is absolutely essential that the oppressed participate in the revolutionary process with an increasingly critical awareness of their role as Subjects of the transformation” (2005, p. 127). In other words, we need to have an awareness of the structures that help to form our being. Bourdieu refers to this as habitus (1984), a continuous framework of experiences which generate us as human subjects. Habitus is our orientations, tastes, perceptions, and making meaning in the world. This structuring then structures our ongoing behaviors. In many ways the institutional conditions of school have contributed to a certain habitus in both teacher and student. As teachers and students, we are aware of our place in the educational hierarchy and we know the limitations imposed on us. The use of Web 2.0 tools and open content add another dimension to our once traditional roles of teacher as narrator and the student as the receptacle to be filled. Web 2.0 tools offer accessible modalities to learn, construct knowledge and reflect on our own habitus, examining the “just the way it is” practices that have helped develop us, and in return created our academic world by our own actions, lack of action and acceptance.

The Web and corresponding tools offer both teachers and students opportunities to challenge the ideological and political nature of curriculum. Web 2.0 technologies foster collaboration, creation and dissemination, and perhaps most important, serve as a vehicle as we begin to look at issues of equity and access in a critical light.

CHAPTER VII

CONCLUSION: THE NEED FOR CRITICAL CONNECTIONS

It is a Sunday evening in March and I am watching the first segment of a four part series entitled, *The Irish in America: The Long Journey Home*. The scene opens with the music of a Celtic flute, the camera panning the rocky, yet lush country-side of Ireland. The camera then focuses in on an elderly gentleman, possibly 80 years of age. He stands directly in front of the camera, the fog-covered mountains behind him. He is speaking Gaelic. The voice-over of the narrator translates, “*The Irish are old hands at telling stories. They like talk. They’re word hungry. Their oldest stories in Gaelic can take days in the telling.*” My husband, David Majewski, sitting next to me on the couch, turns to me and says, “I wish someone had told me that before I got married...”

I enjoy listening to a good story perhaps more so than telling one. Apart from the shared experience, I find myself drawn into the telling itself; the sound of particular words, certain expressions, analogies, metaphors, and alliterations. There is a scene I love from the movie *Harvey*, in which Jimmy Stewart, as Elwood P. Dowd, explains, “At first Dr. Chumley seemed a little frightened of Harvey, but that gave way to admiration as the evening wore on. *The evening wore on.* That’s a very nice expression, isn’t it? With your permission I’ll say it again. *The evening wore on.*” Like Elwood, I savor words. But, aside from doing so in my personal life, I recall few opportunities to do so in grammar or high school experiences. In hindsight, I realize that many of the stories I listened to, the words I savored, were through music.

As a teenager, I immersed myself in songs from British bands, American folk rock, country, blues, jazz, and the “oldies” of the fifties. One of my greatest joys was discovering that the record album I had just purchased included lyrics. With lyrics, printed in stanzas on the album’s jacket, I no longer had to painstakingly drop the needle, over and over again, in certain spots on the vinyl, attempting to discover words that I failed to uncover from the vocalist; words that ultimately represented a moment in my life or a moment yet to come.

She gets rock n roll, a rock n roll station
 and a rock n roll dream
 she's making movies on location
 she don't know what it means
 but the music makes her wanna be the story
 and the story was whatever was the song, what it was
 rollergirl don't worry
 DJ. play the movies all night long
 - Mark Knopfler, *Skateaway*

The line for those waiting to pass through the metal detector spills out into the sidewalk. It is half past nine and the heat of the morning sun is strong. “I bet ya it’s going to be 100 today,” I hear one student say as I walk along the curb, balancing with one step in front of the other, by-passing the crowd. The students, dressed in summer clothing, either hold or wear the latest technology; Mp3 players. As I walk, I can hear music reverberating through their ear phones. Those listening dance in place, while others sing aloud. A few simply mouth words into the steamy air. Still others stand against scaffolding poles or street sign posts, with eyes closed, listening to stories, making movies.

In a 1971 debate between Noam Chomsky and Michel Foucault on the origins of human nature, Chomsky states:

A fundamental element of human nature is the need for creative work, for creative inquiry, for free creation without the arbitrary limiting effect of coercive institutions, then, of course, it will follow that a decent society should maximize the possibilities for this fundamental human characteristic to be realized. That means trying to overcome the elements of repression and oppression and destruction and coercion that exist in any existing society, ours for example (dsandeford, 2008)

In the New York City classrooms in which I have taught and the schools in which I now teach, possibilities for creative work and creative inquiry are rarely maximized. Budget cuts have removed art and music from the curriculum. Engaging in interdisciplinary aspects of the arts rarely occurs inside secondary classrooms. In fact, the physical makeup of the rooms themselves lacks the colorful displays of student work, or the inviting décor of drawings, reproduced prints or photographs. And as discussed in Chapter 3, the urban classroom is even void of basic resources; working electrical outlets, window shades and chairs. The culture experience while in a school in New York City is starkly different from what we experience in our lives outside of schools.

Outside of school, music is played from radios in the home or in the car and on personal players while on the train and the bus. The walls and shelves of homes are speckled with images. I think about my own home; in addition to framed photographs or prints, I have areas in which I have taped photographs alongside quotes and snippets of text from newspapers or magazines; even printed email messages. Not a traditionally decorated space but the mixed media collage is comforting to me. Small representations of my life.

As a middle and high school teacher, I frequently brought music and photography into my classroom. I would create music montages on blank cassette tapes to be used as a prompt for students' personal narratives; I would bring in personal photographs or magazine clippings to persuade the creation of stories in creative writing journals, and I would videotaped students' original interpretations of "classic" novels, poems, and plays. This type of teaching enabled me to know my students, learn from them, and help create a learning community in which we sharing of knowledge was encouraged. The community created then directly gave way to sharing and discovery. Ladislaus M. Semali and Joe Kincheloe (1999) speak of encouraging teachers to seek out and analyze indigenous knowledges that may be salient to many of their students. I was blessed with students that were brave enough to share information about their families, the way they acquire knowledge, and the various traditions that they practice in their lives.

But the classrooms described in this dissertation are far from creative fields. I am intrigued by Chomsky's notion that we should maximize possibilities for inquiry thus overcoming the elements of repression and oppression through a fundamental human characteristic; the need for creative work. I believe that effective technology use, grounded in critical pedagogy, can be just the vehicle for our liberation.

From then to now: Summarizing and concluding thoughts

I began this dissertation with a strong focus on technology use at the classroom level, within a New York City school building. That is a place I know very well; my comfort zone. The scenarios I depict, regardless of how recent, or how long ago they occurred, come back to me vividly, like a series of pictures in my mind; a movie playing

with a soundtrack, a continuous disheartening melody, but with breaks of an upbeat, hopeful tempo.

In the first chapter I defined the term instructional technology and addressed the history of technology use in education on a national, state and city level; this was a story which was not familiar to me. But by researching, by reading texts about instructional technology at a multitude of levels, I began to make sense, finding correlations and contradictions with what happens at the classroom.

Mats Alvesson and Kaj Sköldberg (2000), talk of text as what is interpreted, not necessarily facts or data. The facts emerge as a process of interpretation, as meaningful signs that influence the pattern of interpretation. The text itself must be placed in a “context” (p. 62), or an external weave of connections, with author’s work being read within. In my interpretation, I began to use theory to explain some of the facts and concepts I uncovered, one concept in particular was the Digital Divide.

When addressing the Digital Divide, I felt it necessary to create my own term, “digital divisions” to explain the gap, or rather gaps. I believe this to be an important distinction. The economic ramifications of technology access are not the only barriers to use. As explained, there are several divisions, a complex myriad of scenarios, issues, and inequalities that affect technology use by both teacher and students. Introduced in Chapter 1, these barriers are explained in detail through a series of narrative accounts in Chapters 3 through 6.

The use of narrative is just one of the methods I use in my research. As explained in Chapter 2 I use a variety of approaches to trace my journey from teacher to teacher/researcher,. Throughout I employ Joe Kincheloe’s notion of “bricolage.” From

Kincheloe's perspective, in the context of teacher-researcher, criticality is enhanced by a multilogicality that values diverse perspectives and the insights gained by careful analysis of their intersections. I use Kincheloe's overarching concept as a rigorous interdisciplinary approach, incorporating theoretical and philosophical approaches such as sociocultural theory, critical theory, and critical pedagogy and making use of differing methods of inquiry such as auto-ethnography, hermeneutics and phenomenology, in addition to narrative inquiry.

But this dissertation, this narrative, is more than story recording. My narrative account serves a powerful tool in the sharing and construction of knowledge. As a critical researcher I felt it was imperative that I create multiple dialogues reflecting diverse truths. Drawing from auto-ethnography, a cultural accounting of my experiences as well as the experiences of others, I reflect aware of the non-neutrality of my words and instead aim at engaging "with suppressed aspects of history" (Pratt, 1991, p.40).

The writing of this dissertation was a journey unto itself. As the story unfolded, I uncovered more than I originally anticipated. As mention earlier, telling a story about the classroom was my comfort zone but it was naïve to think that is was where the account would rest. The process of teaching with technology, the process of learning with technology, the relationships that exist within that locality, the resources used for instruction and the decisions intermingled within educational structures are complex and fluid.

My phenomenological approach begins a dialogue that discounts "one truth" about the act of using technology as a learning tool. And through hermeneutical analysis,

I feel I have told a story of a multidimensional act within cultural, historical, and social contexts.

When I began, the story was local; a classroom within a New York City school. As I end, I moved further from those urban walls to societal frameworks and national educational policies. In writing this dissertation, in making sense of technology use in daily classroom practice, the story evolved. But not only the story of instructional technology has evolved- my personal story did as well.

Well looking back through time
 You know it's clear that I've been blind
 I've been a fool
 -David Gray, *Babylon*

In becoming a critical researcher and more specifically through the writing of this dissertation, I have gained insight into the forces that have shaped my identity and consciousness. Through a personal transformation, I have developed a critical ontology; a new form of self awareness, the recognition of power's complexity in ideologies and discourses and the conceptualizing of my emergent self as ever changing as I interact with others and the world. The writing of this story has helped me to gain new levels of consciousness and ways of being. Similar to technology use, this process did not occur in isolation. In this journey I have joined a network of scholars that have introduced me to their work as well as the work of others. A new awareness of philosophical and critical perspectives have broadened my perspective and helped to inform my construction of self. In my doctoral work I have been introduced, informed and urged to question issues and concepts that, for lack of a better term, never occurred to me. The guidance of others

ultimately helped me to develop and exercise critical agency. My new found sense of agency permeates the writing of the story; the scenarios, however disheartening at times, have the potential of reflecting hopeful change.

You will see light in the darkness
 You will make some sense of this
 And when you've made your secret journey
 You will find the love you miss
 -Sting, *Secret Journey*

Upon reflection, I have gained new perspectives and insights into the use of technology for teaching and learning. But my attempt to make sense of this complex process is not final. It is a process that is ongoing. I began with the idea that a particular theory or theories could apply to each scenario, but discovered instead the knowledge that the theories overlap, they are fluid and changing much like the use of the technology itself, and they lend themselves to applications beyond urban settings. And, the stories in the chapters do not end; there are implications and ramification that follow, as well as empowering possibilities and potentials of technology use. I have become part of a scholarly dialogue, a contributor to a screenplay with actors at the micro, meso and macro levels.

In addition to the suggestions at the end of Chapter 3, I have found that the continuing use of blogs by teachers holds the prospect for change, beginning with the sharing of “truths.” When looking at the potential of blogs, I am reminded of Foucault’s (2001) concept of parrhesia; one who uses parrhesia is the one who speaks the truth. Foucault asks us to use four guiding questions in considering a truth-telling activity (p. 170).

The teachers who are blogging are practicing parrhesia and are in fact, truth-tellers. But first we must determine, who is able to tell the truth? The teachers may not have any degree of "power" per se in an economic or cultural sense but they are "insiders" in that they speak from personal experience about teaching in New York City schools, for the Department of Education. But they speak truth about what? Again, teachers share their professional experiences, the deplorable conditions and demoralizing constraints imposed on them daily. Third, we need to ask, truth with what consequences? Early in *Fearless Speech*, Foucault says there must be a certain amount of risk for one who practices parrhesia, but not "always a risk of life" (p. 16) and although the teachers' actions (creating blogs) and their words (blog posts) have caused the Department of Education to create a new office unit to search through the blogs for what they deem "misinformation," at this point it has not been enough for the DOE to take action. Yet, although anonymous, the teachers that are blogging have an awareness of the possibility of some negative consequences to their acts. And lastly, we need to determine, what is the relationship between truth telling and the exercise of power? With the power of "free speech" as professionals, blogging teachers have decided that it is their duty to speak with frankness; a duty to help or improve the lives of others. The continued use of blogs by teachers does have potential. The blogs are a venue that reach far beyond the Department; a venue that can publicize voices and mobilize change.

At present, the challenges associated with professional development as described in Chapter 4 still exist, but have already undergone some changes-unfortunately, not for the better.

Starting in December of 2008, The Department of Education began to interview their current staff in the Department of Instructional Technology for a “shift” in duties. One DOE professional developer I spoke to said, “Can you believe this is happening? I’ve worked with this department for five years, on projects and initiatives, and give workshops at conferences and now we have no jobs because ARIS is what the DOE is saying is instructional technology? Disgusting.”

ARIS or the Achievement Reporting and Innovation System, “provides a single place where educators can find important information to use to accelerate student learning” (New York City Department of Education, 2009, ¶1). Accelerate student learning? I am not even sure what that means; perpetuate the status quo, work like cogs in a machine, mindless, faster, more efficient? What does appear to have been accelerated is the termination of the DOE instructional technology staff. It is not clear how many staff members were let go during the “shift” or how many were “re-hired” but those who did stay with the Department now work out of the Office of Accountability.

The ARIS data program is reported to have cost \$80 million, with the money going to the corporation IBM. It is not necessary to list what the Department of Education could use 80 million dollars on; that would be stating the obvious. The program, at present, has not received a warm welcome. According to information posted on the blog *GothamSchools*:

The Public Advocate’s Office survey, conducted between November 30 and December 31, 2008, was released as part of a report: “ARIS on the Side of Caution: A Survey of New York City Principals on the City’s Accountability Computer System.” Findings of the report include:

- The majority of principals believe that the DOE overpaid for the ARIS System.

- More than a third of principals believe that ARIS interferes with their ability to be instructional leaders at their schools.
- The majority of principals believe that their staff has not been trained to use ARIS.
- More than a third of principals do not believe that ARIS will improve teaching and learning at their schools.
- More than a quarter of principals do not believe that ARIS is a good use of their time or their staff's time.
- More than a third of respondents state that they have spent money from their budgets on ARIS.
- Nearly half of principals surveyed believe that ARIS provides them with information that was already available before the implementation of ARIS.

The teachers I speak with tell a similar story. “We never got training. I look up previous years’ grades on it. Big deal.” “It’s supposed to have some blog capability. Blog about what? It’s the DOE’s. That’s a joke. Write something they don’t like and it’ll be gone by the time you log off!”

Because of ARIS and a greater number of teachers requesting professional development around the use of technology, NYC City Teacher Center began to increase professional development opportunities. These opportunities, however, were large session of 50 participants. As a result, participants had little, if any, hands on practice or exploration of the technology. As a result of my work planning and conducting these sessions, many of my Smart Board communities of practice members began to lose connection with the group. “I never give it the time I need to feel comfortable and the teachers want to use it (the SMART Board) but my principal won’t let them unless I train them. (sighs) I’m sorry I signed up... it’s like an albatross.” Another member expressed similar sentiment. For weeks she tried to find someone to take the SMART Board that took up room in her professional development center. “No one wants it. It’s useless since the projector bulb burnt out. The bulb is too expensive to replace...and I never get around to using it on my own anyway. I wish we still had our meetings. Oh well... I need to

move that board fast so the new testing coordinator can share this space. The principal is very worried about our progress report.” About a week later she had an update, “Oh, I finally got rid of that SMART Board...thank God.”

The above scenarios are multilayered. A global neoliberal agenda finds its way into the New York City classroom, with regulated and controlled students, teachers and administrators who are evaluated as if they operate in isolation, by extreme practices of individual accountability. And this neoliberal trend has forced teachers into isolation. They operate as docile bodies working under narrow time constraints, imparting knowledge in scripted curricula to students silenced from critical classroom discourse. There is no room for creative work, for creative inquiry, for professional collaboration or engagement.

As Wenger (1998) explains, an initial requirement of educational design is engagement. And although my emails created a virtual sense of community, they provide little opportunity for members to invest themselves, thus building an identity and pursuing a “socially meaningful enterprise” (p. 271). Because of the lack of socially meaningful experiences to explore and work together, members begin to practice non-participation.

As mentioned in Chapter 6, the use of wikis allows for interaction that is also characterized by successful communities of practice. This online space, free from the constraints of teachers’ daily scheduling and accountability, may be the answer to greater participation in a learning community. Teachers are able to participate on their own time, asynchronously.

But, for those wanting a more visual experience with the opportunity to interact with others synchronously, Webinars, free online seminars, offer this possibility. But as mentioned many times in previous chapters the technology itself is not the savior, the panacea. The way in which technology is used structures possibilities in New York City schools.

The way in which we use the technology is crucial. We must be aware of the misuse, as I mentioned in Chapter 1, for means of repression and surveillance or as I showed in Chapter 5, when available software (Microsoft Office) is used to perpetuate the status quo, the deskilling of teachers and the dumbing down the curriculum. But teachers can opt not to use the software at all. Both student and teacher computer logs created by the Department of Education give access to free video editing software, iMovie or Windows Movie Maker. With these editing programs student can develop emerging literacies as they create digital stories. Digital stories can be viewed as an alternative medium of knowledge production offering students an opportunity for collaboration, critical reflection and creative inquiry, about issues that are often left out of current classroom dialogue or accounts that have been typically silenced or marginalized.

However, dialogue of both students and teachers need not be silenced given the potential of the Web and Web 2.0 tools in particular. As discussed in Chapter 6, the potential of the medium is there but through the use of filtering in DOE buildings, the possibilities are greatly decreased. Yet despite this reality, resisting teachers and their technology based “work arounds” do so knowing the value of the information, and the dire need for access in order to positively impact students’ success. But, I am not convinced there is an awareness of the greater power structures at play which have

negatively impacted classroom practice. The power laden layers are thick and concealing; they need to be stripped away so that we can then work to “undo” what the culture of schooling has created. In school we are trained as to what it means to be a student. Likewise, the culture of schooling trains teachers in dominant discourses and practices. Shor suggests, "teachers and students alike need to desocialize from the dominant influences on their development" (1992, p. 203).

The use of the Web to challenge the status quo, to question, to work at changing the unjust social context, moving from present understandings to a more complex view that includes transformation and cultivating of the intellect. The Web offers a familiar platform to do just that.

According to a study released in 2006, The Harrison Group found that Americans aged 13 to 18 spend more than 72 hours a week using electronic media--defined as the Internet, cell phones, television, music and video games. Because teens and young adults are known for multitasking, their usage of devices often overlaps. Therefore, if our students are already proficient users of particular technology based methods, as educators, why wouldn't we use the Web and current technologies to communicate, consider multiple perspectives and frontload students' discourse (Shor, 1997) about social, economic, political, and cultural issues? In this way, through a familiar medium, we include students' knowledge production in the learning process, rather than transferring “the knowledge” to them.

One of the tasks of the progressive educator, through a serious, correct political analysis, is to unveil opportunities for hope, no matter what the obstacles will be. After all, without hope there is little we can do.

-Paulo Freire, *Pedagogy of Hope*

The stories presented in this dissertation continue; the movies play on. New scenes have been released such as the federal government's *Race to the Top* program in which \$4.3 billion in grants are available to states that show they are improving student achievement and raising standards. The rules, released recently by Education Secretary Arne Duncan, maintain that states, in order to apply, must not have any barriers to linking data on student achievement to teachers. Data on student achievement will serve as a central means for teacher evaluation.

Additionally, under the economic-stimulus plan, money has gone to the U.S. Department of Education's *Enhancing Education through Technology* program, from which states get money to distribute to school districts. But how does that impact classroom access, use and practice?

And, where do we go from here when aiming to make sense of the implications of technology use for teaching and learning in the secondary classroom? Moving forward we can continue to use the aforementioned theories as frameworks for understanding but also employ additional theoretical lenses to the stories already told as well as new stories waiting to be shared.

There are intriguing possibilities for understanding complex relationships related to the use of technology by both students and teachers. For example, the work of Jürgen Habermas and the concept of the public sphere. How might we use the Internet as a

transformed public sphere, a place for critical debate, leaving aside the bias and manipulation of the media?

Or how might Louise M. Rosenblatt's transactional theory help to educators think beyond traditional notions of literacy? What is it like to experience and engage with a text—or more specifically, hyperlinked text? How does the act of reading for information online evolve into an emotional, aesthetic, and intellectual experience?

Or James Paul Gee's work in language, literacy and gaming. As educators how might we begin to use video games as problem solving spaces? And again, what happens when we “read” these games or engage in online activities? What sociocultural situated discourses do we encounter in gaming experiences and how do they affect our notion of literacy?

And perhaps the most hopeful and fascinating are “disruptive technologies,” a term which refers to innovations that improve a product or service in a way that was not expected by the market. What impact do these technologies have on the “business” of schooling? How can these technologies be used by students and teachers to empower both parties to be agents of educational and societal change? We need to explore the ways in which these disruptive technologies can serve as a conduit for developing a critical consciousness and critiquing the institutions in which we create our lived experiences.

With all of the above there are implications and ramifications but yet possibilities and positive potentials of technology use. The following is an email I received recently from one of my former graduate students, a New York City school teacher.

Subj: **Technology update from your past student..**
Date: 10/27/2008 1:05:24 PM Eastern Daylight Time
From: Student.s.m.@yahoo.com
To: ohara@

Dear Ms. Kate O'Hara,

I hope this finds you well. I took your five-week ESC 529 course last June. I was just emailing to express my gratitude for the lessons learned in that course. I never felt very connected to course work throughout my graduate studies. Your class however inspired me to really push for technology in my classroom. I squashed all the excuses I used to give for why my students didn't use any of the six computers in my classroom beyond simple Word processing and Internet keyword searches. Currently, I am working with a 30k grant from Adobe software for my students to use. They love it, and although it is a daily challenge, I find that the learning that is happening every moment is well worth the upkeep.

If you hear of any cool technology driven workshops or opportunities please let me know. Keep inspiring, Teach.

Best,
s.m.

As Freire reminds us, transforming possibilities and potential can be achieved through praxis; action and reflection, with theory to illuminate it. We need to do this through dialogue, criticality, and in solidarity. Teachers need to share their successes, give hope to one another, help each other move toward a critical awareness. Together we need to be “motivated by the power of ideas to reshape the world in which we operate, the notion that human beings can become far more than they presently are, and the belief that ultimately the fate of humanity is related to these ideas” (Kincheloe, 2009, p. 34).

AFTERWORD

And the three men I admire most
 The father, son, and the holy ghost,
 They caught the last train for the coast
 The day the music died.

-Don McLean, *America Pie*

It is March 2009 and I am sitting in the wooden pew, midway between the stained-glass windows and the green carpeted aisle leading to the altar. The sun through the panes spills through in hues of red, yellow and indigo, but offers no warmth. It is the first mass of the morning and the chill of the winter leaves the inside air crisp. I watch as people quietly pray, making the sign of the cross, the motions representing the Christian Holy Trinity. I have returned here these past few months in a futile attempt to make sense of death and dying and afterlife; Joe's in particular.

While the lecturer reads the scripture my mind drifts to Joe. A series of pictures run through my head; a movie of a mentor and friend. The soundtrack is Rock n Roll and Joe is singing. A brief moment of fond remembrance is replaced by despair and a selfish sadness from not being able to ask his advice, hear his laugh, or feel a welcoming hug.

It was Joe that helped me make the decision to stay in the CUNY Urban Ed program. "I don't think this is for me." I can remember telling him, sitting in his 4th floor office of the Graduate Center. It was December of 2003 and I idealistically thought racism and essentialism would not exist in an educational institution that brought people together with the goal of the bettering the lives of ourselves and others. But it did exist and after a meeting that lasted well over an hour, Joe basically told me to stay and fight the fight. It was from that day on that Joe brought to light a world previously unknown to me. Through his incredible depth and breadth of knowledge and critical insight, he gave me the opportunity to find my own voice, to question the status quo, to explore words and worlds beyond my own. And he did so, untiringly.

Since his death, I find myself late at night reading Facebook or the Freire Project Web site posts from people whose lives have been touched by Joe. I find comfort in their words. I read and reread and reread, amazed how much I find their words accurately reflecting the ones I couldn't say as well myself. I am struck by the enormity of Joe's

presence in people's lives. How I thought I was special, when in fact he had a gift of making so many of us feel special.

Joe was always great for the ego. "Brilliant" and "Good stuff here koh" made it so much easier to continue writing and revising a chapter well into the wee hours of the morning. Who else could make me smile at the opening salutation of every email? "koh" he would start out with. It was the name he called me after receiving my many papers that I would save with an appropriate name followed by an underscore, then my initials.

I remember as I prepared for my second exam, sleepless and stressed beyond belief, Joe being there for me, miles away in Canada, through every revision, pushing me to keep going, clarifying concepts, and providing immediate feedback via phone calls and email, making my goal his priority, when in fact he had his own personal issues to contend with. But that was Joe; his kind, unselfish nature set him apart from others. And I loved that he was always ready to laugh with me at times when I felt like crying, as my job and my doctoral work and my family, intersected with great vigor and chaos, "ladies and gentlemen, koh, the highly educated and irish erma bombeck. thank you for making me lol....more soon, joe"

As a scholar, a teacher, a mentor, but most importantly as a human being, Joe embodied virtues that I can only hope to emulate. His giving, nonjudgmental, gentle, compassionate way drew people in, made them at ease and filled them with hope. His love of a good story coupled by his gift of listening, really listening, made him a person you were proud to know.

When Joe was alive, he somehow was able to be with so many people, giving of his time. In fact, soon after his death, I often heard others say just as I had, "I was just talking to [emailing] him." If he was able to be with so many of us here on earth, in my heart I know Joe is with us still, in mind and spirit. I love him and miss him dearly but in his life and his death he has given me new hope for a better world, new knowledge and strategies of getting there, and new friends to travel with on my way. For that I am forever grateful.

At the end of mass, the lecturer asks that the congregation to stay a few minutes to listen to a guest speaker. The speaker, a cheerful and animated man, begins to explain the idea of starting a book club. He describes how this would be an opportunity to read, share, debate, and discuss texts. But it was not the idea of the book club that captured my attention, but rather the one book in particular he spoke of. He related a section of the suggested first book in which there is a reference to Joan of Arc. He explained the author's perspective; admiration for her both as a heroine and as a martyr. But then he said something very profound. He asked those of us who stayed to listen, if we thought

we needed more martyrs in the world. Or, he proposed, did we need to ask ourselves, instead of what we are willing to die for, what is it that we are willing to live for? In a clear voice, an increment louder, he again asked, “What is it you are willing to live for?”

It was that moment that the images of Joe came flooding back to me. Joe passionately lived for equity, justice and the betterment of the human condition. It was at that moment I knew that was also my mission; to take my six years of doctoral work as a starting point as something I was willing to live for; to continue the story, to add to the screenplay of technology use, grounded in critical pedagogy as a means for transformation and liberation.

At that moment I also knew my approaching dissertation defense would be bittersweet for obvious reasons. In preparation, Joe will not be there to call, or to write to or to visit. As I struggle with sadness and trepidation, I am comforted by the realization that Joe would want me to continue on just as he wanted me to do six years earlier. I am touched by his spirit as I read the words he wrote to me the night before my second exam.

looks very good. are you ready to rumbleeeeeee!!!
you'll knock em dead.
j

It will be those words that I will carry in my head on the day of my defense, as well as on a piece of paper tucked in my pocket. And it will be those words that I will carry with me through my life and in my work, when the going gets tough.

Thanks Joe...for so very much.

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