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4. SINGING A DIFFERENT TUNE: AN AUTO/ ETHNOGRAPHIC JOURNEY INTO AND OUT OF THE LAND OF EDUCATIONAL TECHNOLOGY

Abstract In this chapter, I use auto/ethnography, sociocultural theories, identity theory and critical pedagogy to make sense of disparities in the ways in which technology is (or isn't) integrated into urban school curricula. First, I draw on my own experiences as a digital native at home, as a student in a technological high school and as a college instructor to illuminate the differences between how technology is taught in schools and how it is integrated into daily life outside of schools. Next, I re-examine the findings of a study I conducted about teachers' identities and technology integration practices in an English/Technology curriculum-writing group at a college in New York City. Finally, I introduce my work with the Young Researchers' Club, a group of students who conducted critical social research in an under-resourced and technology sparse "failing" school in Boston. By bringing these data sources into conversation with each other, I illuminate 1) the contradictions between what it means to be technologically fluent outside of school and to learn to use technology in school, 2) the ways in which technology has been prioritized as a mechanism for control over learning in some urban urban schools, 3) how the literature on technology integration is woefully ill-equipped to tackle what technology integration means in a high-poverty urban school and the implications this has for educational equity, and 4) how high quality learning environments may be afforded for urban students despite the absence of technology resources.

For the past thirty years, integrating technology into education has remained a top priority in education reform discussions. Since computers made their entrée into classrooms in the 1980s, educators in the U.S. have seen the national computer to student ratio shrink from 92:1 in 1983–84 to 3:8 in 2006 (Bausell and Klemick 2007). We have seen countless professional development strategies, digital divide initiatives, policy recommendations, and partnerships with corporations. The perceived need for technology integration has become so pervasive, so commonsensical, that it is difficult to have conversations about education that don't refer to 21st century skills, global learning, global citizenship, and the digital/information age. Year by year, we appear to be closing in on the realization of the techno-dream in education if only we could incite one final transformation—an overhaul in classroom pedagogy. Until this happens, the story goes, the promise of technology remains only a promise. For

K. Tobin et al., (Eds.), Transforming Urban Education, 53–69.

the past five years, I have contributed to the chorus of voices promoting technology integration in schools. Specifically, my focus was on providing equitable education in underperforming urban schools by encouraging professional development learning communities for teachers (Kress 2008), as well as challenging oppressive urban school structures that make technology integration in these schools particularly difficult (Kress 2011a). Yet, each year as I am introduced to more urban teachers and students, I continue to see the same scenarios that I have seen for the past ten years. Technology isn't being used much, and when asked why, people point fingers at each other.

The technology promise is beginning to look empty, causing me inner turmoil as my techno-identity is called into question. As a result, I have been doing a lot of *Self* searching, because I need to know exactly how I got to this place in order to understand where to go from here. If not technology, then what? According to Kincheloe (2005), "A critical ontological vision helps us gain new understandings and insights as to who we can become. Such a vision helps us move beyond our present state of being—our ontological selves—as we discern the forces that have made us that way" (p. 162). In this spirit, in the following sections I chronicle my journey into and out of the land of educational technology, by reflecting on a) my own contradictory childhood experiences with technology in education; b) how my own teaching practices and research about technology integration in New York City reflected and contradicted those experiences; c) the blind spots within educational technology literature which strongly influenced my research; and d) how a change in context has led me to rethink technology integration altogether. I assert that, indeed, a pedagogical overhaul needs to occur, but not the kind that the techno-world has been singing about for the past twenty-five years.

A DIGITAL NATIVE IN A GUIDED-INSTRUCTION WORLD

I was a middle-class kid who grew up in Staten Island, NY and attended New York City public schools for all of my K-12 years. My formal education was very traditional, individualistic, rote learning—repetition, worksheets, *lots* of following directions. I don't recall group work activities or student-centered assignments unless they involved projects that were completed at home. None of my classrooms had computers in them. In the 1980s, when computers were slowly making their way into schools, I looked forward to the rare occasions when my elementary school teacher would walk my class down the tiled hallway and up the metal staircase of our old building to the library where the computers were kept. Computers were separate from academic learning. Computer time was fun-time. We used the computers to play games, not educational games, just racing games and games where the user shoots aliens on the screen; meanwhile, our teacher graded papers or talked with the librarian.

By the time I was in middle school, computers had become more available in schools, but computer use still occurred in a computer lab and was still separate from academic learning. We sat at the dusty machines with papers that had lists

of commands on them, and we typed the commands into the machines to program them to do something in particular, like print a name repeatedly on the screen or make a little green ball of pixels bounce around. The programming was tedious; an awful lot of work for such little payoff, and always all students were doing the exact same-guided task with the exact same end result. Partly, the separation between computer use and academic learning could be attributed to the newness of the technology; however, even in the early 1990s when I attended a technical high school and used computers several times a week, the tasks I performed were never related to my academic classes. They were computer specific activities involving programming in BASIC or PASCAL, programming robots to drop pegs into holes, or learning to use a particular software, like Computer Aided Design (CAD) for mechanical drawing. Aside from CAD class where students were expected to use the program to create their own mechanical drawings, computer use in high school was tremendously boring. There was no exploration of the capabilities of the machines or even satisfying explanations about why we did what we did; we simply followed the appropriate steps in order to get the "right" outcomes. I still remember the binary numbers I memorized for an exam but have never used in my life (0000, 0001, 0010….). After these experiences, I never wanted to "go into" computers because I couldn't see how they connected to my life.

The irony of this reflection is that in 1984, when I was in the third grade and computers were first entering schools, I had more exposure to computers and technology than all of my teachers and classmates, and probably most people in the country, because of the home I grew up in. None of my friends had computers in their homes because they were too expensive and didn't yet serve a practical purpose; in my house, there were at least three computers because my father is a computer scientist. Computer use in my home stood in sharp contrast to computer use in my schools. At home, I wasn't allowed to use computers for playing racing or alien games because my father insisted that computers were for work, not for play. I remember my father plugging the actual telephone receiver (not the phone cord) into a black rubber modem in order to "talk" to people in California. (He was using email before most people knew it existed.) I remember using a handheld device with a half dozen colorful buttons and a plexiglass scope with cross hairs on it to draw pictures with a cartoon pencil on the computer monitor. (Before ordinary home computers were even equipped with them, I was using a mouse to create artwork.) I saved data files onto what most people would have thought was an audiocassette. I used a drawing tablet, which was not readily available to the general public until the past few years and had not received much attention up until the arrival of the Apple iPad. Unlike computers in school, technology at home was cutting edge, and the activities I engaged in and applications I explored came with few directives. My father would show me basic commands or actions, and then I would explore. I moved in and out of the different menus in the various programs, which were far more advanced than what we had at school. I created things—artwork or music, using the programs he introduced me to. I did this for hours without direction until my creative energy ran

out. There was never a prescribed end to my activity. I tried things and saw what happened. While finished products may or may not have emerged, I was learning to be a fluent technology user by experimenting with my father's machines. Before there even was such a term, I was a "digital native" (Palfrey and Gasser 2008), but this was just my life at home.

By the end of high school, I was sick of using computers in school. I could never remember the right words or commands. My exploratory tendencies from home were useless, and school technology killed my motivation to use computers at all. In the 12th grade, I begrudgingly took a course in computer robotics because it was the only course I hadn't yet taken that fit into an empty time slot in my schedule. And yet during that same year, outside of school I worked on a computer project at the College of Staten Island. On my own, I used a computer software program (AuthorWare) to capture video from a silent cartoon, develop subtitles, overlay them onto the video, and then create an interactive multimedia CD-ROM tutorial that was designed to help American Sign Language students differentiate between English verb tenses. A year later, when I was in college, blissfully free from the mind-numbing computer use of my K-12 school years, my CD-ROM was still being used by people at the college, and it had also been translated into Chinese. Yet, I also still believed I didn't know much about technology. Technology use was part of my habitus (Bourdieu 2003), but this was invisible to me because it was ever-present in my home life, while also an ever-present contradiction in my school life. Home technology use had nothing to do with "real" technology learning in school because it was organic with no stakes involved, and if I made a mistake I tried again later. In traditional classroom settings, my organic technology knowledge was useless, detrimental even, because if I explored the technology in school, I was downgraded for being off task or making mistakes. I learned quickly that I was not good at using technology in school.

After high school, I walked away from technology for six years during college and graduate school. I used computers only to type papers and check email. I recall one class, not even a whole course, during that time that involved technology use. It was a writing course; our professor showed us how to use Microsoft Word to create columns, insert images, create titles, and add text boxes in order to make our documents look like newspaper or magazine articles. Aside from that, I didn't use technology in school for six consecutive years; that is, until 2000, when a family friend asked me to teach a *Computers for Teachers* course for the Computer Science department at the College of Staten Island. My social and cultural capital reeled me back into the same technology world I had tried so hard to walk away from six years before.

Before *Computers for Teachers* began, I was given a textbook, a syllabus and course materials created by someone else and was told to "just go for it." I had previously taught college English. I had no experience using computers while teaching. I had no experience teaching teachers and barely any experience with the applications I was teaching (MS Word, Excel and PowerPoint), but I drew from my

habitus and taught myself how to use the technology. Then I drew from my own K-12 past when devising my pedagogy (point here, click there, double click here, click and drag, type this…). That first semester, I recognized that the curriculum was dumbed down and of the same rote learning style I had been exposed to in my own education, but I taught it anyway because that was what I was given. I wasn't confident enough to change it. The second semester, I still used guided instruction, but rather than having timed exams where the teachers created specific artifacts designed by me, the teachers developed portfolios which enabled them to apply their computer skills by designing and creating their own artifacts. Semester after semester I grew bolder, and I allowed the teachers more freedom to use computers to complete their own tasks that were useful for them as professionals, but this almost never resulted in any type of technology integration.

By 2002, when I began my doctoral studies, I was feeling less than adequate as a technology teacher. The computer integration that showed up in the books I was reading wasn't happening as a result of my class. All the teachers in my classes enjoyed my class, I got great evaluations, and they all found it very helpful for preparing their lessons or handouts. However, I had different goals, and so, I believed the "checked at the door" (Cuban 2001) rhetoric that permeated the educational technology literature. The technology texts I read (e.g., Sandholtz, Dwyer and Ringstaff 1997) told stories and gave illustrations of kids working diligently on exciting student-centered activities, during which teachers became "guide on the side" instead of "sage on the stage" (Warschauer and Whittaker 1997). Sometimes this occurred in computer labs and sometimes the kids worked in groups on a few classroom computers, but almost always, it seemed revolutionary. This vision is what I hoped my teachers' classrooms would become, but it was only the rare maverick that would change her pedagogy to resemble what happened in the literature. Even when I required the teachers to integrate technology through webquests, using instructional software, and designing lesson plans that incorporated technology, the impact on classroom practice was minimal because the technology was always added on.

Most often, the teachers applied their skills by creating artifacts to use in their teaching, or alternately, using computers for "center time," a reward, or an enrichment activity connected to a non-technology lesson. Technology use for most of the teachers in my classes was not a necessary part of teaching and learning in the classroom; although, it was a necessary part of preparing to teach a lesson. In their classrooms, technology was something that their students used when the real business of academic learning was finished (or nearly finished). In hindsight, I recognize that the ways in which the teachers opted to use technology did not actually differ much from my own use of technology, except, the focus of academic learning in my room *was* technology; whereas, in the teachers' classes, it wasn't. In my class, teachers learned skills and then applied those skills. Even though I divided my class into instruction time and lab time, the structure of the class was still very traditional. I drew from my home-life capital when using technology for achieving my own goals to prepare for my classes; yet, I ignored that same capital when preparing my

lessons, which closely resembled the classes I took as a child. In this regard, the teachers and I were not very different in the ways we handled technology use in education; however, because I had my sights on integration, and because my courses were *about* technology, I could not see that at the time.

Revisiting the "revolving door"

In 2004–2005, when I conducted my dissertation research at the College of Staten Island and Brooklyn High School (Kress 2006), technology integration and closing the digital divide were obviously high priorities for me because of my unhappiness with the outcomes of my own courses. I believed that urban students were being shortchanged because they did not have access to technology that could enhance their education and prepare them for college and the workforce (Moore, Laffey, Espinosa and Lodree 2002). From working with teachers I did not think this was the result of a lack of skills. The teachers had all taken classes and gone through various professional development sessions without much resulting change in their pedagogy. Perhaps, instead, it was a matter of teacher identity (Roth and Tobin 2007), or perhaps a community of practice was needed for support (Wenger 1999), or perhaps it was a matter of culture and structure and agency (Sewell 1992), but I believed something was happening that created a "revolving door" effect whereby technology would enter the classroom and exit as quickly as it came. By examining these other possibilities, I wanted to find a way to better facilitate the technology integration process. Providing teachers with a community of practice focused on using technology in education in inquiry-based ways seemed to be a logical step toward doing that.

Thus was born the English/Technology Curriculum Writing group at the Discovery Institute at the College of Staten Island/City University of New York. My goal was to provide urban teachers with what I saw as a much-needed community in which to explore technology, and produce a teacher/technology culture together. Consequently, the goal was to re/construct hybridized teacher/technology user identities. This design was based largely on the work of Tobin, Elmesky, and Seiler (2005) in their use of cogenerative dialogue (cogen) to improve classroom learning, combined with Wenger's (1999) notion of communities of practice and identity. In Tobin, Elmesky, and Seiler (2005), the authors explain the cultural production of the group and identity construction of individual and collective leads to a process of "cultural transfer;" whereby, participants will carry new culture from the group back to other fields of their lives. This process of engaging in a "cultural seedbed" has the potential to transform the culture of urban classrooms. Similarly, Wenger explains that people's identities are fashioned by their association with various communities of practice; thus, one's practice is more likely to change with the support of a learning community that shares similar goals. Perhaps, I thought, this was what was needed to help teachers integrate technology. And perhaps, by using video microanalysis and discourse analysis, I could shed light on the ways in which teachers participated in a

learning community and reconstructed their identities as teachers/technology users. I wanted to document the usefulness of an alternative to traditional professional development models.

Carol's story

After I began working with the curriculum-writing group, I selected a single teacher, Carol, to observe and interview while she redesigned her curriculum during the school year. I chose to follow Carol's progress because she considered herself to be a novice computer user, but she was very dedicated to learning how to use technology so that she could in turn teach her students. She was a Ramp-up/literacy[1] teacher at an "Impact"[2] high school in a working class neighborhood in New York City, and she considered herself to be "computer illiterate." For Carol, computer use had not historically been central or even present in her life, but she recognized the advantages of using computers and the Internet for academic work, while also recognizing the difficulties of it for someone who is inexperienced. In addition, prior to becoming a teacher, she worked for a moving company, and she saw similarities between the movers she had worked with and the students in her literacy classroom. She believed that many of her students who were lower-income, from minority backgrounds, and who struggled with reading and writing would be at an additional disadvantage after they left high school if they were not also technologically literate. She was determined to develop her own computing skills in order to incorporate technology into her lessons and provide additional opportunities for her students. Even though she had no one to guide her in her technology use, she kept plugging away at it and trying new things on her own.

Carol's school housed a population of students that was more than 50% African American, approximately 25% Latino(a), 15% Asian or Asian American, and 5% white. Many students came from lower-income or impoverished households (approximately 80% of the students were eligible to receive free lunch). While the school was only 50% African American, Carol's literacy class was nearly all African American with a small number of Latino(a) students. Because of low standardized test scores, graduation rates, and student enrollment, New York City High School (NYCHS) was labeled a "failing" school by the New York City Department of Education. Furthermore, as is often the case with troubled urban schools, NYCHS was plagued with frequent turnover in the faculty and staff; the school had seven principals in eleven years (from 1997–2008), one of whom was there for four years; all the others had only lasted one year.

FINDINGS

For anyone who has worked in an urban school or with urban teachers, my findings will not be terribly surprising. Not having a community of practice in her workplace was only a tiny component of the challenges Carol faced while integrating

technology. The difficulties she encountered had as much to do with the realities of urban schooling as it did with learning how to use technology (Kress 2006), and while having a community of practice to work with was helpful (particularly for developing self-esteem and gaining new ideas), it was not enough to truly support her attempts to integrate technology in her school. For example, computers were not easily accessible because they were in a locked computer lab, to which very few people in the building had keys. Computers were often in disrepair in the lab; students would frequently lose their work; and there was no technical support because the technician was also a full-time teacher in the school. Simply navigating the hallways with the students to go to the lab created anxiety because of the high surveillance in the school and Carol's fear that a) her students would have run-ins with the school police, or b) her students' misbehavior would reflect badly on her. As a result, Carol always kept an eye on integrating technology into a scripted curriculum, while monitoring her students' behavior and achievement, and being mindful of her own image as a teacher in a high surveillance and high accountability school climate. The fear of scrutiny and the urgent need to adhere to school regulations often served as a deterrent to using technology at all. Carol was pulled in many different directions at once, which forced her to prioritize her goals as an educator, and sometimes technology integration appeared at the bottom of the list.

The school culture created difficulty for Carol when she tried to include technology in her curriculum. Even though her efforts resulted in, for the most part, enjoyable learning experiences for her students, they never really became an integrated part of classroom practice. In the end, the overall outcome was not entirely satisfying for her. However, the ways she navigated the challenges that arose from integrating technology in her school displayed quite a degree of ingenuity and determination; she applied her agency in ways that often meant negotiating between her goals as a teacher, the goals of her students, and the culture of her school. Carol's quick responses to arising obstacles (like locked doors, student confrontations, high surveillance, or technical problems) showed that being fluent in the culture of the school was just as, if not more, important than being fluent in technology use. Carol, however, internalized many of the challenges she encountered as having been the result of her own incompetence as a technology novice and new teacher. I did not share the same sentiments as Carol because I knew that she did the best she could with what she had, given the circumstances, but I too was a bit disappointed with the results. Eventually, Carol's motivation to incorporate technology dissipated, and by the time I completed the dissertation, she had stopped using the computer labs entirely except on a rare occasion. She had, however, installed her own computer from home in her classroom. While I mentioned this in my dissertation, it had seemed an insignificant action at the time. In hindsight, however, that act was very telling. Carol's motivation had not gone away entirely after all. By bringing her own machine into the classroom, she was able to continue to provide her students with access to a computer. At the same time, the locus of control remained in her room,

and she would not have to battle against the structures of the school. My grand vision of what technology integration ought to look like prevented me from seeing just how important that act was for Carol and her students.

Surveying the educational technology research landscape

Since the conclusion of my research with Carol, I have changed jobs and locations. I no longer teach *Computers for Teachers*, and I get irritable whenever I have to read the educational technology literature. Partly, this is because there is no longer a direct connection to my job, so the literature is not immediately relevant to what I do. As an assistant professor in a doctoral program for education leadership, my students' interests vary widely, and I must read and be knowledgeable about a wide range of literature and theory, educational technology is a very small part of that. For most of my students, technology doesn't emerge anywhere near the top of their list of priorities. Nearly all of them work in underperforming urban schools that don't have consistent access to working technology. Even if they did have access to working technology, many teachers I work with are faced with wave after wave of administrative turnover and whole school reform. Technology integration is just not a high priority when they are afraid of layoffs while trying to survive constant instability. Consequently, I find literature about policy and critical social theory much more useful for thinking about the deep systemic issues that urban teachers and learners grapple with on a daily basis.

If, however, I set these deep structural issues aside and try to focus just on educational technology, I still find myself struggling to overcome the limitations in the body of literature. First, given just how much literature exists about technology integration, the majority of these studies are not about urban schools, urban learners, or urban teachers (see DeGennaro and Brown 2009 as an example of an exception). Under-resourced urban schools are continually positioned at the margins, and the literature has little relevance for teachers and students in urban areas. As an example, Journell (2009) states that his research "operate[s] under the assumption that most schools in the United States can provide stable computer and Internet access to their students" (p. 56). This assumption is simply unrealistic when considering technology use in urban schools. Second, in all the literature I have read, I have yet to find any that approaches technology use as an organic part of learning. Some literature explicitly talks about constructivist (Mitchell 2007), student-centered (Norton 2008), or project-based (Hofer and Swan 2008/2009) approaches; meanwhile, learning outcomes are still orchestrated and directed by the teacher. Even when the technology infused activities are "successful" and students are engaged in and motivated by the learning activities, the actual activity itself is still not authentic in the way that technology is used outside of schools (e.g., Norton 2008). In other words, my own tendencies toward organic technology use that I developed as a digital native at home more than twenty-five years ago would still be marginalized in many school settings, and especially in

urban schools like Carol's. This in itself points to a contradiction between what it means to be technologically fluent outside of school and to learn to use technology in school.

Furthermore, the types of technology promoted in the literature are changing very rapidly; however, the actual vision of technology integration has not changed much over the last ten years. As I have further removed myself from the educational technology community, it is becoming increasingly apparent that authentic moments of organic, student-centered learning occur when students are able to or encouraged to experiment with and appropriate technology in unexpected ways to meet their needs in the moment; yet, this is not usually the primary focus of the educational technology literature. When it does appear, it is usually an unexpected outcome within an activity predetermined by the researcher or the teachers in the study. For example, in DeGennaro and Brown (2009), urban learners who participated in an after school Digital Divide initiative adamantly resisted an imposed, inauthentic and dumbed down curriculum, to the point where their instructors were forced to come face-to-face with their own preconceived deficit notions of the learners in front of them. By resisting, the students refused to "learn" the demeaning curriculum that their instructors sought to teach; in effect, they demanded that they be respected as learners, which forced their instructors to completely redesign the learning environment. The agency displayed by the students in studies like this one illustrates the ways in which students can and do draw from their habitus to transform oppressive learning structures that are imposed upon them by others. This indicates that the students are actively recreating their learning environments and vying for ownership of their own learning, whether or not this agency is intentionally afforded by the structures that educators design. These types of agentic acts are not restricted to learning with technology; they can and do happen in all kinds of learning activities (see Tobin, Elmesky and Seiler 2005 among numerous others). I believe that our real challenge is to tap into students' desires to structure and direct their own learning. This will necessarily make learning unpredictable and nearly impossible to measure, which flies in the face of more than a century of U.S. education reform that is based on notions of efficiency and standardization. The potential for transforming education (with technology or without) into an experience that honors the knowledges that urban learners bring to the learning environment does not lie in the predetermined outcomes we anticipate, but rather in the outcomes we don't anticipate when teachers and students create new knowledge organically together.

Change of context, change of tune

Presently, I am conducting research at a small school in Boston, which could easily be classified as an apartheid school (Kozol 2005). The student body is 95% Black with small populations of Latino(a) and Asian students. The number of White students is so small that they do not even comprise one half of a percent of the total student body. And in fact, in all the times I have been there, I have not seen a White

student, only White teachers. The school is a Title I school with more than 80% of students living in lower-income households. In this school, which I will call Urban High School (UHS), I have seen three computers. One was in a faculty office, and the other two were at the teacher stations in classrooms. Although computers for students aren't immediately visible in this school, they do exist, and they are housed in three computer labs. One lab is an "open lab" that can be used by any teachers and their students, and the other two are relegated to the Business teachers who teach their classes in these rooms. All are in a state of disrepair with fewer than half of the outdated machines working at any given time. Teachers and students make do with what they have, because getting a technician from the Boston Public Schools central office to repair or update the machines could take six months or more. On paper, however, there is a 5:1 student to computer ratio and consistent Internet access.

To be truthful, when I go to UHS, my primary interest has nothing to do with technology. I go there because I am conducting an ethnographic study about the Young Researchers Club (YRC) (see Kress 2011a and Kress 2011b), an after school club initiated by Av, a teacher at the school and my former doctoral advisee. It is a spin-off of a "Social Activism" course he taught (and I co-taught on occasion) in the 2008–09, school year. In this course, students designed and conducted research that investigated the culture of their school. At the time, this was a pressing concern for both students and faculty because the school had been labeled "failing" for several years in a row and was going to be restructured at the end of the year. Restructuring in this case meant merging with another "failing" small school that was housed in the same building. Technically, they would be a new school, but many aspects were the same e.g., many of the same students and faculty, similar patterns of enacted culture (and its associated challenges). Both the class and the after school club (now part of the new school) were designed to be places of empowerment within a school where students are often disempowered by virtue of deficit perspectives, curriculum mandates, and oppressive school rules. In these extracurricular spaces, the students take charge of their own learning by conducting research that emerges from their own interests, relates to their lived experiences, and is action oriented. My readers may hear similarities to YPAR (Youth Participatory Action Research) (McIntyre 2008) in this description, but a critical component to this initiative, which is not necessarily included in all YPAR projects, is the students' engagement with the same critical social theories with which teachers and administrators in my doctoral program engage. The students work with ideas from the likes of Pierre Bourdieu (2003), Paulo Freire (2000), Jonathan Kozol (1991, 2005), Pedro Noguera (2003), and others, as they identify and name the social structures that reproduce inequality in society and in their lives. They dialogue with the theories using their own experiences and ways of knowing as urban organic intellectuals as they begin applying their agency towards changing their lived realities (Kincheloe and hayes 2006).

Technology is not the focus of what the YRC does. When technology comes into play, it is a tool and only a tool. Technology is used to complete specific tasks and reach specific goals that the students want to achieve, which have little to do

with technology and everything to do with engaging in their own education and envisioning a more just society. In the moments when it is timely and appropriate to use a particular technology to accomplish a task, if the students need instruction their teacher will provide them with instruction; however, technology instruction is not (and cannot be) a premeditated act when the learning is being driven by the students' needs as they occur in real time. In this space, technology use does not dominate; rather, it is aligned with authentic practice that you see in work environments. It facilitates and enhances what the students already do and the knowledge they construct. Because of this, and because of the small number of students in the group (eight), the students easily share a single computer, the teacher's station, to do what they need to do. In some ways, having a computer for each of them might actually be counterproductive for them because a) this would imply that learning is an individual activity, b) it could undermine their own knowledge production by providing easy answers from "experts" on the Internet, and c) it could place emphasis on creating finished products by using the computers while deemphasizing the importance of knowledge creation itself. As the YRC currently functions, learning is a collective activity and knowledge is negotiated and created by the group through discussion. In this type of learning environment, I am not sure that technology use, as it is often presented in educational technology literature, would be especially helpful; it may even hinder the flexible and organic learning environment that exists in the YRC. This is not to say that technology shouldn't be available; rather, it is just one resource among many that the YRC turns to for accomplishing their goals.

TECHNOLOGY ON THE PERIPHERY

As controversial as this will sound, given the agency that this group of students has thus far displayed in directing their own learning without much technology use, I have come to believe that technology integration (or lack thereof) in urban schools is not necessarily a problem in itself. There are bigger issues that technology integration is embedded within, and while it should not be ignored, technology integration is perhaps not the first place we should be focusing our attention. If we see technology the way folks outside of schools (i.e., in workplaces or other social settings) see it—as a tool—then it is simply one resource alongside other resources. Therein lies the problem; "When one set of schools is given the resources necessary to succeed and another group of schools is not, we have predetermined winners and losers" (Duncan-Andrade and Morrell 2008, p. 1). Urban schools are chronically under-resourced, so the fact that this particular resource is nearly absent and when present is often antiquated or in a state of disrepair, should not be surprising. We could easily replace the word technology with the words textbooks or science lab equipment or rigorous curriculum, and we would have essentially the same scenario. Insufficient access to technology (or textbooks or lab equipment or rigorous curriculum) is just one symptom of a larger malady, which is that many urban schools are at a severe disadvantage when it comes to educating students (most of whom are lower-income

and minorities). This disadvantage is the result of a "systemic structural design that essentially predetermines their failure" (Duncan-Andrade and Morrell 2008, p. 1). Furthermore, within the present high-stakes climate, the curricula of "failing" urban schools are increasingly regulated by strict policy mandates causing these spaces to become hostile environments that perpetuate rather than alleviate social inequality by limiting urban students' exposure to authentic learning, with or without technology (Duncan-Andrade and Morrell 2008).

When looked at in this way, the digital divide in schools is just another piece of the Achievement Gap puzzle. While I do not deny that urban students are further disadvantaged when they are unable to access computers in schools (Tobin 2005), particularly since many students may not have computer access at home, we cannot overlook that they are also disadvantaged in other pressing ways. For instance, many urban students are denied access to a high quality curriculum that is rigorous, culturally relevant and personally meaningful because of the emphasis placed on providing remedial education for improving standardized test scores (Romer 2006). As Duncan-Andrade and Morrell (2008) poignantly explain, "This is where urban school reform has missed the mark. It presumes that urban schools are broken. Urban schools are doing exactly what they are designed to do" (p. 1), which is deskill teachers and students, police urban kids, force compliance and conformity, and justify this maltreatment by perpetuating deficit perspectives via the discourse of standards and accountability and the use of standardized tests for measuring so-called "achievement" (Kincheloe and hayes 2006). Thomas (2009) further explains, "We must recognize that the 'failure' we often associate with the achievement of impoverished students does accurately describe that disconnection, but not necessarily the student intellect" (p. 6). The educational disconnect that results from deficit perspectives that permeate all facets of education from policy down to pedagogy cannot be fixed through technology integration because it has little to do with technology.

A different approach would be to call into question the very terms achievement gap and digital divide, because both metaphors indicate that something is missing, like a broken bridge preventing passage to the other side of a ravine. The implication is: if only we use more of the proper materials that are thus far missing, we can fill these gaps, enabling underperforming students to walk across to the other side. Simply put, this is a smokescreen. What we have are not gaps; we have two separate systems of education that are inherently unequal and exist in two different worlds (Duncan-Andrade and Morrell 2008). No matter how much more basic literacy and math remedial filler (or technology) you add, you will not create a bridge between these worlds. Thomas (2009) urges, "In order to reach the goals we set for our schools and for the children who enter those schools, we must rethink the language we use, the assumptions we have, and the practices we implement both in our schools and in the greater society around those schools," and we must "move away from deficit models and toward the 'generative' classrooms that all students deserve" (p. 4). Deficit-laden structures that are in place in urban schools set students up for failure as compared to their more advantaged peers in other geographic and socioeconomic

locales. "[L]ow achieving students who are disproportionately children of color and from impoverished backgrounds do receive the most traditional and narrow forms of instruction and assessment—year after year—while the accelerated students receive more progressive instruction and assessment" (Thomas 2009, pp. 12–13). Wenglinsky (2005/2006) illuminates this disparity in regard to computer use in schools in his study about NAEP history scores. He explains, "The more time students used computers for schoolwork outside of school, the higher they were likely to score on the NAEP history assessment. The more time they used computers *in* school, however, the *lower* they were likely to score on the NAEP" (p. 32). His findings suggest "teachers can make better use of computers by having students complete such assignments at home rather than at school" (p. 33). His findings also show that the largest determining factor in achievement was students' socioeconomic status, not their use of computers.

When unequal structures are pushed aside, we encounter contradictions that illustrate just how much urban students are capable of when not being bombarded by policy that attempts to "normalize" while always norming them against their more socioeconomically privileged peers (Kincheloe and hayes 2006). As a prime example, several of the YRC students are also on the school debate team. Urban High has been a "failing" school for several years, but the debate team won second place in the state the year before the merger and won first place in the city the year of the merger. These are not "failing" students, but they do not perform consistently well on exams, and they do not receive "A's" in all their classes. On paper, they do not "measure up" when placed side-by-side students they debate against who live in more affluent areas. A contradiction such as this points to inconsistencies in the hegemonic logic of AYP and urban school reform in general. These students can and do outperform their peers when provided with structures that enable them to do so. This new perspective has forced me to question the value of many technology integration initiatives and their corresponding literature (including my own dissertation) as they relate to the realities of urban education. As a result, I have chosen to shift my attention elsewhere, namely toward devising ways to subvert oppressive school structures and create organic and empowering learning environments (with or without technology) for urban students. In the case of the YRC, given the strict sanctions on the curriculum of their newly restructured school, the only place this type of learning can really flourish is in an after school setting. As an extracurricular activity, it is outside the reach of the distorting influence of oppressive and repressive education policy. While ultimately I would like to see these types of opportunities during the regular school day where they can be available to all students, I also recognize that in the present educational Zeitgeist this is nearly impossible. It is also unlikely that this will be possible for years to come.

CONCLUSION: SINGING A DIFFERENT TUNE

I have come to terms with fact that in 2004 when I began my own dissertation research, I walked into it with preconceived notions of what technology integration should look like. Largely, they were based on deficit views of *all* learners, not just

urban ones. This was shaped by my own contradictory childhood experiences where I too had been positioned as deficient; it was then exacerbated by my readings of the academic literature, which positioned *both* teachers and learners as deficient. I recognize now that my own technology use does not and has not ever looked like the technology integration that has for years been promised in the literature and was force-fed to me in school. I use technology every day, but I also read books, and I talk to colleagues. I don't sit at my computer and think, "today I am going to create a PowerPoint presentation about X." Instead, out of necessity, I create PowerPoints about the ideas in my papers when I need to present those ideas to an audience. The technology punctuates and communicates, but it does not shape the foundations of my ideas. However, my reading, conversations with students and colleagues, and writing are undeniably foundational to the development of my ideas. Technology has become a central part of these activities, but as a means of more quickly or efficiently accomplishing the task at hand. If I think about technology use at all (of this, I am uncertain because technology use is fairly automatic), it more resembles "I need to know about X; I will Google it, or I will ask a friend about this." I then decide on the best course of action, and I use the technology to accomplish my goal. Such has been the case my entire life as far back as when I was a child—but outside not inside school. Herein is where I believe the technology integration disconnect resides, regardless of whether we're talking about urban or suburban schools. When technology use in schools is planned and not connected organically to learning, students are prohibited from making their own judgments about when and how to use technology as it relates to their goals as learners; in other words, they are prevented from being technologically fluent. In this way, technology use becomes decontextualized and inauthentic, just like much of school learning in general because it is unnaturally segmented into discrete skills that have no direct application in the real world.

The natural questions that arise at this point are: so what does this mean for urban teachers and learners, and what do we do now? Clearly, ignoring technology is not the answer because that in itself perpetuates disadvantage for students who are already at a constant disadvantage. And yet, clearly, creating more computer labs and adding more machines isn't the answer either, nor is providing more training and professional development for teachers. At this point, I believe that several things need to happen to make education more equitable for urban learners, all of which involve a serious rethinking regarding the purpose of education as well as a decentralization of power in educational settings. First, learning in general needs to become more authentic. This means allowing teachers to create their own curriculum based upon their students' needs and their judgment as professionals. It also means cross-disciplinary learning and larger blocks of time for learning. These suggestions are not earth shattering. John Dewey talked about this in the early 1900s, Paulo Freire and Maxine Greene in the 1970s, Henry Giroux in the 1980s, and countless educators are talking about it in the present. Once we catalyze these ideals, then we can start thinking about how to use technology; otherwise, learning

with technology will continue to mirror learning in any other subject because this is how our educational system is designed. If technology is to be used for "generative" rather than deficit learning (Thomas 2009), it needs to be available for students to use when it is timely and appropriate (i.e., organically and fluently), not just when it is planned by the teacher as a whole class exercise, or as an add-on project. I understand how unrealistic this sounds given the current political climate. This is why for now, I sing my different tune in a marginal after school space where the opportunity to thrive as organic intellectuals and to use technology to achieve their own goals is available at least to some students.

NOTES

[1] Ramp-up is a packaged literacy curriculum for underperforming students that is mandated by the New York City Department of Education.

[2] The Impact schools program was explicitly modeled after the NYPD's "Operation Impact" which involved using a computer system to identify, target and police high crime areas of the city. Impact schools were identified by "high risk" markers such as low attendance and graduation rates, low achievement scores, and higher than average violence, after which they would be assigned extra school police officers and advances surveillance technology.

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