Retelling the Story: Official Tales of Technology and Head Start Teachers' Technophobia[1]

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"I don't think that the governing body whether it be a state or government or even further closer to us, sometimes I don't think that they realize how their expectations are affecting the classrooms and the families" (Head Start Teacher, 12/13/2002).

Abstract: The United States has invested in educational technology and nourished the enthusiasm to infuse computers in K-12 classrooms since the early 90s through various technology policy initiatives. However, the Digital Divide and differences between the expected and actual technology use in schools are still in existence. In line with this problematic, this paper discusses federal constructions of technology in comparison to the experiences and practices of Head Start teachers using technology. Situated in the context of a federal initiative, the Preparing Tomorrow's Teachers to Use Technology (PT[3]), this paper presents findings from a larger ethnographic case study to compare the official *tales* of technology with the local experiences of teachers who participated in a PT[3] grant. Findings suggest that there are both overlaps and disconnects between federal rhetoric and local practices in regards to how technology is defined and the ways early childhood teachers act on these federal constructions. It concludes by suggesting that those disconnects can be eliminated by acknowledging different faces for technology learning among teachers.

Introduction

The changing world and new developments in computer technology are two inseparable phenomena in the 21st Century. In fact, technology is changing how we function, think and behave in the social world as well as changing how we perceive teaching and learning. With the increasing emphasis on computer literacy in the digital age, many federal and state funded programs have proliferated in the United States since the early 90s (i.e. E-Rate Program, The Technology Literacy Challenge Fund, The Technology Innovation Challenge Grants and The Preparing Tomorrow's Teachers to Use Technology Initiative(PT[3])). Those technology initiatives

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[1] An earlier version of this paper was presented at the 2005 Annual Meeting of AERA Conference in Detroit, Canada based on preliminary findings of the author's dissertation research. In this paper, the author presents selected sections of her dissertation by providing direct and indirect quotes from the dissertation. For a detailed discussion regarding the presentation topic, please refer to Arikan (2005).

[2] I would like to acknowledge the contributions of my dissertation advisors, Professor David E. Fernie and Professor Rebecca Martin-Kantor. I am grateful for their guidance throughout the research project and take full responsibility for any errors of fact or interpretation in this paper.

attempted to infuse technology into education by providing funds for technology and training in elementary, secondary and post secondary education.

As Selwyn (2001) notes, the use of technology in education now is a 'political orthodoxy.' Therefore, it is no longer a question of if technology needs to be used but it is a question of how technology should to be used. It changes the climate in education and imposes advocacy for technology integration to pace with the digital age. For instance, Thurston, Secaras and Levin (1996) suggest, "real classroom teachers who use technology effectively are the best role models as instructional leaders" (p.5). Teaching in technology rich environment means "intensive student-teacher interaction, fast delivery of on-demand student-teacher virtual contact, customized content, delivery, and schedule" (Long & Riegle, 2002, p.137) and the ability to apply technology knowledge into educational contexts (Barron & Goldman, 1994; Long & Riegle, 2002).

In line with those definitions, teacher education institutions are integrating technology through a variety of ways. Single courses on technology, technology requirements for students, field experience options, partial or full integration and distance learning are among the most common approaches to technology integration in teacher education (Mehlinger & Powers, 2002). In response to the changing climate in education, elementary and secondary school teachers are also expected to adopt new roles as life-long learners. How are teachers responding to these expectations? Are they successful in keeping up with these demands? In fact, using technology in many contexts is still a challenge for teachers. In most cases, they lack basic skills or knowledge about the educational uses of technology (Barron & Goldman, 1994; Long & Riegle, 2002). In addition, schools often lack equal access to the Internet and capable computers, as well as lack of trained teachers, technology support, and quality educational software (Bolt & Crawford, 2000; Chapman, 2000; Garland & Wotton, 2001). Technology use in early childhood education reveals similar issues. While technology is perceived to be helpful in the areas of literacy, play and art, the consensus among the scholars is that early childhood teachers lack the basic skills in technology and have greater technology anxiety (Hong & Trepanier-Street, 2004; Smith, 2002; Turbill, 2001; Wood, Willoughby, Specht, Stern-Cavalcante, & Child, 2002; Yelland, 1999).

While above-mentioned initiatives aimed at providing funds for technology access and quality experiences in a wide range of educational institutions (from primary grades to higher education),

early childhood education has never been the direct focus of these technology programs. Furthermore, the predicaments still exist in the official tales of technology initiatives in the United States. I intentionally use the tale metaphor because the expectations are overly romantic and decontextualized. It draws a predefined and linear route that systematically denies the sociocultural complexity of using and learning technology at the local contexts and envisions a future projection of transformed education at all levels. Thus, seemingly straightforward definitions of technology in the federal initiatives suggest an unproblematic view of learning process that the learners of all ages engage in while teachers integrate technology in education. They portray technology proficiency for teachers as a set of advanced skills that teachers develop by simply faculty modeling technology use in teacher preparation. In fact, teachers' journey 'with technology' to earn the title of the proficiency reveals that technology-proficiency is a sociocultural competency, acquired through a complex learning process for adult learners and they need to be supported by multiple points of access to technology.

To address these complexities and disconnects between official expectations and teachers' practices of technology use, I looked at the expectations of the federal PT[3] Initiative and documented early childhood teachers' practices as they use technology in Head Start context during their participation in the PT[3] project. Through this qualitative study, I asked the questions of how federal government constructs technology in the context of the Digital Divide and how/if early childhood educators' experiences fit into federal visions of technology in the context of a PT[3]project.

Background to the Study

In response to the growing challenge of technology-proficient teachers in K-12 education, the US Department of Education launched the PT^3 Initiative in 1999. The PT^3 Initiative awarded over 400 grants nationwide between 1999 and 2001[3] to carry out projects on higher education faculty professional development, creation of training and learning tools, and pre-service teacher training in technology (PT^3 Website, 2002, about page). In 1999, the PT3 Initiative awarded a grant for the Teachers Learning Technology Project[4] (TLT) at the Midwestern University in Ohio. The TLT project worked with 12 Head Start agencies and 24 higher education institutions in the Midwest Region. The TLT Project's purpose was to help Head Start teachers gain technology proficiency as they continued their education in those 24 higher education institutions. This paper is a product of my dissertation research that took place within the context of PT^3 Initiative and the TLT Project between August 2002 and March 2003.

Data Collection and Analysis

This study is an ethnographic case study, which refers to a collage of interpretive practices employed during the entire inquiry process (Denzin & Lincoln, 2000; Eisner, 1988; Erickson, 1986; Glaser & Strauss, 1967; Yin, 1994). Data collection methods included semi-structured interviews, telephone interviews, focus group interviews, participant observations in local contexts and collection of organizational documents and artifacts from each layer of practice. There were five groups of participants in the study. These groups included six TLT project staff and two project proposal team members in Ohio; 11 Head Start staff and teachers and two faculty members in Ohio and Indiana; and two key informants from the PT^3 Program in Washington D.C. Multiple interviews were conducted with participants, each interview lasting between 40 minutes to two hours. In an effort to retell the story in this paper, I share some of my interpretations based on the data from my dissertation research.

When analyzing data, I followed an eclectic approach drawing from various interpretivist approaches and grounded theory (Charmaz, 2001; Erickson, 1986). The NVIVO Qualitative analysis program was used to manage and code data. Coding was performed using open, axial

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[3] Some grantees were allowed to carry over remaining funds in FY 2002.
[4] Pseudonyms are used to protect participants' identity.

and selective coding procedures. NVIVO qualitative data analysis program was used to manage and code the data. Analysis of the data utilized constant comparison method along with memo writing, and diagramming of categories emerged from coding (Strauss & Corbin, 1990).The following table summarizes the contexts of the study, participants and data collection procedures for the original research.

Contexts and Methods	PT3 Program	TLT project	Cameron County Head Start	Flint County Head Start
Participants	>>2 PT3 Program Staff	>1 Project Director- >1 Project Coordinator- >1 Training Specialist- >1 Technology Specialist- >5 Early Childhood Educators, including the Project Director	>4 Early childhood teachers >1 Curriculum coordinator > 1 Faculty partner from 4 year higher education institution	>4 early childhood teachers >1 Agency Director >1 Adult Education Manager >1 Faculty partner from 4 year higher education institution
Total= 23	Total= 2 Participants	Total= 8 Participants	Total= 6 participants	Total: 7 participants
Participant Observation	None	Staff meetings	Cohort meeting	Cohort meeting
Face to face Interview	None	Project Director- >2 interviews Project Coordinator- >3 interviews Training Specialist- >1 interview Technology Specialist- >2 interviews	4 teachers >1 interview each Curriculum Coordinator >2 interviews	4 teachers >1 interview 1 The Agency Director >2 interviews 1 The Adult Education Manager >1 interview
Total= 15 Interviews				
Focus group interview	None	Focus group interview with the proposal team	None	None
Telephone interview Total= 2 Interviews	2 PT3 Program Staff	None	Early Childhood Faculty >1 telephone interview Curriculum Coordinator >1 telephone interview	Early Childhood Faculty >1 telephone interview
Documents/ artifacts	PT3 Website, Application Guidelines Legislation	TLT Website, Project Proposal, video tapes, Handbook, Meeting minutes, site visit and training reports	Agency website, application proposal, feedback forms	Agency website, application proposal, feedback forms
No response/ Participant dropout	No response from 2 PT3 Representatives	None	1 teacher 1 faculty	1 teacher 1 faculty

Table 1. Research Participants and Data Collection Methods

In the sections that follow, I share my findings and interpretations under three headings.

Technology Transforming Education

The federal involvement in education fueled by international competition at times of national crises continues to be a topic of debate among scholars (Chapman, 2000; Clark & McNergney, 1990; Cohen-Vogel, 2005; Cookson, 1995; Twight, 1996). A common observation in this debate is the fact that federal programs are mostly driven by economic rationalism imposed by the capitalist world. That is, underlying motivation of these programs has been to maintain future employability prospects of students in order to remain at the competitive edge in the global market. Similar pattern appears in the history of technology programs, too. Furthermore, the central role of technology visible in "the 21st education discourse" reinforces this motivation. As an example, during his speech at the Information Technology Press Conference in 1999 Richard W. Riley said,

> "As citizens of the Information Age, we know that opportunities for Americans in the 21st century will be created largely through technology. Those Americans with the ability to use technology effectively will be in the best position to build rewarding careers and productive lives. That's why technology must play a central role in any curriculum that sets high standards for students[5]."

In this speech, the essential role of technology in education is emphasized in relation to competitive capitalist market with the simultaneous use of words 'opportunity, rewarding careers and productive lives.' At the same time, the national emphasis serves as a tool for building consensus among public in relation to the role of technology because it speaks to any nation's heart-felt needs of belonging and attachment in this borderless world of information. The speech, thus, presents technology as an identity marker uniting diverse people of America under the umbrella of Information Age citizenship. Similar tools of consensus building on the role of technology are visible in the PT[3] Initiative. For instance, the following excerpt from the 1999 PT[3] Application Guidelines maintains the same emphasis:

> "In recognition of the urgent need for technology-proficient educators, Congress has appropriated $75 million to begin a new initiative focused on preparing tomorrow's teachers to use technology for improved teaching and learning. No school in America can meet the demand for teachers prepared to educate 21st century students without a significant commitment to teacher preparation program improvements across the country" (U.S. Department of Education, 1999, p.1).

As the excerpt shows, the technology initiative is framed around the vision for improved teaching

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[5] U.S Secretary of Education, Richard W. Riley, from the speech delivered at the Information Technology Press Conference, Washington, DC June 30, 1999.

and learning with technology, future predictions of the need for technology-proficient teachers, and the role of teacher preparation programs. A sense of urgency and national unity is created by an emphasis on "the need" and "the challenge." At the same time, use of the terms "the demand," "nation," and "our schools" attempts to build consensus among the public. While presenting the role of technology as a transformation agent in improving teaching and learning, the PT^3 Initiative also provides a definition of what technology means and how it will change education. One of the key informants said,

> Grantees tend to get stuck sometimes at the point of trying to make faculty proficient in the use of a computer program or technology or use of Power Point or word processing or email and never get to the integration. Whereas, if you start with integration and what it actually can, a program, a software or whatever will do to improve student learning, the actual proficiency will come. (Interviewee 1, 08/21/02)

She distinguishes between technology integration and "technology-proficiency" and describes the latter as the responsibility of the higher education institutions for ongoing employee development. Another informant said, "In order to change the way that teachers teach with technology, you would have to integrate technology into higher education (Interviewee 2, 12/18/02). The words "improve, technology and change" often appears together in the documents and the interviews with multiple definitions of technology. For example, the initiative simultaneously defines technology as a set of advanced technological skills that teachers should develop and use in their K-12 classrooms, a medium for connectivity, the 'cultural tool' of the 21st century, and a ' modern tool' to be integrated into higher education curriculum that future teachers can model. Thus, the technology initiative proposes a vision for transforming education with technology. It also defines a pedagogy requiring integration of technology without concern if educators are even proficient in basic technology skills or if every institution has the resources to provide basic technology training. The federal expectations loaded with unwarranted optimism presents a futuristic tale in which educators and students are subject to an idealistic prophecy while technology is a modern protagonist. That is, technology is a change agent that educators are expected to adapt and integrate in their classrooms to transform education (Arikan, 2005).

The emphasis on "change" and the tone embedded in the federal expectation for "integrating" and "institutionalizing" technology to transform education delineate a process not mutually shared by all educators but implicitly imposed upon future teachers, students, faculty, teacher preparation programs and K-12 education. This was also evident through the accounts of

study participants in this research. Early childhood teachers in Head Start felt that technology was "one more job to do" due to a combination of factors, including their simultaneous responsibility of going to school, working and learning technology. For early childhood teachers, using technology was a challenge because they were afraid of technology and they lacked basic computer skills such as clicking the mouse and keyboard typing. Technology presented a foreign knowledge domain for them because they did not grow up with computers as adult learners. At that point, they needed basic technology literacy to "get through college" rather than having the purpose of integrating technology in their classrooms. Those experiences compared to such federal expectations shows vivid disconnects between local practices and official tales of technology.

At this point, the *e-divide* between educators and policy-makers is worth noting in the PT[3] Initiative. As an example, the PT[3] Application Guidelines (2000) states, "Rapid developments in online learning, visualization, modeling, simulations and other applications, along with the explosion of new knowledge in every field, will require that tomorrow's teachers use these technologies to support their own continuous professional development throughout their careers" (U.S. Department of Education, 2000, p.3). The e-divide between policymakers and educators presents a new form of Digital Divide that is discernible simply by looking at what the *e-visions* technology policies are based on. That is, the technology visions of policy-makers are more in resonance with the expert residents of *techno-communities* in the business world than with vigilant, and often times novice members of educational community. While policymakers represent "haves" in terms of what they expect of technology to achieve, the educational community's members fall under "have-some's" and "have nots" on this continuum (in terms of technological know-how and resources).

I would like to conclude this section by making two introductory remarks for the upcoming sections in this paper. First, the transforming power of technology is arguable because the expectations often do not match material resources available for teachers. Second, it is not simply technology integration that can transform education but a combination of sociocultural factors including teachers, students, and communities, and "technology merely provides some of the tools and processes that can support educational reform and create pressure for change" (Fullerton, 1998, p.74). Therefore, the official tales of technology should include both material preconditions and sociocultural factors in order to transform education.

Material Preconditions and the Digital Divide

The growing disparity between "haves" and "have-nots" is the heart of the Digital Divide that resurfaces repeatedly in educational technology initiatives. The presence of the Digital Divide, still enduring as a barrier, is not pronounced as an access problem any more by the federal government, but it is conveniently used as a rhetorical strategy. At the same time, this rhetoric has little to offer as it contradicts the liberal role of federal government in promoting capitalist market as oppose to a welfare government distributing social goods to public (Birdsall, 2000). In order to close the divide, the technology programs need to acknowledge local needs of educational communities (Adams & Freeman, 2000; Bishop, Tidline, Shoemaker, & Salela, 1999; Borgida, Sullivan, Oxendine, Jackson, & Gangl, 2002; McMahon & Bruce, 2002). Those local needs may differ for different communities. While some communities may be at the level of obtaining basic technology proficiency and infrastructure, other communities may be at the level of socializing teachers into integrating technology in education.

Any effort aiming at transforming education will be incomplete if it selectively focuses on certain needs. Although the PT3 Initiative awarded three kinds of grants for educational institutions at different rates of readiness integrating technology, the majority of funding went to those institutions that could easily meet material preconditions for integrating technology in education. This was evident in the unfair funding pattern for three kinds of grants: Capacity building, implementation and catalyst grants. The following table summarizes the funding amounts for each type of grant:

Preparing Tomorrow's Teachers to Use Technology Grants			
Year & Funding	Capacity Building	Implementation	Catalyst
1999 of $75 million	- 138 projects funded averaging $120,000 a year	- 64 projects funded averaging $390,000 a year	- 23 projects funded averaging $644,000 a year
2000 of $125 million	- No funds	- 115 projects funded averaging $320,000 a year	- 12 projects funded averaging $570,000 a year
2001 of $ 65 million	- No funds	- 74 projects funded averaging $337,000 a year	- 15 projects funded averaging $613,000 a year

Table 2. Preparing Tomorrow's Teachers to use Technology Grants[6].

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[6] Information obtained from U.S Department of Education's PT3 Grant Application Guidelines.

Capacity building grants were to support the initial year of work by those who needed time and resources. Implementation grants were provided to institutions that were ready to implement programs to develop well-prepared, technology-proficient future teachers. Catalyst grants were to support "1) institutions that could provide technical support to those who are improving teacher preparation programs, 2) consortia that were developing innovative learning communities and 3) restructuring efforts that improve the capacity of the existing teacher preparation programs" (U.S. Department of Education, 1999, p. 4). Capacity building grants were funded for one year, while implementation and catalyst grants were funded for three years. In addition, the equity and diversity issues were the last resorts in the program. It is visible in the following excerpt from the 1999 PT[3] Application Guidelines:

> To insure that tomorrow's teachers know how to use new learning technologies for improved teaching and learning, teacher preparation programs must develop innovative responses to three demands:
> QUANTITY: We need two million well-prepared, technology-proficient teachers in less than a decade.
> QUALITY: Future teachers must know how to use the power of new technologies to improve the teaching and learning process.
> EQUITY: To close the Digital Divide, schools in low-income communities and rural areas must be staffed with technology-proficient teachers. (U.S. Department of Education, 1999, pp. 2-3)

The equity issue in the application guidelines repeatedly appears as the third priority in the subsequent years of the program. It is evident that touching on the equity issue in the PT[3] Initiative is a rhetorical strategy creating a positive image for the limited pursuits toward equity in education. The fact that PT3 Initiative funded only 138 capacity building projects averaging $120,000 a year, and that only 43 projects out of 440 addressed some aspect of the Digital Divide (Foley & Voithofer, 2003) undermine this image of pursuing equity in technology programs. Furthermore, the shift in the language of the application guidelines from the Digital Divide to the digital learning needs of students in low-income and rural areas pronounces teachers role in closing the learning gap. The question is no longer how the federal programs address access and equity issues but the extent to which teachers can assure learning for responsible "citizenship" and "productive employment" in low income and rural communities. For instance, one of the key informants from the PT[3] Initiative said, "A trained teacher is one of the biggest factors in digital equity or digital divide. It is not just the students in low-income communities who need

computers they also need teachers who knows how to use those computers well to improve learning" (Interviewee 2, 12/18/02). Elsewhere he stressed that the program did not support grants for equipment purchases or basic technology training.

This shifting focus indicates an underlying assumption that majority of educational institutions meet material preconditions in order to integrate technology and transform education. Similarly, recent discussions of the Digital Divide stress looking at social and cultural factors and question the quality and meaningfulness of technology tasks that different groups of students engage in and the ways teachers utilize various technology tools in the classrooms (Damarin, 2000; Hinson & Daniel, 2001; Looker & Thiessen, 2003; Warschauer, Knobel, & Stone, 2004). For instance, having a computer at home does not automatically lead to quality use or academic achievement for all students of different socioeconomic backgrounds (Attewell & Battle, 1999; Becker, 2000).

Schofield and Davidson's (2004) study documented how online access in school was often provided as a privilege or reward to the most advanced students, thus amplifying other forms of inequality in schools.

These studies show different faces of the inequities related to technology in education, thus require changing definitions of the digital divide. While I highlight material preconditions in transforming education, I do not intend to define the digital divide in narrow terms limited to physical access. Rather, I argue that because material preconditions still do not exist in many educational settings, technology programs cannot deny the technology infrastructure needed to bring changes in technology use. In this line, Weston (2005) points to technology access and organizational factors as major obstacles to technology integration. The reality of Head Start teachers in this study supports his observation and it stands in stark contrast to the presumed conditions of the majority. In the following section, I describe early childhood teachers' experiences with technology in Head Start.

Head Start Teachers and Technophobia

The experiences of Head Start teachers and their technology practices are situated in a complex plane of social reality that is not present in the official tales of technology. The official tale constructs teachers as an identical group of people (K-12 teachers) who are expected to learn complex technology skills by modeling from faculty regardless of their differences in age, socio-

economic status, gender, ethnicity and the grade level and subject area they teach. However, adult learners' experiences with technology shows different scenes of an affective journey, including reluctance, fear, anxiety, tension, confidence, and comfort (Hillesheim, 1998; Kotrlik & Redmann, 2005; Lawson, 2005; Russell, 1995; Selwyn, 2002). Therefore, official tales of technology must take into account the interplay between the nature of learners, learning contexts and the nature of learning when forming high expectations for teachers.

In this study, Head Start teachers were so marginalized in prevailing technology discourses that they were concerned about "breaking computers" and they ironically feared "messing up important information" in the information age. Thus, they showed a reluctant attitude toward technology. Furthermore, they were female, adult learners of underprivileged communities, subjected to a gendered discourse of technology. When a teacher was expected to learn using technology, she reluctantly replied, "Why do I need it? It is one more job to do!" A 70 year-old teacher attended a session to learn using library databases but the language of technology was so foreign that she simply got "lost" among many windows that popped up on her screen. A community college faculty member of age 50 patiently stared at her unlit monitor during a computer training session and waited until the session was over to ask the male instructor, "How did you turn on the computer?" A Head Start teacher took the challenge of learning technology by driving half hour at midnight to use the computer at her daughter's home. Over time, teachers became comfortable with technology and they gained an increased sense of awareness for technology. One of the teachers said, "I think it's something that's absolutely necessary...because it's getting to where you almost have to have a computer to get along when and in every aspect of your life" (CC, Teacher 5, 12/13/02). While it was 'one more job to do' and an object of fear for many participants, they evidently developed an awareness of technology as they socially participated in the learning process. They think that "with the way the world is today" technology is necessary and they do not want to be "left out" yet they are also aware that technology is "changing all the time."

The social constructivist theory defines learning as embedded in social and cultural activities and emphasizes the crucial role played by peers and other community members in scaffolding the learning (Cole, 1978; Kozulin, 2002; Rogoff, Baker-Sennett, Lacasa, & Goldsmith, 1995; Vygotsky, 1978). Technology learning is a social activity; therefore, authentic and collaborative learning experiences supporting adult learners should be emphasized for

technology learning as opposed to simply offering direct instruction in technology trainings based on behaviorist theories of learning (Chen & Price, August 2006; Holt & Crocker, 2000; King, 2002; McCotter, 2001; Wood et al., 2002).

The PT[3] Initiative was launched to integrate technology in teacher education to prepare prospective teachers to use technology in education. While this goal, to some extent acknowledges the social learning processes involved in technology, it is still limited in its scope. It utilizes a single concept of faculty modeling and is based on the assumption that both faculty and prospective teachers have access to technology and basic technology skills to begin with. In contrast, early childhood teachers in Head Start needed technology "to get through school." The teachers' learning was embedded in social processes beyond modeling. In this study, Head Start teachers faced their fears of technology and developed technology awareness through a professional development model that promoted a community of learners approach and supported adult learners. They were positioned in such ecologies of learning that kept them engaged in technology as they interacted with their peers, co-workers, children and technology trainers in their agencies, i.e. with people with whom they felt comfortable. Therefore, educational organizations should create an ecology of learning that scaffolds technology learning and provides contexts of interactions and communication through ongoing community support and collegiality (Bruckman, 1998; McCotter, 2001; Svensson, 2000; Thomas, Wineburg, Grossman, Myhre, & Woolworth, 1998).

Head Start teachers' experiences of technology practices were situated in their experiences of being adult learners and non-traditional students, their socioeconomic status, family commitments and gender roles. Therefore, they attained technology-proficiency slowly and progressively, moving from a point of technophobia to a point of catching the technology bug. In order to achieve this, they needed multiple points of access, support from their peers and leaders in their agency. In this sense, simply providing exposure to technology through faculty members' modeling practices does not lead to transformation in education with technology because teachers are not a homogenous group of learners. While some teachers may quickly learn to integrate technology in education, other groups of teachers may be far behind in basic technological skills. In either case, teachers are adult learners, with different needs and competencies when it comes to using technology or learning technology. Therefore, official tales

should be reconstructed to reflect those diverse learning needs of teachers rather than identifying them as a group of homogenous K-12 teachers.

Conclusion

The present paper introduced official tales of technology and early childhood teachers' experiences in Head Start. On the one hand, holders of official visions passionately celebrated a hopeful and optimistic future, and overstated promises for transformed education with technology. On the other hand, the spectators chased a simple dream of catching up with the present. There is no question that social agents in both contexts are making a conscious and willing effort to improve education, yet, the orchestration of this collective effort is driven by complexities, disconnects, and a rationalist management discourse that sets high expectations beyond the reach of many educators. The PT[3] Initiative is now history but technology is our present and future. Rather than viewing technology as a change agent transforming education, we could perceive it as the language of the digital age in which educators could be speaking at different levels of competencies. The ways teachers as adult learners acquire this language influences the way they speak the language of technology in their own classrooms. In this respect, we need to ask how and in what conditions teachers can be successful and how teachers' characteristics as learners shape and shaped by this process of acquiring technology language as a cultural tool. The answer partly lies in supporting teachers learn technology and our assumptions of how technology learning occurs. Changing our assumptions about using and learning technology and finding unique and innovative ways to serve our children in our ever-changing world can be first steps toward making difference in children's lives with technology. However, this work should not remain as an isolated effort on the part of teachers. It should be a collaborative and well-orchestrated effort between teachers and policy makers through more dialogue and more teacher voice in the technology programs.

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