

TALKING STORY: USING NARRATIVE ANALYSIS
TO EXPLORE IDENTITY IN MIDDLE SCHOOL TECHNOLOGY INNOVATION

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Dedication

This research is dedicated
to my parents, the Honorable Kenneth R. MacLeod and Amber MacLeod,
and
to my family, Darryl, Cayman and Scout.

Without you, this would mean nothing. Mahalo.

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Abstract

This dissertation examines the influence of professional identity on educators' understanding of technology innovation. The study draws on research on narrative sensemaking (Bruner 1990; Czarniawska 1997), storytelling (Boje 1991a; Brown et. al. 2009; Clandinin and Connelly 1996), communities of practice (Wenger 1999) and identity (Ashforth et. al. 1989; Wenger 1999). Interviews were conducted with teachers, administrators and technology specialists in the middle school (grades 6-8) at an independent school, chosen because of its recent investment in and commitment to transformational technology innovation.

Building on Mishler's (1986) and Riessman's (1993) narrative analysis methods, 20 in-depth interviews were analyzed using a whole story narrative analysis method. Story themes were identified that highlighted how educators made sense of the school's efforts to promote technology innovation in the classroom and their own experiences with it. Four distinct identity perspectives ("identity lenses") were identified. This analysis illustrated how an identity lens draws together aspects of professional work, interactions with colleagues, perceptions of organizational events and perspectives about technology in the classroom, as individuals make sense of technology innovation in their professional lives. Professional identity is transitional and negotiated constantly (Wenger 1999), particularly during periods of technology innovation (Barrett and Walsham 1999; Lamb and Davidson 2005). Four organizational values were identified as significant organizational exchanges through which individuals negotiated their professional identity related to the school's technology initiatives.

This study contributes to our understanding of how professional identity influences individuals' interpretations of and participation with technology innovations. It demonstrates how narrative analysis of stories of technology innovation can be employed to understand how individuals make sense of technology changes in their professional lives. Implications for practice include the recognition of diverse perspectives (“identity lenses”) related to technology innovation, which influence how individuals interpreted and related to technology innovation projects. Studying participants' stories highlighted how opportunities for “low-risk” experimentation allowed educators to find success with technology innovation. The support of knowledgeable technology professionals, who have teaching experience themselves, also emerged as an important enabler for such experimentation.

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Chapter 1

Introduction and Motivation

The underlying premise of narrative inquiry is the belief that individuals make sense of their world most effectively by telling stories.

- Patricia Hill Bailey and Stephen Tilley (2002 p.575)

Technology innovation in organizations poses numerous challenges. Projects are expensive and time consuming. Frequently the desired results are unclear and, at the outset, remain elusive. Much effort has been devoted to theorizing about better ways to innovate in organizations (Avison et. al. 1999; Swanson 1994), as researchers explore policy, resource or strategy issues associated with innovation, such as value creation (Zhue and Kraemer 2005), information requirements (Alvarez and Urla 2002), emerging issues (Dahlby 2004), diffusion (Dooley 1999), and organizational learning (Dasgupta and Gupta 2009). However, despite this research, we need to understand the “human side” of technology change more fully.

Research that examines how participants participate in organizational innovation can help us to gain a better understanding of the factors at play and holds particular promise for innovation projects that occur outside the business sector where budgets can be particularly tight and resources limited. Efficiency and effectiveness can take on new levels of priority (Bessant and Caffyn 1997; Wallace 2003). In these organizational contexts, participants who possess considerably diverse perspectives about technology and how they imagine it in their lives and in their work often lead innovation projects. Understanding the influences of these different views of innovation processes is important. If unresolved or unrecognized differences in how stakeholder groups view technology-related innovation exist, desired organizational outcomes may not materialize (Davidson 2002; Orlikowski and Gash 1994).

This exploratory study considered the challenges of information technology innovation in K-12 education, which in recent years has begun widespread adoption of information technology into administrative practices and pedagogy. Innovation in this setting is interesting because teachers,

technologists and administrators each operate with significant independence within the school setting and belong to professional disciplines that may have varied conceptions about the role of technology in the workplace. However, despite significant work autonomy and possible differences in viewpoint, each is also dependent on the others for support and success.

Technology innovation research studies have been conducted in educational settings, including those who have explored the less-than-ideal use of computers in classrooms (Cuban 2001), middle school digital documentation (Hofer and Swan 2009), teacher's beliefs about technology (Lumpe and Chambers 2001), laptop programs (McGrail 2006), and teacher training for technology use (Roby and Dehler 2010). Yet, there is still much more we need understand about how this traditional institutional context influences educator perspectives on organizational relationships and collaboration related to technology innovation.

Teachers have well-defined professional identities (O'Connor 2008; Penuel et. al. 2009), which influence their perspectives of teaching and learning and the role they see for educators in a child's school experience. Professional identity also shapes understandings of work experiences and significantly influences all aspects of teaching, professional development, relationships with colleagues, as well as consideration of technology innovation. Classroom teachers enjoy day-to-day classroom autonomy and connect their professional status to the degree of freedom they have to both develop and implement curricula. Teacher satisfaction has been linked to both autonomy and curriculum independence (Dinham and Scott 1998; Ellis and Bernhardt 1992; Tschannen-Moran 2009; Waugh and Punch 1987). Similarly, school administrators have clearly articulated notions of professional identity, which they also connect with the significant freedom they are given to set policy, engage with faculty, students and parents and to run their schools according to the goals and priorities they identify (Somech 2010; Walker and Kwan 2009). In particular and perhaps related to their respective views about working autonomously and the value they each place on this freedom, classroom teachers and their administrator partners tend to be quite skeptical of initiatives led by non-educators (Bolger 2001; Datnow and Castellano 2000; Fabos and Young 1999; Firestone and Pennell 1993; Pincus 1974). Accordingly, externally initiated

technology innovation projects, even those undertaken by school-based technology specialists, are frequently perceived to impinge on cherished freedoms.

To explore these issues, I draw from literature on educational technology (cf. Bentley 2004; Cuban 2001; Ertmer and Ottenbrief-Leftwich 2010), identity (cf. Cohen 2010; Collay 2006; Dallmer 2004), communities of practice (cf. Cox 2005; Wenger 1999) and storytelling (cf. Bailey and Tilley 2002; Boje 1001b; Brown et. al. 2009; Clandinin and Connelly 1996). In this study I used narrative analysis to explore the influence of professional identity on the innovation processes of middle school educators. This methodological approach paints a rich picture of how individuals make sense of and experience technology innovation in their professional lives. To improve understanding of technology innovation as an activity requiring participation from various types of participants in the K-12 setting, this study focused on educators assigned to grades six through eight and the technology specialists who support them, as well as administrators whose mandate includes setting policy for the middle school. The following research questions guide the research design and analysis:

- Question 1: What story themes are evident when educators talk about classroom technology innovation?
- Question 2: How do the story themes of educators align and what does this, along with an understanding of identity, suggest about how educators perceive classroom technology innovation?
- Question 3: How can story theme analysis inform our understanding of how participants in this educational community of practice negotiate their identities with respect to technology innovation in classrooms?

To address these research questions, I conducted a series of in-depth interviews with classroom teachers, technology specialists and administrators to elicit personal experience stories. Drawing on the research perspectives of Mishler (1986) and Riessman (1993), I developed an analytic framework to study the interview data and, from my analysis, I identified nine story themes, four identity lenses and four organizational values that influence identity negotiation.

Section A. Dissertation overview

The results of this research study are presented in the following chapters. In chapter two, the study's theoretic foundations are presented. I begin by providing an overview of the research on educational technology innovation in the classroom and the transformation occurring in schools as teaching, learning and the role of educators is reconsidered and re-conceptualized. Next, I outline the main theoretic framework that underpins the study. This includes professional identity and communities of practice. I then review research on stories and storytelling because the narratives shared through stories comprise the main data collected in this study.

The research questions open chapter three and are followed by an outline of the research approach I used. In this section, I also introduce the research site and then provide a detailed explanation of the research methodology, including data collection and analysis methods. I conclude chapter three by summarizing my assumptions and outlining the limitations of the research strategy and design.

In chapter four, I introduce the story themes that emerged when educators talked about their work and their experiences with technology innovation in an educational setting. I found that as educators talked about technology innovation, they told stories that highlighted the various ways they connected technology with their work. These stories can be categorized into nine broad themes centering on students, colleagues, innovation, or relationships.

In chapter five, I illustrate how different groupings of the story themes can be organized to provide insight into the influence of educators' perspectives as they seek to understand the transformation occurring around them. I use the term "identity lenses" to characterize this finding, with each lens a prism through which educators interpret their experiences related to technology innovation at the school. The lenses are: nurture, evolve, innovate, and outside.

Many of the narratives educators shared included references to specific organizational values. Chapter six explores the four organizational values identified as particularly salient to identity negotiation in relation to technology innovation in this organizational setting. They are: professional autonomy, professional recognition, collegiality, and professional growth.

In chapter seven, I discuss the implications and conclusions of my research, beginning with a brief summary of my findings for each research question. These findings illustrate how the professionals in this study (middle school teachers, administrators, and technical support) interpret technology innovation in relation to their professional identity, and how these interpretations influence their engagement with and receptiveness to organizational initiatives to promote use of classroom technologies. This study's findings suggest that not only do individuals in different roles hold different views, but employees with similar professional roles may also hold diverse perspectives about technology innovation. Some viewed technology innovation as consistent with their professional identities, and others viewed technology innovation opportunities as developing their identities. Understanding identity-related differences may help organizational sponsors of innovation projects to adjust recognition and rewards in ways that motivate a broader range of professionals' engagement with technology. A managerial implication of this study is that opportunity for low-risk experimentation promoted educators' willingness to innovate and their success with technology innovation. Knowledgeable technology professionals, who have teaching experience themselves, and who support educators in transforming their work and their classrooms, were also important to educators' willingness to

and success with classroom technology innovation. I conclude my dissertation by outlining the study's contributions, limitations and future research possibilities.

Chapter 2

Theoretic Foundations

The goal of qualitative researchers is to provide ways of understanding experience from the perspective of those who live it.

- Patricia Hill Bailey and Stephen Tilley (2002 p.575)

In chapter 1, I introduced an exploratory research study, which examined the influence of professional identity on educators' understanding of technology innovation, as revealed through their stories about classroom technology innovation projects. The study draws from four empirical theoretical traditions: technology in education, identity theory, communities of practice, and narratives and storytelling. It is an exploratory investigation into the professional identity of middle school educators as they experience technology innovation in their work.

In this chapter, I outline the theory upon which the study was developed. I begin, in section A, by providing an overview of research on educational technology innovation in the classroom and the transformation occurring in schools as educators reconsider their profession and the learning environments of their students. Next, I outline the main theoretic framework that underpins the study. Professional identity is considered in section B and communities of practice in section C. In section D, I review research on stories and storytelling because the narratives shared through stories comprise the main data collected in this study. I conclude this chapter by summarizing, in section E, the implications of this literature for current research.

Section A. Technology innovation in schools

Fresh approaches are needed to address persistent problems of the past and provide students with an education appropriate to the needs of a modern, information-based global economy. (Eric Rusten 2003 p 207)

In 2001, Cuban wrote about the history and policy of technology in American schools. Examining technology used by teachers and students in early childhood, high school and university, he explored the extent to which recent government policies and technology innovation had changed the way teachers taught and the way students learned. He argued that

“few researchers know about the past uses of technological innovations in schools, and even fewer researchers sit in classrooms, interview teachers and students, and investigate how new technologies are actually used in schools” (2001 p 243). Therefore, he visited schools, interviewed teachers and students, observed classes in progress and conducted surveys. He found very few of the classrooms he studied used technology as widely as was anticipated by policymakers (p 135). He found that students typically used more technology outside the classroom than in it (p 171). And, in most cases, when he observed classes in which students used computers, he found they were used primarily to complete peripheral tasks or to play games (p 133). Further, the teachers he interviewed indicated they used technology mainly to augment existing pedagogy, not to transform it (p 96).

Cuban’s study, and the historical analysis that underpins it, points to the need for research to investigate the myriad obstacles facing successful technology innovation in schools. He begins by asking questions about teacher responses to technology innovation, arguing that the questions themselves are framed to assign blame to teachers. He then posits that many of the current challenges are anchored in policy-based assumptions. Rather than position teachers as resistant and unskilled, he recognizes the vital role of educators and the complicated environment and pressures they face in attempting to transform schools into technology friendly places:

“As framed, these questions place the problems at the feet of teachers. Answers to these questions become explanations for the teachers’ classroom behavior when they are faced with technological innovations. Those explanations quickly get converted into solutions aimed at changing teachers’ actions in their classrooms. So what I call explanations are really solutions-in-waiting to problems framed by those who invest in new technologies” (Cuban 2001 p 136).

Educational environments are complicated places, and educators in both public and independent schools seeking to transform teaching and learning must navigate uncertain terrain while facing scrutiny from multiple stakeholder groups (Culp et. al. 2005; Ertmer 2005). Barriers exist inside the school as well and include a lack of resources, institutional factors, educator attitudes and

beliefs, as well as knowledge and skill (Hew and Brush 2007). In the following sections, I outline research on educational technology innovation in school settings relevant to this study.

Section A.1 Innovation in educational environments

For more than three decades, researchers and educators have struggled to understand how best to integrate technology into schools, both as organizational communication tools and also as classroom resources to support pedagogy. As in business environments, school systems have implemented large-scale technology projects with mixed results (Barron, Kemker et. al. 2003; Hernandez-Ramos and La Paz 2009). And, like business leaders, school administrators struggle to find the appropriate balance of strategy and execution, stability and change. As well, under the microscope of public interest, school administrators find they must be always mindful of the added pressure to demonstrate cost effectiveness and sensitivity to students when contemplating any technology project. Despite several decades of effort, a clear path for successful technology integration into classrooms as a means of transforming teaching and learning has yet to be determined (Chapman et. al. 2000; Hew and Brush 2007).

Among those searching for solutions, Maddux and Johnson (2009), editors of *Computers in the Schools*, called for a review of information technology in education, suggesting that although technology has been part of education for more than thirty years, many of the assumptions framing technology adoption have never been questioned (p 1). In their introduction to a recent issue, Maddux and Johnson suggested that more research is needed to “advance our understanding of how to achieve true integration of information technology in education” (p 3). A decade earlier, Dooley (1999) made a similar call for a better understanding of how to integrate technology into education arguing: “advanced technological development must occur in our schools and educational institutions if we are to prepare students for a competitive global marketplace. The educational reform movement is forcing changes in many traditional pedagogical practices” (p 35) and research is needed to understand the implications of these changes.

While she posits that pervasive technology may advance teaching and learning and transform education, “there are many uncertainties regarding the benefits of technology and the changes that the adoption of technology necessitates, such as the demand for technical support, pedagogical and instructional management issues, teacher professional development, network infrastructure, and costs of all components” (p 35).

Section A.1.1 Structural change and school reform

Among the challenges present in technology innovation is the (perhaps justified) suspicion that educators have about the often double-edged sword of technology. While it can be implemented as an innovative learning tool, it sometimes serves as a resource to invoke structural and organizational change, reducing the autonomy of classroom teachers and forcing conformity within organizations (Fitzer et. al. 2007; McNamara and O’Hara 2008). Dooley made quite clear the connection between technology innovation in education and the transformation of practice that follows frequently. In particular, she noted that technology necessitates the restructuring of schools, by “rethinking the way teachers teach, the way students learn, and the way we assess them” by “redefining the roles of teachers, administrators, parents, and students in the governance and management of schools” (p 37). Her work also draws attention to the competing demands of technology implementation and teacher independence, although she does not consider the tension it creates within the broader context of a school system. Ertmer and Ottenbreit-Leftwich were more direct, citing research revealing the truly limited success of using technology as a *Trojan horse* for school reform in K-12 contexts (2010 p 258).

When teachers perceive technology implementation projects as intended primarily to create structural change and reduce teacher independence, they will resist. As Dooley notes “computer technologies are changing the teacher’s role from information giver to facilitator, counselor, advisor, guide, coach, co-learner, mentor, resource and technology managers, and mediator to the students. For schools to improve, teachers must change. For teachers to change, there must be appropriate and promising practices and procedures (innovations) that they develop or adopt and,

when necessary, adapt” (p 37). More research is needed on how to best implement technology change and on the roles that organizational members should assume to ensure success in the classroom and personal satisfaction regarding their own career views.

Section A.1.2 Research on technology innovation in schools

Ertmer and Ottenbreit-Leftwich (2010) argue that teachers’ mindsets need to change to one that incorporates a belief that “effective teaching requires effective technology use” (p 256). They posit that, despite technology ubiquity in other fields, to date, technology has had very little to do with the way teachers teach (p 257). And, while they offer a framework, centered on knowledge, beliefs and values, to support this mindset shift, they also note that current technology use in the classroom is in the mid-to-low range and, as Cuban noted, most technology use supports traditional, rather than transforms teaching. Ertmer and Ottenbreit-Leftwich do not offer suggestions as to why technology innovation has had so little an effect on educational practice or why researchers have not been able to uncover reasons for it. Maddux and Johnson (2009) suggested that little helpful research exists due to a lack of interest in or training on how to conduct research, as well as, occasional hostility toward the researcher and poor communication (p 37). They further suggests some teachers feel theory is separate from practice and, therefore, not relevant to them or their work (p 38).

Despite these challenges, some research on technology innovation in schools does exist. Maddux (2003) surveyed the first 20 years of research in educational technology and identified two distinct research phases. The first he classified as focused on computer literacy and underpinned by the broad assumption that mere exposure to computers would garner benefits to the student. Research conducted in this stage, Maddux contends, “was crude and seldom experimental” (p 39). Research he classified as stage two began in the mid-to-late 1980s. And, while it was more sophisticated than the initial studies, it was still quite simple in approach and theory. Emphasis during this stage was primarily focused on school-specific applications and incorporated the manipulation of numerous variables (p 40). An attempt to move into stage three studies, Maddux

suggested, began in the late 1990s. While Maddux argues researchers have begun to see the need for research on “learner/ treatment interactions” (p 40), he acknowledges that full stage three research studies have not yet begun.

Maddux concludes his survey article on an optimistic note, suggesting (among other things) that most teachers believe information technology can improve teaching and learning, and that students tend to write better and have more positive attitudes toward writing when they use technology tools like word processing (p 45). However, this review, like much of the research in the field, focused on technology as a specific classroom program (e.g., Maddux researches Logo-programming in schools) and with teachers as the sole profession needing consideration. The vast majority of education researchers consider only classroom teachers in their studies of technology innovation in schools. Few, if any studies of technology innovation consider the collaborative relationships of teachers, technology specialists and school administrators.

Section A.1.3 Barriers to innovation

There are several challenges to technology implementation in the classroom and to measuring any progress being made. A 2003 study by Barron et. al. found that just six percent of teachers in a K-8 school district had classrooms that were “highly integrated” with respect to technology use, while 60 percent had “limited” or “no integration” (p 496). In 2008, Spires et. al. stated the “growing consensus among policy makers and educators alike ... that our education system must be transformed to address the needs of a global society as well as the needs of the 21st century student” (p 497). The thrust of their argument, like that of Barron et. al., is that students are demanding changes to the way they are being taught and they want information technology in their learning environments. This study also suggests that classroom teachers have been slow to respond.

Both studies summarized above suggest that teachers are not interested in adopting information technology for teaching and must be forced by outside forces (administrators or technology

specialists) to make changes to their practice. Three key challenges are expressed: teacher desire for classroom and curriculum autonomy, teacher perspectives about technology and teacher access to resources. Garthwait and Weller (2005) note in their study of a statewide middle school one-to-one laptop implementation that “in Maine, where local control of education is a fiercely held right [challenges occurred because] individual schools were expected to devise policies regarding acceptable use, insurance, and consideration for allowing laptops to go home” (p 361). In this study, teachers are positioned as reluctant, even resistant, to innovation. Further, the views and perspectives of administrators and technology specialists were not within the study’s scope. Lumpe and Chambers (2001) offered similar findings through the construct they developed to assess teachers’ views of technology innovation as an external influence. Their study showed that while most teachers enter the field with positive perceptions of most things pedagogical, including technology in the classroom, time in the field provides the opportunity for colleagues to negatively influence them (p 105). Again, this research is centered on teachers (and not their colleagues), portraying them as doubtful participants rather than neutral or even willing innovators.

To summarize, much of the research conducted on technology innovation in schools has considered 1) program-specific initiatives, 2) attempts to define effective integration and 3) gaps between desired integration and current levels, and 4) barriers to teachers adopting technology into their curricular practices. Although some consideration has been given to the types of changes current teachers need to make and to the support needed to prompt change, little research exists on the perspectives of the broader group of educators who work in schools (e.g., classroom teachers, school-based technology specialists and school-based administrators).

Section A.2 Educator perspectives on technology innovation

Some studies have attempted to articulate teacher views of technology transformation. Harris, Mishra and Koehler (2009) conducted a quantitative study to consider innovation related to pedagogy and curriculum, specific to social studies software. The study by Garthwait and Weller

(2005) examined the question: “Given ubiquitous computing, how do teachers use laptop computers in constructing curriculum and delivering instruction?” (p 361). They were interested in exploring specifically “how one-to-one computing interacted with teaching styles, as well as determining the barriers for teachers who were integrating the laptops into teaching and learning” (p 362). Drawing on Rogers’ diffusion of innovation theory, they traced “the teachers progress from first hearing about the innovation to forming an attitude, to deciding to reject or adopt it, to implementation of the innovation” (p 362). Garthwait and Weller helpfully highlighted the challenges of conducting longitudinal studies of technology integration and posited that “teachers’ integration of computer technology in their teaching is based on a number of factors, including access to properly functioning technology, level of professional development and teacher dispositions” (p 362). While they do not specifically connect professional identity to technology, their preliminary study revealed, “that the best predictors of classroom technology also include openness to unspecified change and a willingness to invest time and energy beyond contractual duties” (p 362), which suggests that professional identity should be considered when investigating innovation in the classroom. Their work built on an extended study by Windschitl and Sahl (2002), which concluded that “teachers’ interconnected belief systems about learners in that particular school, about what constituted good teaching and within the context of institutional cultures, and about the role of technology in the lives of students” shaped the success of technology integration (p 363). My study complements that work by considering the professional identities of classroom teachers, technology specialists and school-based administrators as they work to make sense of their experiences during technology innovation.

Section A.2.1 Rogers’ diffusion of innovation theory

Everett Rogers’ diffusion of innovation work has served as the research framework for some studies attempting to understand the process of innovation as it relates to technology integration in schools to enhance learning. Toledo (2005) used Rogers’ framework (with two other research frameworks) to study the stages schools, colleges and departments of education experienced while innovating. Her study is important because it not only recognizes the influence of teachers

on the innovation process, but also the persuasive capabilities of administrators and technologists. As well, her research approach was investigative, allowing a new, socially framed model for educational technology adoption research to emerge. Toledo's study supports my research approach and is consistent with my view of influence.

In 2006, Sahin and Thompson used Rogers' framework to "develop a theory-based methodology for exploring instructional computer use by faculty members in one college of education ..." (p 81). They were able to effectively use diffusion of innovation concepts to analyze qualitative data collected. They identified barriers to faculty computer use and developed an action plan for innovation to be implemented at the study site. Their data confirmed Rogers' categories, which was helpful in determining a recommended course for the institution. This study is interesting because it considers two aspects of technology transformation: first, the faculty are innovating by incorporating information technology into their teaching practice, and second, the faculty serve as models for their students by offering best practices. Universities professors advocating technology use in K-12 classrooms must first model technology use behavior themselves, which might challenge the professional identity of some college professors.

To summarize, the social nature of school settings does influence how innovations are adopted and the success achieved over time. While Rogers' stages of adoption (knowledge, persuasion, decision, implementation, and confirmation) do not include explicit consideration of professional identity, this well-used framework has helped some researchers to understand better complex relationships within school systems and the influence various professionals have on innovation.

Section A.2.2 Schulman's pedagogical content knowledge theory

Along a somewhat parallel path, Hofer and Swan (2008) explored the impact of teacher knowledge on technology integration into the classroom. Their in-depth case study extended Shulman's (1986) Pedagogical Content Knowledge (PCK) theory to contemplate the impact of technology on this skill set. This study is interesting because it centers on the notion of teaching

excellence, which is defined as expertise in both content and knowledge areas. They found that the intersection of technology with curriculum posed unanticipated challenges in even the most innovative schools; “even in schools and districts committed to technology integration, teaching practice remains largely unchanged” (Hofer and Swan p 179). This statement was echoed by Cuban (2001) and later by Ertmer (2005). The research focus of Hofer and Swan was consistent with much of the work on technology in education: classroom specific tools and technologies, teacher resistance to innovation, or teacher frustration with pressure to integrate technologies. Their study is important because it, more than many others, positions teachers as thoughtful partners in the change process, while exploring knowledge and training focused research questions: “What types of teacher knowledge (content, pedagogical and technology) are required to implement a digital moviemaking project?” and “In what ways do these domains of knowledge intersect?” (p 181).

Hernandez-Ramos and La Paz (2009) also looked at classroom learning tools by exploring how a particular technology learning strategy influenced how eighth grade students learned (and retained) American history lessons. While the two schools they studied had similar profiles, their research emphasis was firmly focused on student learning and not the role of the teacher in crafting and delivering the lessons. In conclusion they suggest “this study serves to highlight the potential of technology-assisted [project-based instruction] PBI, to enhance middle school students’ learning of history in school settings where most organizational factors remain constant (such as curriculum, time periods, etc.), and where there has been little or no prior experience working with alternative instructional strategies” (p 169). While, in the further research section, they suggest working with teachers to explore finding ways to promote disciplinary thinking, they largely overlook the teacher’s role in the innovation process.

Prain and Hand (2003) studied innovation in a secondary college by looking at both teachers and the whole school during a period of transformation through the introduction of information and communication technologies for teaching and for administrative efficiency. While several

distinctions exist between teaching and learning in K-12 settings and post-secondary environments, this study is relevant to my research because my case study site operates in many ways like a small college, particularly with respect to work autonomy. Prain and Hand found specific factors that supported successful technology integration:

- “**Teachers** are likely to implement and sustain effective use of new technologies for learning under certain circumstances. These include access to, and knowledge about, appropriate technologies for meeting particular curricular needs; the development of a whole-school approach to change, and hence a supportive culture of innovation and teacher ownership of this change; and sustained opportunities for teachers’ professional development in using these new technologies, as well as disseminating these practices more widely within and beyond the school” (p 442).
- **Whole-school** innovation requires “strong leadership within the revised organizational structures of the school; strong implementation plans incorporating the development of a management structure appropriate to the proposed innovation; a culture of teaching staff collegiality, commitment, and ownership of the innovation; transparent devolution of management into power-sharing through committee system decision making and consultation about sustaining effective change; and effective sustained teaching staff professional development to support their engagement with, and commitment to, changed practices” (p 442).

This study is relevant to my research for three reasons. First, it articulates the significant role of teachers in the innovation process by tying success directly to teacher buy-in, engagement, access to resources, support and professional development. Second, it acknowledges both the significance and interdependence of school leadership and teachers in crafting a successful implementation. Third, the authors argue that educational goals, not technology capability, should drive technology design and implementation (p 455).

Section A.3 Summary

For more than 30 years, technology in schools has been an active research topic. However, much work is still needed. Investigations into specific applications and communications tools, as well as the types of training and support that teachers need, can be helpful; but acquiring a deeper understanding of the influential role of individuals on the innovation processes of educators and the social communities within which they work is crucial.

In section B, I outline identity literature as it relates to educators (teachers, administrators and technologists) and in section C, I provide an overview of the communities of practice literature. This research, identity and communities of practice, frames my study and brings into direct focus the human side of technology innovation.

Section B: Identity

Identity [is] a 'resource for the participant' rather than for the analyst, not so much something we have, as something we do. (Cate Watson 2006)

How we understand ourselves within the context of our organizations is an important consideration for technology innovation research, as many organizational members connect experiences with technology innovation to their own professional identities. These experiences and understandings also influence how individuals view their organizations. In 1959, Goffman characterized identity as the performance a person gives in social settings in an effort to control the perceptions others form about him. His extended metaphor of actor and audience led to extensive research on the intended and unintended consequences of manipulating social situations in an attempt to create and manage an impression. Goffman believed that identity was a transient production of social interaction. More than 30 years later, Giddens (1991) argued similarly that identity is transient and reflexive, a notion he identified as the “narrative of the self.” These seminal works became the rich source of many research streams; Giddens’ “Modernity and self-identity: Self and society in the late modern age” has more than 15,000 citations; Goffman’s “Presentation of the self in everyday life” has nearly 21,000 citations (scholar.google.com July 2011).

This section will summarize Goffman’s and Giddens’ theoretic perspectives of identity and then focus on identity as it relates to education and technology innovation in an educational setting. Successful technology innovation is dependent on an educator’s ability to rationalize competing views and understandings of the private self and self as a professional participating in multiple

relationships, each accompanied by roles and expectations. In a learning environment undergoing significant technology transformation, sorting out how these many roles interact can become complicated. By considering the research related to technology innovation in educational settings as it extends from Goffman and Giddens, the central nature of professional identity negotiation during technology innovation becomes evident.

Section B.1 Goffman's presentation of the self

Erving Goffman's seminal work, "The presentation of self in everyday life" (1959), articulated the careful choreography of individuals whose dance with one another attempts to manage (or manipulate) the impressions they make and the impressions they give. His research "consider[ed] the ways in which the individual in ordinary work situations presents himself and his activity to others, the ways in which he guides and controls the impression they have of him, and the kinds of things he may and may not do while sustaining his performance before them" (p xi).

Goffman argued "when an individual appears before others he will have many motives for trying to control the impression they receive of the situation" (p 15). Goffman defined these thoughtfully and purposefully undertaken actions as performance. "A 'performance' may be defined as all the activity of a given participant on a given occasion, which serves to influence in any way any of the other participants" (p 15). His definition suggests the public person may be rather different in nature from the private person. Routine or pre-established patterns of performance are considered to be roles, since members of the organization expect certain types of actions (or performances) from individuals, either based on their roles (which, in my study, would be their organizational roles) or because they are familiar with the individuals. Additionally Goffman suggested that individuals unknowingly perform acts, which may augment or reduce the impression they are attempting to form.

Goffman's work is significant to this study for several reasons. First, the notion of impression management resonates with classroom teachers who must project many different personalities

during the course of a workday. Teachers must be both inspirational and a source of authority and guidance to students. Within a particular class, teachers might need to present themselves as nurturing or innovative, depending on the situation. In collaboration with colleagues or in other professional situations outside classrooms, teachers may need to be engaging, innovative and supportive or a number of other personas. Different situations call for different performances, each of which may reflect some of the true person. Similarly, administrators and technology specialists may need to convey authority, support, or reassurance according to the needs of the situation and the colleague (Brookover 1955; Durban 2007; Snider 1960). In addition, as Connelly and Clandinin (1990) note, the professional spaces of educators differ in nature and form and call for sometimes markedly different behaviors.

Section B.1.1 Presentation of self in school environments

How individuals influence others' perceptions of them is key to this study. While most research conducted tends to focus on "teachers in classrooms," some authors have considered other interesting perspectives. Gaudelli and Ousley (2009) studied pre-service teachers completing capstone student teaching assignments. Following Goffman, they posited that student teachers "metaphorically act out their everyday lives just as an actor represents a character on stage, using contexts, actions, props, and moments to appear a particular way to an audience" (p 932). This study is important to my research because the narratives shared by the student teachers conveyed how their interactions, particularly conflicts with colleagues, helped them to negotiate professional identities. Gaudelli and Ousley also point to the transient nature of identity and the efforts that individuals undertake to manipulate the identities they reveal: "Identity work is not so neat and tidy given the idiosyncratic nature of people and the myriad and flowing situations in which they exist" (p 932).

Similarly, Preves and Stevenson (2009) saw the classroom as a performance space in their study of team teaching at the college level. They argued, "education itself is a social exchange ... analysis of collaborative teaching is especially significant because identity negotiation in team

teaching has the potential to impact one's teaching, one's career, and students' learning" (p 245). Preves' and Stevenson's research is particularly interesting because the authors analyzed the physical space within the classroom as elements of the performance, with the professor's syllabus, position in the classroom and meetings with students in conference as props. This follows Goffman's props as symbols of status and identity.

Section B.1.2 Negotiating identity in public spaces and private spaces

Connelly and Clandinin articulate the process of identity negotiation as it concerns the professional environments of teachers. The authors begin with the role of narrative and storytelling in educators' lives as teachers attempt to understand their own experiences in the context of the school environments where they work. The mesh of professional aspirations and administrative realities, as well as the ongoing negotiation of relationships among colleagues, parents, students, and administrators, framed their first study (1990). They extended the notion of negotiated identity in subsequent research, creating a view of schools as a landscape within which certain stories are crafted, told and retold in order to cast, reinforce or shift a perspective of professional identity (Clandinin and Connelly 1996).

Their research echoes and aligns with both Goffman's presentation of the self and Giddens' narrative of the self. It also articulates different stage areas where different versions of stories are shared. While storytelling is discussed in section D, it is interesting to note here how Clandinin and Connelly connect identity negotiation directly to the places where stories are told. They align with Goffman's view of stage and performance as important aspects of identity negotiation. The storyteller, the audience and the stage upon which the story is performed will necessarily influence how a story evolves and how an identity is expressed.

Section B.2 Giddens' narrative of the self

In a complementary research stream, Anthony Giddens (1991) wrote extensively from a sociological perspective about individual identity. His view, crafted as a consideration of a post-modern society, is of identity as a transient notion, constructed as the story of someone's life. He defined "narrative of the self [as] the story or stories by means of which self-identity is reflexively understood, both by the individual and by others" (p 243). While Giddens' work is not centered on professional identity, his perspective is relevant to my research because he weaves together carefully notions of self, society and narrative to articulate the process of professional identity negotiation. As educators negotiate identities in professional communities, theorists can analyze these negotiations through the lens crafted by Giddens, as "a reflexively ordered narrative of self-identity [that] provides the means of giving coherence to the finite lifespan" (p 339). As Giddens asserts:

"Self-identity today is a reflexive achievement. The narrative of self-identity has to be shaped, altered and reflexively sustained in relation to rapidly changing circumstances of social life, on a local and global scale. The individual must integrate information deriving from a diversity of mediated experiences with local involvements in such a way as to connect future projects with past experiences in a reasonably coherent fashion" (p 215).

Section B.2.1 Narrating the self in educational environments

Woods and Jeffery (2002) explored the formation of teacher professional identity in elementary school English teachers using Giddens' narrative of the self to frame their investigation. They chose Giddens because of the shifting nature of relationships. Referencing Giddens, they suggest individuals are being affected by global trends in unprecedented ways, which is shaping the way they view the world and their relationships. Their experiences are necessarily becoming less local as teachers connect with others in digital as well as face-to-face exchanges (p 92). My study explores the professional identities of educators experiencing transformative technology innovation. Consistent with my research, Woods and Jeffery further argue:

"The reconstruction of teacher identities makes a useful test case for Giddens' theory, as well as providing an opportunity to consider identity theory in general. So far, humanist theories, emphasizing the consistent and unitary self ... have largely prevailed. But these have come under attack in recent years from post-structuralists, who argue that we have

multiple selves and identities that change and shift according to different discourses. According to the latter view, there is no ideal, real or substantial self or identity. Individuals' negotiations through the rapid and radically changing events of recent years lend some support to this view." (p. 93)

The study by Woods and Jeffery is relevant to my research. They interviewed mid-to-late career teachers experiencing transformative change in their work places. Participants in their study were acutely aware of their own professional identities and how others' views of their work were changing. Although the teachers Woods and Jeffery studied has enjoyed a government-endorsed identity, to their surprise, some 30-years into their work, they found their professional identities as educators (the "sage on the stage") challenged by a new child-focused curriculum (2002 p 100). And, while many teachers agreed that some review of their practice was needed to ensure the best educational curriculum for students, participants suggested the revised policy rules worked against teachers and caused students to become numbers in a school system, rather than the focus of learning and curriculum (p 103). This change challenged the teachers' professional identities as shown in teacher interviews from that study, which conveyed the blurring of the lines between personal and professional identity:

"I now put a lot of time and effort into school to the detriment of my own personal identity. I will do things like planning but I'm going to take a bit of time back for *me*. It is a process that puts you through so much stress and strain that you are no longer talking about yourself as a 'rounded person'. We're like cardboard cutouts. - *Shula* (2002 p 100)

The new role thus appears to demand a radical change of identity: 'It's almost like telling us to change our personalities. If you say to somebody, "You can't do that any more" after 24 years' teaching, it is completely and utterly demoralizing. It's so alien to the way we work.' - *Carol*" (2002 p 104).

The essential challenge to professional identity they articulated is one of the external versus internal. Teachers in the Woods and Jeffery study had long-established recognition, imbued by the state and by policy. When the focus of education shifted to the student, teachers were threatened and expressed a pressing need to renegotiate their professional identities and, in some ways, their personal identities, *vis-à-vis* their work.

Section B.3 Summary and connections

Identity is significant to who we are as people and as professionals. Researchers who have considered professional identity in school settings tend to focus on the professional identities of classroom teachers, emphasizing identity negotiation with students or other teachers, or challenges to balancing personal and professional identities. Some studies have drawn on the performance aspect of identity as articulated by Goffman. Others have examined the reflective aspects of identity, noted by Giddens. Recently, researchers have explored the influences of outside factors on professional identity as with the studies that consider such things as globalization.

My research considers identity as a socially enacted enterprise, in which individuals make interpretations based on the performances they observed. However, my research scope incorporates the larger view of the school setting by including administrators and technology specialists, as well as classroom teachers. While I consider identity a reflexive practice, I also see it as negotiated within a community populated by students, colleagues, friends, supervisors, and other stakeholders.

Technology innovation is relevant to professional identity because it frequently forces reconsideration of self and others as roles are shifted and realigned with new and evolving uses for technology in schools. Barrett and Walsham (1999) studied the London insurance market to examine the influence of technology transformation on the professional identities of insurance industry professionals. They found that professional identity was challenged when new information sharing tools were introduced mitigating the power of knowledge. Lamb and Davidson (2005) conducted a study of scientists in the fields of oceanography and marine biology to determine the influence of information and communication technology on professional identity. They found that scientific identity was associated with core research technologies. Both found that professional identity was influenced by information technology

transformation that led to evolving views and, sometimes, reconsideration of professional identity.

In the next section, I consider identity negotiation as occurring within a community of practice. Wenger (1997) offers a viewpoint on the relationships that exist within a community of workers, which may illuminate identity negotiation in my study setting.

Section C: Communities of Practice

“Identity is routinely socially constructed from the roles, relationships, norms, discursive practices, and expectations of the communities in which they participate” (Joanne Rajadurai 2010)

Wenger’s work in *Communities of Practice* (1997) explores the ongoing negotiation of identity through social interactions. He suggests that identity evolves constantly as individuals test and refine their professional selves with respect to the communities to which they belong. He articulates five elements that frame and define theoretically identity: 1) negotiation: identity is constantly in-flux; 2) community membership: identity exists only as its expressed in a community; 3) learning trajectory: identity evolves with experience and new information; 4) membership nexus: identity is connected to the centrality of a member to his community; and, 5) local-global connection: identity is influenced by the relationship between one community of practice and other communities (p 149).

At the core of Wenger’s work is his notion that identity exists only in negotiations with others, “we cannot become human by ourselves” (1997 p 146). We become who we are by constantly refining and rethinking “the meanings that define our communities and our forms of belonging. Building an identity consists of negotiating the meanings of our experiences of membership in social communities” (p 145). Wenger’s framework enables us to see more clearly the transitional nature of identity, because the process of identifying ourselves occurs as a negotiation in social situations and is a reflection both of how we imagine ourselves and how others receive the “us”

we project in social situations. He provides “community membership” and “learning trajectory” as measures of identity negotiation. The first juxtaposes the familiar with the unfamiliar, while the second assesses where we are against where we are going. Both express identity as transitional and context dependent. Recognizing the ongoing multiple roles we assume, Wenger articulates multiple memberships as an identity prism, in which each different view reveals a new identity shape. While the findings of the study will be discussed in detail in chapters four through six, it is helpful to note here that Wenger’s definition community membership and learning trajectory connect with my study. They possess elements that align with the “identity lens” I characterized to articulate how educator’s at Independent School view their work.

Wenger wrote about learning as a social theory arguing that learning occurs in social situations he called “communities of practice,” which are framed by a shared interest that may be constrained or supported by an organizational structure. His social learning theory articulates a view of knowing and learning through common engagement with a community. “Practice is, first and foremost, a process by which we can experience the world and our engagement with it as meaningful” (p 51). He argues identity is a significant aspect of learning because “our identity includes our ability and our inability to shape the meanings that define our communities and our forms of belonging” (p 145). Again, elements of shared interest in Wenger’s research align with the values shared by educators at Independent School and which influence the ways they consider their work.

Section C.1 Characteristics of communities of practice

A number of educational researchers, interested in the identities of teachers, have used Wenger’s communities of practice to frame their research, emphasizing in particular the social learning aspects of Wenger’s theory.

In Cox’s (2005) comparative review of communities of practice, he considered four approaches and articulated characteristics necessary to suggest the presence of a community of practice.

First, he posits a community requires the existence of sustained mutual relationships, whether or not they were harmonious, as well as shared ways of engaging in doing things together. In addition, he found that in a community of practice information flowed rapidly, supporting the propagation of innovation. Conversations occurred absent of introductory preambles, as if conversations and interactions were merely the continuation of an ongoing process and problem discussions got underway very quickly. Members of the community shared a common description of those who belong to the community and a clear understanding about the contributions, knowledge and skills of other members. As well, certain behaviors were recognized as displaying membership in a community.

Cox also found that members possessed mutually defined identities, signaling their interdependence, as well as the ability to assess the appropriateness of actions and products. A community shares specific tools, representations and other artifacts, as well as local lore. They share stories, inside jokes and knowing laughter. Members shared jargon and shortcuts to communication; they jointly produce new jargon and modified shortcuts. Essentially, a community of practice has a shared discourse that reflects a certain perspective on the world (p 531).

Cox's identification of characteristics of community of practice is relevant to my study because his work considers implications for professionals who find themselves marginalized by the organization. He notes that, "for Wenger, part of the role of a community of practice is to make work 'habitable'; and 'a significant amount of the processors' communal energy goes into making their time at work a livable realization of their marginality within the corporation and the insurance industry" (p 533).

Paavola et al. (2004) expressed active participation in organizations as a metaphor for learning. They contend that the "participation metaphor examine[s] learning as a process of participation in various cultural practices and shared learning activities ...[where] knowledge does not exist

either in a world of its own or in individual minds, but is an aspect of participation in cultural practices” (p 557). They continue, suggesting, “that knowledge and knowing cannot be separated from situations where they are used or where they take place. In the participation metaphor, learning is a matter of participation in practices and actions” (p 558). While they do make direct connections to identity, their study is helpful to my research because they reinforce the notion of participation as connected to learning about innovation.

Wong Hur and Brush (2009) studied the online practices of K-12 teachers whose commitment to the community was associated with “mutual engagement of members around a joint enterprise” (p 280). They suggest that “members share repertoires of tools, stories, routines, and words that the community has generated or developed; the repertoire becomes a part of the community’s practice” (p 281) and they clarify that communities are different from groups or gatherings “in that they seek to develop members’ capacities and knowledge and sustain the community as long as the interests of members last” (p 280). Arguing for the need to continue this research stream, they suggest “one of the main reasons why educational researchers and practitioners are paying increasing attention to the concept of communities of practice is that scholars attest that learning occurs while individuals are actively engaged in these communities” (p 281).

Section C.2 Teacher collaboration within a community of practice

Penuel et al. (2009) echo the call for more research in this area but shift their view to “looking at teacher collaboration as a form of distributed leadership within school, mediated by artifacts and routines for discussing and sharing problems of practice” (p 120). As Clandinin and Connelly (1996) identified in their work on the private and public spaces of teacher work, Penuel et al. argue:

“a network perspective on teachers’ interactions draws attention not only to the social structure of the school but also to the expertise and resources exchanged through interactions among teachers that take place in meetings, staff rooms, hallways, and classrooms. It can also be used to analyze the efficacy of reform coaches for improving teachers’ access to expertise and resources and for facilitating the change process” (p 126).

Their research is relevant to my study because of their view of teacher-initiated collaboration, arguing “the community of practice perspective draws attention to the ways in which teachers’ interactions with one another, in which they engage with artifacts and representations of teaching, constitute a system of practice that can enable ongoing learning and development” (p 126).

Further, they echo Wenger’s view that learning and identity exist in the social exchange that occurs, “teachers are participants in the community, taking on particular roles and responsibilities within it and using available resources to reproduce, improve, or even transform practice” (p 126). They acknowledge the more narrow focus of previous research in this area by suggesting:

“Studies tend to focus much more on learning that takes place as part of formal meetings rather than on discussions that take place in hallways, lunchrooms, or staff workrooms. They also tend to focus either on individual participants or on community development as a whole and do not focus on interactions that take place within cliques or subgroups in a school” (p 128).

They note the need to explore more broadly, arguing that multiple learning models exist producing varying results:

“In schools where teachers had formats for interacting with colleagues around problems of practice in which they could raise questions about practices, meetings were more successful than in schools where meetings focused on administrative issues or where formats did not permit deep discussions of practice” (p 128).

Section C.3 Teacher identity negotiation within a community of practice

Varghese et al. (2005) argued similarly that “it became apparent that in order to understand language teaching and learning we need to understand teachers; and in order to understand teachers, we need to have a clearer sense of who they are: the professional, cultural, political, and individual identities which they claim or which are assigned to them” (p 22). They explored how

foreign language teachers are often marginalized in the educational communities where they work. Their investigation extended theoretically from Wenger's view of identity as context dependent, which they articulate thus: "identity is not a fixed, stable, unitary, and internally coherent phenomenon but is multiple, shifting, and in conflict; by the same token it is transformational and transformative" (p 22). They suggest three distinct aspects of identity. First, that it is not free of the context of the educator's experience and that social, cultural and political experiences naturally influence identity. Second, they note a distinction between types of identity: assigned identity is "the identity imposed on one by others—and claimed identity, the identity or identities one acknowledges or claims for oneself" (p 23). Third, they argue that identity is constructed and renegotiated through discourse.

They continue, suggesting, "Teacher identity is a profoundly individual and psychological matter because it concerns the self-image and other-image of particular teachers. It is a social matter because the formation, negotiation, and growth of teacher identity is a fundamentally social process taking place in institutional settings such as teacher education programs and schools" (p 39).

Section C.4 Professional values and identity negotiation

Andland (2010) defined values as "an expression of human intentionality, being enacted in forms of human behavior" (p 462) and which are "expressions of worth within language" (p 46 2). He argued, "values are conscious, as well as subconscious goals, ideals and performances of worth, expressing intentionality and shaping directions of actions" (p 471). Although his essay suggests values are produced retrospectively, as a sensemaking exercise, his work is relevant to my study as he posits values as a personal and intrinsic enterprise in which action is shaped but not in a way that can be actively manipulated by organizational programs or top-down values management. This notion is connected to educators' views of values, as frames to consider their professional identities.

Day (2007) expressed teacher professionalism as: “associated with having a strong technical culture (knowledge base); service ethic (commitment to serving clients’ needs); professional commitment (strong individual and collective identities); and professional autonomy (control over classroom practice) (p 600). These classifications are quite closely aligned with my findings, which will be discussed in chapter six. Of importance here is data from two longitudinal studies he conducted to explore connections between self and professionalism as it relates to teacher motivation and commitment. His study included secondary school teachers in England, Denmark and France. He found that teachers, when asked about the effects of policy changes on their work, overwhelmingly focused on themselves, “in particular, the effects of the reforms on: 1) motivation and commitment; 2) beliefs, ideologies and personal and professional values; and 3) efficacy and job satisfaction. It was clear that these were *core elements of the teachers’ professional identities*” (p 607). While his research is focused on factors that aid building teacher commitment, his framework of teacher professionalism connects with the professional and organizational values I identified as important in my study.

Andrew et. al. (2008) researched the link between professional values and organizational values in a nursing community of practice. While their research aim was economic in its focus, there are parallels between the professional groups, nurses and educators. Two aspects of their student are relevant to my research. First, they found that professional values are recursive in that, as Wenger suggests, “individuals are motivated by an intrinsic need to develop shared professional values and identity” (p 256). And, second, the communities to which individuals belong exists in part for the “production and dissemination of knowledge and the development of professional values.” (p 249). They conclude by arguing that although the economic benefits of a community of practice may not be directly evident, it “offers a knowledge development and management system designed to facilitate the integration of scholarship and professional practice. The quality, complexity and transferability of real life, as experienced by service users and providers, can be harnessed and given voice” (p 264).

Section C.5 Summary and connections

My study follows Wenger's view of identity as a transitional and context dependent characteristic that shapes and is shaped by our interactions within communities. However, it extends the previous research by recognizing that in schools, a community of practice includes administrators and technologists as well as classroom teachers. The joint enterprise I studied is efforts to integrate technology innovation into the classrooms and other work of educators as this school. In particular, I follow the notion of key organizational understandings, which at Independent School are expressed as organizational values, as significant to identity negotiation. Membership in a community of practice is also an indicator of identity and is explored in this study.

Section D: Narrating our lives through stories

The underlying premise of narrative inquiry is the belief that individuals make sense of their world most effectively by telling stories. (Patricia Hill Bailey and Stephen Tilley 2002 p.575)

Stories research crosses disciplines and generally falls within the broader category of narrative analysis. Stories and narrative analyses have enjoyed recent popularity in response to the growing need to understand how people make sense of organizational experiences within the context of change (Boyce 1995; Dawson and Buchanan 2005). Most studies of narratives and IT innovation have drawn attention to the influence of power, knowledge and identity on the personal experiences of organizational members or on project outcomes. IT researchers have also applied narrative analysis to challenges associated with both technology driven organizational change and systems implementation (Davidson 1997; Dawson and Buchanan 2005; Hardy and Lawrence et al. 1998). Studying narratives to reveal organizational relationships and practices typically excluded from formal change or technology documentation has carved a new and promising path of information systems study.

Narratives and stories have profound significance in the cognitive as well as social aspects of human sensemaking. Bruner (1990) suggests that individuals create narratives when they make

sense of their experiences by attempting to attribute rationale to the actions and intentions of others. He states, “The typical form of framing experience (and our memory of it) is in narrative form. What does not get structured narratively is lost in memory” (p 56).

Narratives privilege the views of the narrator through an account that reflects the narrator’s retrospective sensemaking (Boje 1991b; Riessman 1993). Because stories change with time and circumstances and vary according to the storyteller and the audience (Boje 1991a; Boje 1991b; Riessman 1993), stories trace the influence of personal perspectives, ideas and experiences on individual sensemaking. Narrative analysis can be employed to answer widely different research questions, although much of the research conducted to date falls into one of three categories (Figure 2-1, on the following page): knowledge (creation and management, as well as problem solving), power (politics, influence and control) and identity (personal, professional and organizational).

While stories serve as a valuable sensemaking tool for individuals, they also reveal aspects of the individual’s relationships, experiences and perspectives in relation to professional work and to understanding of the organization and of technology innovation. Bechky (2006) argued, “stories are a meaningful aspect of work, as opposed to being peripheral to work activity or exclusively for building identity ... stories cannot be disassociated from the context in which they are told” (p 1761).

In a survey of more than 100 studies of story and narrative research related to IT and organizational innovation (MacLeod and Davidson 2007a), three broad categories of stories research were identified: power, knowledge and identity. Each research stream is summarized here; *power* and *knowledge* are summarized first and *identity* is discussed in the following section.

Figure 2-1: Research Summary (from MacLeod and Davidson 2007a)

	Selected research (by author and year)
Power	
<ul style="list-style-type: none"> • Politics • Influence • Control 	Avison and Cuthbertson (1999); Balagun and Johnson (2004); Boje (2001a and 2001b); Boyce (1995); Brown and Jones (1998); Davidson (1997 and 2002); Dawson and Buchanan (2005); Ford and Ford (1995); Hercelous and Barrett (2001); Kowalik (1999); Martin (1983); Spicer (2005); Wagener et al. (2004)
Knowledge	
<ul style="list-style-type: none"> • Creation • Management • Problem 	Boyce (1995); Brown (2004); Dube and Robey (1999); Alvarez and Urla (2002); Barnett and Storey (2002); Brown and Jones (1998); Davidson (1997 and 2002) Schultze and Leidner (2002)
Identity	
<ul style="list-style-type: none"> • Individual • Professional • Organizational 	Avison and Cuthbertson (1999); Balagun and Johnson (2004); Barnett and Storey (2002); Boje (2001a and 2001b); Boudens (2005); Boyce (1995); Brown and Jones (1998); Davidson (1997 and 2002); Dube and Robey (1999); Ford and Ford (1995); Martin (1983)

Section D.1 Stories of power (and its implications)

Power research examines politics, influence and control. Power can be manifested through control of resources and recognition (Avison and Cuthbertson 1999; Dawson and Buchanan 2005), the formation of organizational mission and vision (Boje 2001a and 2001b) and the management of collaboration opportunities and employee relationships (Balagun and Johnson 2004). The ways in which stakeholders influence organizational activities also constitute organizational power (Brown and Jones 1998). Researchers who have looked at power through stories have contributed to our understanding of the way that power relationships shape technology implementation and organizational change (Davidson 1997 and 2002).

While most authors acknowledge that organizational life is inherently political, stories analysis can help us see how power is played out in different organizational environments.

Inconsistencies between strategic IT and organizational status (Avison, Cuthbertson et al. 1999), resource allocation (Kowalik 1999), project priorities (Boje 1991a) and the negotiation of team roles (Wagner 2002), for example, can be better understood by looking at the narratives of organizational participants. As Boje states, stories can also be tools to advance political interests (1991a) and to “give voice” to perspectives normally overlooked in the unfolding of the change

process (Wagner 2002). Stories also reveal the highly political environment of significant technology investment and large-scale, technology-driven change (Dawson and Buchanan 2005). “Competing versions of reality and ... uncovering stories that remain locked beyond public view through the power plays of key actors” (Dawson and Buchanan 2005, p 846) show how narratives advance our understanding of organizational politics.

Institutional theory shows us how we create the very structures that eventually constrain our actions (Giddens 1984). Stories provide a script for the process of constraint creation. The exchange of ideas in an organization, for example, is limited both by the topic addressed and the language used. Organizations attempting to innovate may lack the vocabulary to articulate their needs effectively. Similarly, participants may know that some topics are “off limits,” thereby precluding certain ideas from ever being considered. Technology innovation is influenced by organizational conversations because stories and event conversations influence participant sensemaking (Dube and Robey 2001).

Section D.2 Stories of knowledge building

Researchers have extensively studied organizational practices for knowledge creation, knowledge management and problem solving (Avarez and Urla 2002; Davidson 1997 and 2002). Finding new ways to be competitive is paramount to an organization’s survival , which leads to studies focussing on issues of collaboration for knowledge creation (Dube and Robey 2001), competition for development resources (Schultz and Leidner 2002) and how innovation is linked to success measures (Barnett and Storey 2001).

Managing an organization’s intellectual resources also provides rich topics of study, including organizational strategies to elicit important information from members (Hannabus 2000, Schultz and Leidner 2002), IT resource and priority management (Schultz and Leidner 2002), rationalization of actions and defense of plans (Boje 1991b) and efforts to create order (Brown and Jones 1998). Stories are told to make sense of situations and to problem solve (Bryant and

Cox 1994). Stories connect people and ideas and they engage imaginations and emotions. Through stories, we might better understand complex organizations, competing agendas, how meaning is developed in conversations and problem solving (Boudens 2005).

Section D.3 Negotiating identity through stories and places

Significant to my study is Clandinin's and Connelly's (1996) research exploring the secret, sacred and cover stories that teachers tell about their professional and practical lives. These story categories correspond with the diverse landscapes where teachers divide their time each day: classrooms, which are independent places for teachers to spend time with children, and out-of-classroom professional environments, where teacher engage and interact with colleagues. "Classrooms are, for the most part, safe places, generally free from scrutiny, where teachers are free to live stories of practice." (Clandinin and Connelly 1996 p 25) Secret stories, unofficial personal accounts, are typically a retelling of teachers' classroom experiences. These secret stories are typically shared with other teachers in private classroom spaces. "When teachers move out of their classrooms into the out-of-classroom place on the landscape, they often live and tell cover stories, stories in which they portray themselves as experts, certain characters whose teacher stories fit within the acceptable range of the story of school being lived in the school (Clandinin and Connelly 1996 p 25). Organizational leaders create sacred stories to reinforce a desired view of the school. Clendenin and Connelly define sacred stories as:

"Researchers, policy makers, senior administrators, and others, using various implementation strategies, push research findings, policy statements, plans, and improvement schemes, and so on down what we call the conduit into this out-of-classroom place on the professional knowledge landscape. We characterize this theory-driven view of practice shared by practitioners, policy makers, and theoreticians as having the quality of a sacred story" (Clandinin and Connelly 1996 p 25).

These landscapes provide the terrain (or to follow Goffman, "the stage") upon which teachers share their stories. Teacher stories express identity, which can be tested against sacred school stories. As the authors illustrate, secret stories that teachers tell share one perspective of school experiences; cover stories, which are shared in public spaces, with wider audiences, may share a

different perspective. Often administrators who are mandated to share the sacred stories find their narratives at odds with the stories that teachers tell.

This research is particularly interesting because it explores the shifting narratives of organizations attempting to recast their stories by intentionally shifting their sacred stories. An important storyteller, such as a school principal or influential teacher, will be given a new sacred story intended to replace the old sacred story. Through telling and retelling of this new tale, the organization's sacred story is recast and begins anew.

In their 1996 paper, Clandinin and Connelly illustrate this notion of landscapes and storytelling with a teacher story. Stephanie, they say, considers herself to be a “nurturing teacher” who creates a homelike environment in her classroom by incorporating into the space many treasured artifacts created by the teacher and her students. Stephanie tells a secret story about her priorities and her view of her classroom as a reflection of her values and as a safe place for students. The stories told about Stephanie by other teachers reveal a different plotline. Her colleagues' stories suggest they see her as unorganized, unfocused and that her classroom lacks discipline. As the authors note, colleagues view Stephanie's classroom as messy and cluttered (1996).

This study is important to my research because it connects teachers to the community within which they work. It acknowledges that, while teachers spend much of their days in the autonomous environments of their classrooms, they receive support from and have obligations to spaces and people beyond the classroom. Looking at their study for the larger school picture, Clendenin and Connelly note that Stephanie works in a school district, which is multiracial and struggling. A new principal is appointed and he chooses to use Stephanie's story (as a nurturer) to frame the new sacred story he was hired to tell. Stephanie's narrative is recast as a positive tale because the principal recast “nurturing” as “culturally sensitive.” Slowly, as the story was told and retold, Stephanie became recognized as a local cultural expert and also as a teacher who understood the needs of a multiracial classroom within a multiracial community. Using Stephanie and her new principal to illustrate the transitional nature of identity within the context

of a school setting, Clendenin and Connelly reveal the shaping role of storytelling to convey an understanding of both professional identity stories and the reinforcing role of organizational stories.

Section D.4 Summary of stories research

Rationalizing complicated views of workplace identity with embedded morals and organizational values (Boje 1991b), the articulation of cultural beliefs (Boyce 1995; Dube and Robey 1999) and accepted organizational behaviors and attitudes (Currie and Brown 2003) is evidenced through stories. Also, through stories, we see how an organization's culture shapes individual perceptions of identity (Dube and Robey 1999), organizational identification (Dutton, Dukerich, et al. 1994) and the sharing of organizational identities (Denison 1996).

Enduring interest in organizational manifestations of power, knowledge and identity in organizations through stories research has produced varied and rich studies, particularly with respect to influences on technology systems implementation. While power and knowledge are of interest, my study focuses on the professional identities of teachers, administrators and technology specialists through the stories they tell.

Section E: Summary and integration of implications for current research

"Stories are a meaningful aspect of work, as opposed to being peripheral to work activity or exclusively for building identity ... stories cannot be disassociated from the context in which they are told" (Bechky 2006 p 1761)

The dual nature of organizational stories (in expressing identity and also shaping it) becomes evident when we consider identity research, as stories serve both as a tool to aid sensemaking and socialization and, conversely, as a channel through which individuals express themselves and explain their subjective interpretation of experiences. While stories provide a contextual backdrop against which events can be viewed, the backdrop itself often serves as an agent working to shape how the events are interpreted. Individuals may tell a story to make sense of an experience and the same story may later be told to express the organization's culture. Identity exists in this transitional state, particularly in times of significant organizational change, as

organizational members consider their own experiences and share their understandings with their colleagues, as they seek to negotiate professional identity by telling stories and by listening to the stories of others.

Four theoretical streams support this study: research on technology in education, identity, communities of practice, and storytelling. Because the study site is a K-12 independent school, understanding the current research on technology innovation in this setting helps the reader to understand the study context. The opportunity exists for me to add to this research stream by taking a broader view of the professionals who work together to innovate and by considering the professional identities of teachers, administrators and technology specialists. Similarly, identity research in education generally highlights the efforts one professional group. There is also an opportunity to increase our understanding of professional identity in a K-12 setting by looking at the three professional groups in one study. Communities of practice aid this investigation. However, this study can contribute to the work on communities of practice by exploring the shared understandings of organizational members and highlighting organizational events and signals that influence identity negotiation.

Chapter three begins with the research questions addressed in this study, followed by an outline of the research approach used. I also introduce the research site, provide a detailed explanation of the research methodology, including data collection and analysis methods, and I outline the assumptions and limitations of the research strategy and design.

Chapter 3

Research strategy and design

All narrators convey meaning with asides that modify by repeating words or phrases, by expressive sounds and silences. The reduction to a core narrative, although useful at the first analytic stage, excludes important features that are essential to a fuller interpretation.

- Catherine Kohler Reissman (1993 p. 33)

In chapter 2, I introduced the theoretical framework and motivations for this study. In this chapter, I discuss the research strategy and design as follows: In section A, I summarize the specific research questions addressed. Section B outlines the research approach I used and also the research site. In section C, I provide a detailed explanation of the research methodology, including data collection and analysis methods. In section D, I outline the assumptions and limitations of the research strategy and design and conclude with section E.

Section A. Research questions

The literature suggests that consideration of the personal perspectives of organizational members may reveal helpful information about technology innovation processes. It also suggests that stories express the personal views of organizational members, providing clues about how they understand their experiences, relationships and organizational signals and the extent to which their personal views guide their actions. Finally, in the K-12 educational environment, there is a need to explore the implications of professional identity by considering the ways in which classroom teachers, technologists and administrators understand and also influence technology innovation occurring in their institutions.

Given the challenge of attempting to understand the personal perspectives of these educators as their organization undergoes significant technology innovation, this study used narrative analysis to explore the influence of professional identity on the innovation processes of middle school educators to paint a rich picture of how individuals made sense of and experienced technology innovation in their professional lives. To bound this study in a context of shared stories, told

during information technology innovation, this study focused on educators assigned to grades six through eight, the technology specialists who support them, as well as the administrators whose mandate includes setting policy for the middle school or, more broadly, guiding technology innovation for the school. Interviews were also conducted with technology champions.

I conducted a series of interviews to elicit personal experience stories from classroom teachers, technology specialists and administrators and I then analyzed the data to identify story themes, identity lenses and organizational values to investigate the following research questions:

- Question 1: What story themes are evident when educators talk about classroom technology innovation? (*Focus: Story themes*)
- Question 2: How do the story themes of educators align and what does this and an understanding of identity reveal about how educators perceive classroom technology innovation? (*Focus: Identity Lenses*)
- Question 3: What do story themes tell us about how participants in this educational community of practice negotiate their identities with respect to technology innovation in classrooms? (*Focus: Organizational values*)

Section B. Research strategy

I conducted an exploratory case study, drawing on the narrative interviewing and analysis work of Mishler (1986) and Riessman (1993), to explore technology innovation through the experiences of educators in the middle school of a K-12 independent, co-educational, day school. A single case site was chosen to enable an in-depth exploration of the phenomena in a natural setting. By examining the narratives of teachers, technologists and administrators from the same organization, in addition to considering their professional identities, I was able to investigate the organizational factors that shaped interactions around technology innovation and include them in

my analyses. Such things as organizational mission and vision, organizational practices and policies, organizational culture, and interpersonal relationships are relevant to individuals as they work to understand their experiences and, therefore, received thoughtful consideration during my investigation. Similarly, I chose case study methodology to enable the fullest possible exploration of the research questions. Case studies are also consistent with the research strategies used to explore technology innovation, narrative sensemaking and organizational storytelling.

The study was designed to elicit stories, because storytelling provides a means to explore questions of identity, perspective and differences, as well as to compare how experience and perspective influence technology innovation processes. In this professional setting, three largely autonomous professional groups work together to achieve technology innovation. Accordingly, this study was constructed to:

- Elicit personal narratives about technology innovation from educators—teachers, technology specialists and administrators;
- Analyze narratives as whole stories, rather than as individual sets of text, to enable *in situ* analysis consistent with the recent research push to reveal *voice* (Brown, Gabriel and Gherardi 2009) and to consider the ways in which, as Driver notes, “storytelling empowers storytellers not just by allowing them to contest dominant discourses of organizational change but also by providing them with opportunities to assert that they are powerful and creative subjects” (2009 p 354);
- Explore the influence of professional identity on organizational events related to technology innovation and as a reflective sensemaking practice in an educational context; and
- Consider how stories enable individuals to express and reinterpret relationships with other organizational members and how the perspectives expressed by these individuals, as they interact with each other, influence the technology innovation process in one organization.

Section B.1 Why stories? Which narratives?

In their introduction to a special issue of the journal “Organization,” devoted to research on storytelling, the editors suggest, “storytelling is now widely regarded as a currency (maybe, the currency) in which communities of practice trade, the means through which they exchange experiences and learn from ... others” (Brown et. al. 2009 p 326). To explore the perspectives of individuals participating in a technology innovation project, I chose an open-ended interview format for its ability to draw out personal stories about experiences with information technology change. This design allowed me to seek participant views, whether or not they were consistent with the organization’s sacred story, which the literature defines as an accepted organizational script advanced by school leadership to support a particular view of the organization and its vision. As noted, the study design echoes Riessman and Mishler by allowing the voice of the participant to be heard through personal stories.

Interviews, which are common occurrences in technology innovation projects, are vehicles through which stories can be shared. These texts can be analyzed to reveal and clarify the personal views of participants as they share stories in an effort to make sense of their experiences, negotiate and reconsider relationships and reflect on and rationalize organizational events and signals. Stories can also be used as a comparison to researcher observations and to measure against formal documentation, which, when taken together, provide a more complete picture of innovation processes.

Section B.2 The case site

The case study site was chosen because this organization recently made a significant investment in transformational technology innovation to overhaul pedagogy by incorporating information technology into the classroom and curriculum. The institution (to be called Independent School) has a strong tradition of excellence and innovation in teaching, as well as in providing creative learning environments. I was familiar with this organization because I had recently joined the staff and, during my first few months as an employee, I participated in a number of events and

meetings that allowed me to observe the school's strategy to transform the way it used technology for teaching and learning. I was intrigued not only by the evident commitment to technology innovation, but also by the business-focused approach they had developed to guide their efforts, which was underpinned by strong financial support.

Although a K-12 organization, Independent School operates in a day-to-day manner as three quite independent campuses: kindergarten through fifth grade, grades six to eight and high school. One senior administrator oversees the kindergarten through eighth programs, while a second is responsible for grades nine through twelve. Enrollment is competitive, even though the school is very large. Classes in music, dance and visual and theater arts augment the curriculum, which is college preparatory in nature. Independent School has, among its priorities, a goal to become a global thought leader in technology innovation. Faculty, staff and administrators consider themselves to be storytellers, and many embrace oral traditions with enthusiasm. While storytelling in schools is common, the senior administrators of this school make strategic use of stories. They incorporate storytelling into all aspects of school communication and rely heavily on stories as a means to share their vision for the school. Many organizational members have adopted this practice for their own uses.

As noted, this organization's commitment to technology has grown in recent years and the school's leadership has adopted an aggressive plan to achieve a pervasive technology environment. They have defined a broad goal to transform the learning environment to one that seamlessly incorporates technology into all facets of classroom and administrative activities and educators, technology specialists and administrators are attempting to understand and respond to this challenge. Until the mid-1990s, information technology existed only in select corners of this school and stopped at the threshold of the classroom. While a small group of educators worked together to try out new technology tools, overall the school made very little use of technology in the classroom and many of its business practices were automated at only a rudimentary level. In less than a decade, the school has created a school wide intranet, adopted online attendance and

grading systems, transformed its business office and administrative practices and tested and implemented a school wide laptop program. The organization has also evolved structurally with the creation of an information technology department and the establishment of positions like CIO, helpdesk technician and technology specialist.

This study was initiated five years after external consultants, contracted to conduct a campus-wide needs assessment, suggested that an 18-24 month conversion plan for technology transformation was feasible. Since this initial report was submitted, many infrastructure needs have been addressed. For example, all teachers and technology specialists now have personal laptops, as do most administrators. The entire school has wireless connectivity. As well, an intranet site for employee internal communications as well as to host forms, file sharing and classroom tools has been implemented. The school's Internet site has also been redeveloped. As noted, a key aspect of the initial plan was a focused transition period, during which major architecture was to be implemented while organizational members were trained and then supported through the period of significant change. Initially, a business model approach guided this process. Organizational members were asked to define their *user needs* while consultants conducted interviews to determine the same *user requirements*. I observed a number of meetings in which interviews were being conducted. It was evident that the information technology lexicon and approach to work did not align with the language and methods used in education, which caused confusion and frustration on both sides.

I had chosen this site initially because I considered it unusual to use a business model used to advance technology innovation in a school. My original research questions were developed to explore the relationships among educators working together to transform the school through technology. I had planned to observe them in meetings and to interview teachers, technology specialists and administrators individually to highlight how their varied backgrounds and work views influenced the innovation process. I had attended some of the implementation committee meetings and noticed that the IT staff used one vocabulary, while the educators used another.

During the course of a meeting, two or three parallel conversations could be heard and it was not always clear that each professional group understood the other. After meetings, I sometimes overheard frustration expressed by one side or the other. I routinely heard confused interpretations about what had transpired at the meetings and (more significantly) about what had been decided.

The business model approach to technology innovation and the corollary implementation committee that I intended to study were disbanded shortly after I completed the pilot study interviews. I examined the transcripts I had and found they contained significant and interesting data about educator views of technology innovation. I also found a connection between educators' understandings of innovation practices and their views of themselves, as professionals, experiencing significant technology change. I discussed this finding and the challenge of shifting focus with my committee chair and committee. We agreed that, although I would not be able to study the influences of educators on planning and technology innovation meetings because the implementation committee process had been suspended, grassroots technology innovation was continuing. And, educational literature called for more research on this phenomenon as several researchers have pointed to grassroots initiatives focused on technology innovation as possible reasons for the muted results of organizational strategies (Sherry & Gibson 2002; Toledo 2005). While I could not confirm a connection between the decision to end the implementation committee and the ongoing grassroots efforts of classroom teachers and some of their supervisors, I found that the educators indicated they valued the opportunity to collaborate with colleagues and to set their own course for innovation.

Technology innovation was now occurring almost entirely in classrooms and individual workspaces, rather than through committee actions. The wide range of approaches highlighted much about the professional identities of these educators as they experienced transformative change in their organization. Thus, I revised my research focus to reflect the phenomena occurring and to respond to the new organizational environment. This allowed me to also fine

tune my study's focus slightly to emphasize the sensemaking practices of educators as they work to negotiate professional identity *vis-à-vis* technology innovation.

Section B. 3 Access to the case site

The school's vice-president and treasurer gave me access to the case site and permission for teachers, technology specialists and administrators to participate in the study. In addition, the junior school principal, to whom the classroom teachers and supervisors, as well as some of the technologists report, supported the study. While the research results will not be shared with Independent School, the identity of the school and study participants have been changed. The Committee on Human Subjects, University of Hawai'i, Mānoa, approved this study.

My role as researcher was complex. During the research planning and data collection, I was employed at Independent School in a support staff role. My position gave me access to the research site and provided me an insider view of the organization and the activities surrounding information technology innovation. It also meant I had to take special care to manage my dual roles as employee and researcher. While I agree with Mishler (1986) and Riessman (1993) and Miles and Huberman (1994) that the researcher serves in a co-producer role during interviews, I took specific steps to ensure study participants saw me as an independent researcher, not as someone connected with the school.

First, all documents related to interviews articulated my role as clearly separate from the school's administration. Following the pilot study, I made adjustments to the participant invitation, participant consent form and introductory comments and research questions to clarify further my independence from the school's leadership. It was important for participants to understand their comments were being shared with a researcher and not with a colleague or representative of the school who might act on their statements in some way or who might share their narratives with school officials. When educators understood that this study was not being conducted on behalf of Independent School, I found they were more willing to speak openly.

In addition to separating myself from the school to protect the participants' narratives, I also had to manage participant expectations of advocacy. It was important for participants to understand at the outset that my research would not serve as a voice for their concerns or as a vehicle to advance their agendas in any way. Because Independent School considers professional development to be a priority, the school community participates frequently in or serves as a living lab for academic research projects. Most studies center on curriculum specific initiatives and, more recently, on efforts to promote sustainability, encourage transformational leadership or respond to the needs of differentiated learners. Most participants appeared to be quite comfortable sharing their thoughts on technology innovation with me without seeking to advance an agenda or to sway my thinking about the process of technology innovation occurring in the middle school.

Second, as I conducted the interviews, I reviewed the data and my methods with my advisor and committee members to ensure the analysis was derived from accurately collected data. As an employee of the school, I had a unique "insider" perspective that allowed me understand more deeply the stories educators shared about their experiences. As Benenson suggests, "only an insider can be 'aware of decisions we face ... rhythms of timing ... cues we read off students'" (2001 p 57). However, I faced the challenge of needing to maintain professional detachment during the interviews and objectivity during my analysis. My committee chair helped me to maintain objectivity by testing my reasoning, challenging my thinking and reviewing my analysis. While many researchers appreciate the privileged perspective given to those who enjoy an insider's view, they also recognize the inherent risks to objectivity because of personal experience and bias. Many argue for an insider-outsider approach to research, in which some members of the research team are "insider," while others remain "outsiders." The value of an inside perspective, is supported and framed by the outside colleague's perspective (Dallmer 2004; Louis and Bartunek 1992; Valli 2000). Conversations with my committee chair helped me to balance the insider-outsider view for this study.

Although I was employed at the school while I gathered data, I did not routinely encounter with any of the educators I interviewed. During a regular workday, I typically did not see anyone from the middle school and several weeks could pass before I would encounter someone who participated in the study. While I was sensitive about my need to be objective throughout the interview process, physical distance from the study site and the natural barrier created by my work role supported rather than hindered my efforts. Shortly after I concluded the interviews, my work role changed, creating additional distance between the study site and me. During analysis and while I was writing the dissertation, I had little direct connection with the middle school or the educators who work there, allowing me to focus analysis on the data collected.

Section B.4 The co-creation role of narrative research

I developed the interview protocol following Mishler (1986) and Riessman (1993) and Miles and Huberman (1994), who posit that researchers serve a co-creation role with interview participants. Mishler talked about the research interview as a set of “speech acts” (1986 p 35) in which the interviewer and the participant cooperate in the “joint construction of meaning” (1986 p 52). Davidson (1997) also articulated the influence of shared experience in her interviews, noting that a shared professional background allowed her to better understand her participants’ experiences. All argued that the role of the interviewer is significant in any research interviews, and suggested that by making explicit the researcher’s role, the participant’s contribution is placed in context and made more valuable because it has been clarified.

The collegial nature of this learning community frequently produced conversations anchored in politeness and pleasantries, as participants usually tried to avoid conveying anything that might suggest dissatisfaction or dismay. Prior to the interviews, I was concerned participants might simply share stories with me hoping to please, rather than choosing to share true accounts of their personal experiences. I developed the questions carefully to draw out participant stories and perspectives, because it was important to ensure real stories were told. I understood that even

though stories convey the ideas and agendas of the narrator, at times narratives may also adhere to an organizational script or align with shared cultural understandings that echo commonly known themes (Boje 1991a; Markus 2000). Because I was familiar with the case site, I could discern when politeness might be at play and it was possible for me to clarify stories when the motivation behind it was unclear.

Although familiarity with the organization was helpful, as noted earlier, being an inside interviewer required me to manage participant expectations of the interview. However, it also forced me to focus on my own objectivity. Throughout the data collection and analysis phases, I was conscious of the need to separate other information I received at work from that which was connected directly to the study. Throughout the investigation, I worked to avoid influences unrelated to my research and, in particular, avoided talking about the study in social situations. Further, I kept separate notes about observations colleagues made outside of the interview setting and also about information I received through my own work, which might bear on the interview data, the analysis or the findings and discussion. It was helpful to be mindful of these potential challenges as they enabled me to stay focused on the data I collected. Further, acknowledging the co-creating role I served as the interviewer did not alter the value of the interview text or the interpretation of meaning. As Mishler suggests, an inside researcher situates the meaning of the narrative within the context of the interview and the study to provide a more precise reading of the story. Fewer elements are left undiscovered, allowing the analysis to be more focused on the meaning making elements of the story (1986).

Mishler's view held true for this study. In two important ways, my role as a member of the organization helped. First, although the interview questions were designed to elicit thoughtful and candid stories about participant perspectives, my background enabled me to ask follow-up questions that were specific, yet sufficiently open to allow participants to clarify their thoughts and elucidate themes that were important to them. While an experienced external researcher may

have achieved similar success, my understanding of the organization and its processes helped to maintain a focus on the interview questions and responses without distraction.

A second reason my internal research role was helpful became evident during the data analysis. While transcribing the interviews, I found I had a number of follow-up questions about processes, collaboration and work. Because I was a member of the organization, I had security access to the school's network. Teachers who I interviewed offered to share classroom Web sites, administrators shared policy documents and conference presentations, and technology specialists shared processes and work plans. No additional approvals were needed to give me access to this information. Again, while an experienced researcher might have been able to secure access to documents at the study site, I knew I was given access to specific work tools because I was a colleague. It provided helpful context that enabled me to develop a more complete picture of the organization and the practices of its educators as they worked together to innovate.

It should be noted that a secondary reason for receiving broad access to information and supporting documentation might be attributed to the open nature of the organization. A stated cultural value of the school is collegiality and sharing. Teachers frequently visit one another's classrooms; administrators from time to time will sit in on classes that interest them and the technology specialist positions were designed to allow them to easily access offices, other workspaces and classrooms.

Section B.5 The pilot study - Lessons learned

To develop my research approach, in the fall of 2006, I conducted three interviews as part of a pilot study. As well, I tested the analytical framework developed for this study (see appendix C for a summary of the analytic framework used). Three important lessons learned from the pilot study added to the richness of the main research study interviews.

First, the original protocol included three interview questions (Appendix C: Interview Protocol). Prior to commencing the main study interviews, these were revised to become four questions to offer the educators more storytelling latitude. By making the questions a bit more general, I found the responses became less predictable and offered participants more opportunity to share their views of technology innovation as well as the relationships and collaboration experiences they had associated with the innovation process.

Second, role clarity was important. Once my role as an outside researcher, who was not working on behalf of the school, was clarified, participants very quickly became comfortable sharing their thoughts and ideas, even if some of their views differed from the formal, documented processes of technology innovation at the case study site.

Third, and perhaps most significant, it became very clear that terminology and question phrasing was critical. The way a question was asked could shape the response provided and the stories told. Because each discipline has its own lexicon, for the educators' stories to be meaningful, I had to phrase each question in a profession-neutral manner. And, while the questions were asked this way, some stories elicited incorporated profession-specific language. Questions phrased too specifically might have misled participants and perhaps suggested an expected answer. When responding to questions educators also relied on the lexicon with which they were comfortable. I therefore had to become familiar with the professional language of each group to be able to ask appropriately probing questions and to accurately review the narratives provided.

Section C: Research design, data collection and analysis

In the following sections, I discuss the rationale for the data collection methods and describe the techniques I used. I also discuss the analytic methods and procedures.

Section C.1 Data collection

Twenty-one open-ended interviews were conducted over a 10-month period, however the recording for one of the interviews was damaged rendering it unusable. For this study, I transcribed and analyzed a total of 20 interviews. To enable comparisons across professional groups, I developed a participant pool of approximately 100 educators, which constituted a cross-section of educators representing the three primary constituency groups: middle school teachers, technology specialists and school administrators. Three separate professional groups were chosen to enable an analysis of similarities and differences within and across groups, and to consider the broader implications of technology innovation on professional identity negotiation throughout the middle school.

Interviews varied in length from 40-minutes to two hours. While a common interview protocol was used for each interview, by necessity follow-up questions were inserted from time-to-time to build on the conversation occurring (Mishler 1986; Riessman 1993). I also asked follow-up questions to draw out additional details or seek clarification. This process is consistent with narrative analysis methods and extends directly from Riessman's narrative research and Gabriel's work in organizational storytelling. "Contradictions and ambiguities in the narrative are accepted with no embarrassment. While the researcher may ask for clarification of particular aspects of the story, the storyteller must feel that such clarification is asked in the interest of increased understanding, pleasure, and empathy rather than in the form of pedantic inquiry" (Garbriel p 137).

An invitation to participate in the study was sent by email to a sub-set of the initial participant pool (see Appendix A). The first interview set was designed to represent the profile of middle school educators. Care was taken to ensure that teachers from each grade, six through eight, who taught a range of core and elective subjects, as well as administrators and technology specialists, were included. Interviews were scheduled, in the order of response. Eight of out the original 10 employees contacted agreed to be interviewed.

From this initial group, I used a combination of snowball and theoretic sampling to identify additional participants. At the close of each interview, I asked participants to think of colleagues who they felt might be helpful to the study. Each participant suggested other possible participants. Most seemed interested in providing names of colleagues who would be able to add to the stories being collected. Some asked clarifying questions like “Do you only want people who’ve had success with technology, because (name) could provide an interesting negative experience?” Others provided names of colleagues who they believed could articulate strategies for technology integration in the organization or colleagues who they felt represented good classroom technology use.

Participant suggestions were checked against the staff list to ensure invitations were sent to groups of employees who together reflected the overall profile of the middle school (teachers from sixth through eighth grade, administrators and IT specialists) in addition to traditional representation goals (balance of gender, age, experience, etc.). When a group of six to eight potential participants had been suggested, e-mail invitations were sent and interviews scheduled.

Two interviews were conducted each week, with short breaks between sets. While continuity in interviewing was important, a condition of access to the school meant interviews had to be conducted without disrupting the school schedule, the employee’s day or the students’ learning environment. Because I was also an employee of the school, I had to plan interviews at a time when both the participant and I were available. The majority of interviews were conducted in the spring and early summer of 2009, with the last interviews completed in late October 2009. In most cases, interviews were conducted in the participant’s work area (either classroom, technology center or lab) to allow easy access to reference material or resources as necessary. Not only did participants appear to be comfortable talking to me in their classrooms and work areas, no one appeared to be concerned with keeping our conversation confidential or hidden. They all were remarkably open about meeting and were very willing to talk to me about the technology innovation processes they were engaged in.

Participation in the study was voluntary. And, although interviews were conducted in a friendly, collegial manner, I followed approved processes for administering research interviews (Reissman 1993 p 60). The interview format (protocol and conduct) was designed to achieve a careful balance that both adhered to approved research methods and also encouraged active participant engagement. After Mischler, “a view of interviewees as informants or as competent observers and interviews as reporters” (p 123) was adopted in enable the participants to feel like collaborators in the process. Gabriel suggested similarly that the interviewer be viewed as a “*fellow-traveler* on the narrative, someone keen to engage with [the story] emotionally, displaying interesting, empathy, and pleasure in the storytelling process” (p 136). I found this aspect of the interview process quite easy to achieve as I was familiar with some of the participants and they all seemed at ease talking to me. As well, I had tested and revised the interview protocol, and it worked very well eliciting a wide range of stories the educators appeared comfortable sharing.

Each participant was given a consent form as the interview began. Because all interview data was stored anonymously, participants were not required to sign or to return the consent form. Each interview was recorded (using an iPod with ambient recorder), stored in iTunes and transcribed using GarageBand. All participant identities were protected using a simple coding process. Transcriptions were produced in two forms: a Word document of the interview text (shown in Figure 3-1) and a table created for analysis (shown in Figure 3-2). Each interview was considered using two types of narrative analysis:

- Stories within each interview were identified and coded to permit comparison within and across professional groups, and
- Individual stories were analyzed using whole narrative analysis to assess similarities and differences in perspective, with a focus on identity and to determine if other themes were present.

I transcribed each interview myself, which allowed me to become immersed in the data. As noted, early data analysis began as I listened to the recordings and relived each interview. The process of transcription took several hours for each hour of interview. As I listened to the interviews repeatedly, I developed detailed notes. I conducted an initial analysis and took notes as I typed, which I incorporated into the text as shown in Figure 3-2. I had developed the analysis method while conducting the pilot study as I attempted to understand both the educator's perspective of the technology innovation and also the educator's view of his or her own professional identity. This methodology was crafted to achieve a thoughtful reading of the stories, recognizing that "narratives are interpretive and, in turn, require interpretation: They do not 'speak for themselves,' or 'provide direct access to other times, places or cultures'" (Riessman 1993 p 22).

Section C.2 How to read a story

The stories themselves follow loosely the definition developed for the literature review. "To become a narrative, discourse must acquire a particular structure: an original state, an action and an outcome must be present. A story is a specialized form of narrative that includes the structure above and adds to it actors, agendas and influence" (MacLeod and Davidson 2007a p 249).

When I developed the proposal for this study, I used data from the pilot interviews. Most stories in the proposal were identified following this definition, as it was derived from a thorough review of the research and adapted from the working definition of Mishler (1986) and Riessman (1993). This definition recognizes the difference between observed stories and constructed stories. An observed story originates in workplace exchanges. Constructed stories are shared in interviews. Because my study explored participant perspectives, with their inherent biases and errors, I chose constructed stories as the primary data source. My interest was in the personal perspectives of educators as they talked about their work and, thus, I needed stories they crafted and shared as data.

The primary differentiator between workplace stories and constructed stories can be seen through the storytelling. In a review and discussion of my pilot study (MacLeod and Davidson 2007b), I

describe this: “When stories occur within the organizational context, elements outside the story text (e.g., the story performance) earn a place in story analysis. Stories are seen as artifacts to be studied in the organizational setting. [My role as] an observer or outsider, allowed me to assess (with some objectivity) the story, its teller’s intended meaning and the impact of the story on the listener(s)” (p 249).

Figure 3-1: A Story in Parts

Story #1, from Interview #8:

... and if you pick one and it's not the right one ... do you change or do you stick ... and there's been an argument over that for years ... but what was neat is ... that kids online could immediately find out ... all sorts of background on that ... actually play it ... it would tabulate it all and they could try out their own guess about it ... and then they would come up with different sites that would give ... the mathematical aspects of that ... you know the richness of that ... was just amazing ... 'cuz when ... ahh ... when Obama was elected ... that day, I did the "how big is a Billion dollars? ... well, there was fabulous stuff ... on that ... because .. and then to follow that up ... we did "how much memory? " ... 'cuz, you know, a lot of them ... say "memory" like "gigabytes ... " but they don't know what it means ... (Interview #8, 5:35)

Narrative parts defined:

- *Original state = learning about probability*
- *Action = seeking online probability tools*
- *Outcome = lesson about "change or stick"*

Story parts added:

- *Actors = students and teacher*
- *Agendas = lesson about life*
- *Influence = teacher uses technology to teach how big a billion dollars is*

The story shown in Figure 3-1 (above) is analyzed in Figure 3-2 (on page 60). The story begins with narrative elements—original state, action and outcome—and to it is added the story elements as defined earlier—actors, agendas and influence. The analysis process for all stories is described in the following section. It is helpful to note that the illustrations, called “vignettes,” appearing in the following chapters are excerpts from stories similar to the one illustrated here. This technique of analysis was developed and tested during the pilot study, the details of which are shared in Appendix C (MacLeod and Davidson 2007b).

Section C.3 Reading the data table

The method chosen for this study requires consideration of whole stories in an effort to uncover patterns and themes present in the text. As Casey notes, “rather than interrogating a narrative using concepts from an academic discipline, researchers are now discovering that they need to attend to its internal patterns of priorities. Every narrative is highly constructed text structured around a cultural framework of meaning and shaped by particular patterns of inclusion, omission, and disparity. The principal value of a narrative is that its information comes complete with evaluations, explanations, and theories ...” (1995 p 234).

The stories considered here express the opinions, values and perspectives of educators as they consider their professional lives and technology innovation. And, while the analysis framework developed for the pilot study extends from Mishler (1986) and Riessman (1993 2002), Gabriel’s recent research into organizational storytelling also contributed to the theoretical lens applied in this analysis. He suggests that, “stories are emotionally and symbolically charged narratives. They do not present information or facts about ‘events,’ but they enrich, enhance, and infuse facts with meaning” (2009 p 135).

Accordingly, my analysis did not search for objective facts associated with an experience or set of experiences, but rather it was an investigation seeking to understand *how* participants made sense of their technology experiences. Because I interviewed several educators who referenced specific organizational events, I was also able to consider their varied perspectives about organizational occurrences to see how they understood these signals and connected them to their view of work. To quote Gabriel, “the truth of a story lies not in its accuracy but in its meaning – and paradoxically the inaccuracy, the distortion, or even the lie in a story can offer a path towards the deeper truth it contains, at an individual or collective level” (p 135).

Figure 3-2: Identifying Story Themes - Analysis of Whole Stories

Story #	Transcription from Interview #8	Impressions/ Reflection	My interpretation	What's this story about?	Story Theme
#1	(5:35) ... and if you pick one and it's not the right one ... do you change or do you stick ... and there's been an argument over that for years ... but what was neat is ... that kids online could immediately find out ... all sorts of background on that ... actually play it ... it would tabulate it all and they could try out their own guess about it ... and then they would come up with different sites that would give ... the mathematical aspects of that ... you know the richness of that ... was just amazing ... 'cuz when ... ahh ... when Obama was elected ... that day, I did the "how big is a billion dollars? ... well, there was fabulous stuff ... on that ... because .. and then to follow that up ... we did "how much memory? " ... 'cuz, you know, a lot of them ... say "memory" like "gigabytes ..." but they don't know what it means ...	<p>I'm busy; engaged with these kids all day and we're always doing something new.</p> <p>There are many ways technology can be used in my classroom. I find that by not controlling the kids and by encouraging them to explore in a way that works for them adds richness to the learning experience.</p>	<p>This teacher is comfortable with a dynamic classroom and activities that are either lead by or influenced by the kids.</p> <p>She seems to be less concerned about the flow of a particular lesson (according to her plan), than she is about achieving a meaningful outcome for the students.</p>	<p>Getting the kids involved and excited about learning.</p> <p>Flexibility and responsiveness</p>	Student learning

The interviews were designed to “shift attention away from investigators’ *problems*, such as technical issues of reliability and validity, to respondents’ problems, specifically, their efforts to construct coherent and reasonable worlds of meaning and to make sense of their experiences” (Mishler 1986 p 118). To seek the core narratives and stories in this research study, after 10 interviews were completed, I transcribed and conducted an initial analysis. I then examined each interview for the stories it carried. During the pilot study, I had developed a four-step process for analysis, which I used to analyze each story or partial story within each interview transcript. I recorded my initial impressions and reflections and then I made an initial interpretation. Next, I attempted to determine an essential core for each story. *What’s this story about?* Reading left to right (Figure 3-2), from the transcription to story essence, each analysis step helped me to uncover a story’s theme. Organizing the entire interview narrative into the second column enabled me to highlight a fuller interpretation of the text. As indicated, the review began with transcribed text (again, working left to right), I added thoughts about the interview and the

stories told. I added preliminary impressions in the participant's voice (in column three). This step was crafted to clarify participant's talk (insert the phrase "*in other words ...*") and to refine wording of stories for analysis. In the fourth column, I switched the voice from the participant's to mine to generate an imagined conversation, which validated the interview analysis (insert the phrase "*I think you are saying...*") and is consistent with narrative analysis methods I followed (Swenson et. al. 2003). Moving right again, the fifth column distills the text to a summary statement. Defining a summary phrase does not reduce the text, as Riessman cautioned. Rather, it serves as a macro statement intended to articulate the "fuller meaning" of the story. Finally, on the left and right columns of the analysis table, the story is numbered (in the first column) and a story theme noted (in the last column). From this reading of the table, I was able to identify nine story themes that appeared repeatedly in the interviews.

Section C.4 Looking at parts and the whole

When the pilot study was conducted I considered only full stories, possessing all the elements of a research story as Boje (1991) originally defined it. However, more recently, research by Sim et. al. (2009), among others, argued that a single story could be told in snippets and also over time and it is valuable not to overlook elements of a story simply because it is not presented as part of a whole. Brown et. al. posited a similar argument, suggesting that stories are crafted and expressed by "multiple characters, agents, contexts and occurrences [that] overlap and interweave—often in ways which are both uncertain and ambiguous" (Brown, Gabriel and Gherardi 2009 p 325).

I found evidence of partial stories as well as whole stories in my interview data and so have incorporated both story types in my analysis of the study data. By considering both story types for my analysis, I did not feel I had to force a story theme. Rather, I was able to let the story themes emerge through the text. This is an important analysis element as story themes were not identified and made to "fit" to the data. Instead, data was taken as a reflection of the participant's experience and themes emerged naturally from my consideration of the text.

Stories from each interview were considered separately, and themes were assigned to each story. No master list of story themes was developed, allowing each story to earn its own label. However, once story themes were assigned for individual participant interviews, I compared the themes identified across interviews. Because the labels given to story themes served simply as proxies, rather than categories, I could consider and compare multiple stories across the collection of interviews. When individual story themes were compared, I sometimes found that themes could be collapsed or consolidated. For example, stories initially assigned the proxy “recognize my contribution” and “notice me” were collapsed into a theme called “show off.” Another story, originally assigned to “notice me,” on subsequent review became “outside looking in.” These shifts in proxy name occurred as story themes became more clearly defined. The process of confirming the story themes was iterative and required multiple comparisons of stories within and across interviews (Creswell 1998 p 150; Strauss and Corbin 1998).

Section C.5 Assigning labels – Stories, narratives and vignettes

In the following chapters, I discuss the findings of this research study. I use the terms story, narrative and vignette when I refer to the interview passages used to illustrate a story theme or identity lens. As with many researchers, I use “story” and “narrative” as synonyms, following the definition articulated in section C.2 of this chapter. While I have defined “story” as a more precise narrative, in which actors, agendas and influence are at play, I have followed the practice of others in using story and narrative interchangeably in my discussion. “Vignette” is the term I use to reference a specific passage chosen to illustrate a particular point about the data. A vignette is not necessarily a full story, as defined in this chapter. However, for clarity and conciseness I have selected only enough of the passage to make my point clear without adding significant length to the chapter or discussion.

Section D. Assumptions and limitations

This case study explored the technology innovation experiences of educators in the middle school of an independent educational institution. The school's leadership, already committed to excellence and creative learning, had recently introduced a strategy to transform teaching and learning through information technology innovation, making this school a perfect setting to explore the rich possibilities of transformation. Open-ended qualitative interviews were conducted and analyzed using a framework developed initially following Mishler (1986) and Riessman (1991) and, during analysis, incorporating the research view of Gabriel (2009).

In conversations with my committee chair, we discussed my understandings and analysis. She asked questions about my methods to check that my process remained intact and authentic. While no researcher is without bias and no study can be conducted from a perfectly neutral perspective, throughout this research effort I was conscious of my personal involvement in the school's broader learning community. I focused on providing an analysis thorough in its treatment of data, without unnecessarily or inappropriately inserting outside information. That my own work was entirely separate from the middle school aided this goal. In reality, I was able to observe certain processes from a distance. However, other than through the interviews, I had no direct access to lessons, processes, relationships or other study data.

Section E. Conclusion

In this chapter, I summarized the specific research questions addressed. I then outlined the research approach I used including the relevant theory and the extensions crafted to support the analysis needs of the study site. In this chapter, I also introduced the research site, including outlining why I found it suitable for exploring professional identity negotiation during technology innovation. I provided a detailed explanation of the research methodology, including data collection and analysis methods and I provided a story to illustrate both the elements and process to derive the story themes, all of which frame my findings.

In chapter four, I define each of the nine story themes and include story vignettes (or story parts) to illustrate the significant aspects. In chapter five, I extend the story themes by grouping them into identity lenses and in chapter six, I outline how specific organizational values, which were present in the stories told, influence identity negotiation.

Chapter 4

Story Themes (Data)

Narratives carry meaning and cultural value because they encode, implicitly or explicitly, standards against which actions of the characters can be judged

- Brian Pentland (1999 p 714)

To understand how individuals associated professional identity with their understandings of technology innovation in learning environments, I analyzed data from 20 interviews. I explored how educators (teachers, technology specialists and administrators) talked about technology innovation in classroom settings and I identified nine story themes, each of which expressed a view of technology as it connected with the educator's identity. Telling stories about students, colleagues and the learning process or environment, these educators expressed a clear and strong (although not necessarily positive) relationship between their views about and understandings of technology innovation and its relationship to their professional identities.

This chapter defines each of the story themes identified and summarizes their presence in the narratives shared. It is organized as follows: Section A, summarizes the frequency and patterns of story themes to be developed further in chapter five. In section B, I define the elements of a story theme as I found and applied them. In section C, I introduce the nine themes and provide brief narrative illustrations for each. In section D, I summarize this initial data, outlining implications for technology innovation in classrooms and identity research as it relates to educators in school settings.

Section A. Presence and Patterns

In this section, I outline how story themes, which do not necessarily constitute full stories themselves, appeared in the interviews. From the initial analysis of interview data, 412 instances of story themes, each illustrating one of the nine identified, were found. Each story theme is characterized by three elements: focus (student or self), technology view (positive, negative or

neutral) and professional development (positive, negative or neutral). The nine story themes to be considered in this section are shown in figure 4-1 below:

Figure 4-1: Nine story themes

Story Theme	Focus	Technology View	Professional Development
“Student Learning”	Students	Neutral to positive	Positive – connected to pedagogy
“My Kids”	Students	Neutral to positive	Positive – connected to helping students
“Summer School”	Self	Positive	Positive – connected to personal learning
“Let’s Meet”	Self	Positive	Positive – connected to collaboration
“Tech Toys”	Self/Students	Very positive	Positive – connected to new technology tools
“Just Ask!”	Self	Very positive	Positive – connected to access to resources
“Show off”	Self	Very positive	Positive – connected to opportunities to present
“Outside looking in”	Self	Neutral to negative	Neutral to negative – generally resigned
“Out with the old”	Self	Negative	Negative – generally resistant

Because the interview questions were open-ended and the stories told by participants did not follow a particular script, each story theme was not necessarily present in all of the interviews. However, to be classified as indicative of a particular theme, certain elements had to be sufficiently present. For example, “student learning” and “my kids” possess many similar characteristics. However, each theme does contain subtle, yet clear, differences. To be considered under the theme “student learning,” the story must reference pedagogy, a learning experience or a classroom lesson. “My kids” narratives may also contain text referring to teaching or learning but they will also articulate a personal connection between the educator and her students. Similarly, “outside looking in” and “out with the old” may initially appear to be comparable. However, statements that are judgmental of current practices or incorporate comments about preference for previous practices (e.g., connecting change to a decline in collegiality among faculty members) characterize “out with the old.” “Outside looking in,” as a story theme, may also convey fondness for the past, but the story is less judgmental and is shared, in form and style, in a more observational manner.

Figure 4-2 (on page 68) summarizes the different themes present in each interview as well as the number of times each theme appeared. Looking at the table, we can see that educators told stories articulating several different theme categories and that some interviews included a wider

range of story themes than others. Interview #3 contains the fewest number of differently themed stories (three), while interviews #9, #11 and #15 covered the most ground—each transcription contains eight of nine different story themes. This table also shows how story themes do not correspond directly with organizational role. For example, an administrator shared story in interview #2 whose themes matched most closely with interviews #13 and #17, provided by classroom teachers.

Although the study was set in a middle school and the majority of participants were classroom teachers, the most frequently occurring story themes were “just ask,” “let’s meet” and “technology toys.” While the purpose of the question set was designed to glean stories about technology innovation experiences, I was surprised at how eager most educators were, regardless of their organizational role, to share detailed perspectives about technology innovation in their organization. For those who expressed positive experiences about the changes occurring as well as their own role in the innovation process, their stories generally fell under the “just ask,” “let’s meet” and “technology toys” themes because their accounts were positive in tone and content. Educators who offered neutral or negative stories about the technology innovation initiatives occurring or about their own role in the organization’s transformation undertaking also shared “just ask,” “let’s meet” and “technology toys” narratives. However, their stories frequently adopted a pejorative tone. These importance differences will be discussed later in the chapter. How different groups of themes help us understand professional identity is considered in chapter five.

The table in figure 4-2 (on the following page) is ordered according to interview number, rather than according to the patterns present. The recording for interview #4 was damaged and thus has not been included. For accuracy and consistency, I have left the numbering for the interviews to reflect actual order. No data for interview #4 is available.

Figure 4-2: Story Theme Present in Interviews

Story Theme	Interview Number																				
	1	2	3	5*	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	TU
Student Learning	T	A		T	TS	T	T	T	T	T	TS	T	T	TS		T	T	A	T	T	
My Kids			6	5	3		6	4		5	2	1	10	3			2	2	3	5	57
Summer School			3	4	1		10	2	4	7	1	1	1	1	5		3		1	3	47
Let's Meet!							1	3		2		2		2				4			14
Tech Toys	7	7		4	6	2	4	3	5	5	5	1	3	5	7	4		6	5	3	82
Just Ask!	3	1		2	4	3	4	4	1	1	5	5	2	6	3			4	4	2	54
Show Off	6	3						5	2	1		4	2	4	1	4	2	2	6		40
Outside Looking In	1	2				8							1		1	1	4				18
Out with the old		9				1		1		1		4	2	1	5	7	6				37
Total	17	22	13	20	19	16	28	28	14	24	19	20	25	26	24	20	18	23	19	17	412

* The recording for Interview #4 was damaged.

Legend
 T = Teacher
 A = Administrator
 TS = Technology Specialist

Section B. Identifying elements of a theme

Stories gathered during the pilot interviews were analyzed using whole story methodology (Bruner 1990; Riessman 1993) to uncover patterns within and across the stories told. From the outset, I found a strong focus on professional identity in conversations with teachers, as well as with their administrator and technology specialist colleagues. In particular, these educators expressed stories about innovation with passion and frequently made direct connections between their work, their views of technology, the recognition and reinforcement (positive or negative) they received from their organization as well as the way technology innovation occurring in Independent School affected their classrooms or offices and their students' learning. Frequently, educators also provided detailed narratives of their personal experiences with innovation, either through organizationally prompted undertakings or their own experimentation. Educators also used stories of innovation to articulate how they saw technology as a spotlight, which the organization used to feature some educators while casting a shadow over others.

While the interview protocol was designed to elicit stories about experiences with technology innovation, the stories told varied widely, particularly in the type of anecdote educators chose to share or the aspects of the story they emphasized. In some stories, the educator was featured prominently. In others, either students or colleagues were at the center. In addition, educators shared a range of views about technology as well as the school's efforts to support them through this transformation. As the data gathered from successive interviews grew, I was able to uncover distinct patterns within the broader scope of identity narratives. These patterns traced three main paths, which are summarized in figure 4-3 below:

Figure 4-3: Elements of a Story Theme

Focus		Technology View			Professional Development		
Student	Self	Negative	Neutral	Positive	None	Colleagues	Self
Orientation toward students; not self	Orientation toward self, either as teacher or innovator	Technology is harming the way we teach, our school and my career	Technology has little or nothing to do with my classroom	Technology is transforming education; I'm a key part of this	PD is not shared evenly; it does not exist for me	PD is the opportunity to learn from interesting colleagues	PD allows me to grow and to shine; I like the recognition

Section B.1 Focus

In interviews, educators typically shared stories that articulated student experiences or the educator's role in creating the learning environment. Across the nine story themes, focus tended to be bifurcated; seldom did narratives convey equal emphasis on students and educators. In most stories, educators emphasized only the student (without reference to self) or the classroom and learning environment the educator created. In these latter stories, educators mentioned students as an afterthought, if at all.

Two illustrations are presented below. Note that the vignette itself, as discussed in chapter three, is a relevant excerpt of a story told during an interview. Each chapter follows the same vignette numbering strategy (chapter number followed by the vignette number, e.g., #4-1) to facilitate easy reference within and across chapters. Each of the vignettes in this chapter have #4 as a prefix, while vignettes in chapters five and six are assigned #5 and #6, respectively, as prefixes (e.g., #5-1 and #6-1 denotes the first vignettes in chapter five and in chapter six). In parentheses, following the text of the vignette, a specific interview reference is provided. The interview (which is summarized in figure #4-2) is identified, followed by the time marker indicating the beginning of the passage being cited (e.g., Interview #14, 23:32). This practice is followed for all vignettes in each of the chapters.

Vignette #4-1 illustrates student focus. It was taken from a classroom teacher's story about learning, differentiation and the role of technology in classrooms. It illustrates student focus because the classroom teacher's description of a perspective of technology and student learning does not refer to the teacher nor does it include data about her own experiences:

Vignette #4-1: *And, so the kid—himself or herself—is not making a choice about what would work best for them as a learner or would best represent their strengths. However, because the technology does have these rich environments in it, I think there's some differentiation that just happens. 'Now I can put music and I can do this and do that ...' And, so, if you are just thinking about the kinds of learners that you have, any one assignment, if you are using lots of media in it, could potentially touch lots of kids more meaningfully than just writing a research paper.*

But, it's still not as high an ideal as I would aspire to ... which is to assume that they know the technology and say, 'OK, however you are going to do this, you need to meet these goals. You can do a film, you can do a PowerPoint' ... and that doesn't happen in the middle school. Everybody does the podcast. Everybody uses iMovie all at the same time. (Interview #14, 23:32)

This teacher's narrative is about the differentiated learning needs of her students. It conveys concern for students but no concern about the added work necessary to craft a series of fair assignments, which, although varied in task and output, measure similar skills and understandings and require extra time for grading and feedback. In conversation, this teacher spoke only of her students, their wide-ranging needs and the challenges of finding the right technology solutions to create a truly rich learning experience for them. She expressed ideas about teaching and learning as though she was a seamless part of her students' learning processes. On the rare occasion she used "we" (as in "we educators"), she never singled herself out. In her story focuses on students not the educator.

Vignette #4-2 illustrates a self-focused narrative, which means the educator is present in this passage. First, she is present in the way she remembers the story and shares it with me ("So I said, ..."). Second, the educator is present as she articulates her concern about what others might think of her empty classroom:

Vignette #4-2: *So I said, well we need some more data. So, I divided them into groups and then divided the campus and said, "OK, you go here. You go here. Find people, talk to them. Take the little video camera, video their answers to 'what is the most important community program we face in Hawaii?'" Then, they brought them [the cameras] back and I took at the video cameras and uploaded all the video and the next day we watched the video of their research. And, it was great. It was down and dirty. Just collecting data. You know, we could have taken surveys around and killed a few trees. And then, we just sent them out and in the space of a class period.*

But then, I felt kind of weird. Because here I'm supposed to be teaching and I'm sitting in the classroom and I just sent all my kids away. What if somebody comes by, you know? I would kind of wander to see if I could see them. But, they went everywhere. (Interview #9, 29:30)

This classroom teacher conveyed concern about creating rich educational experiences for her students. Yet, she expresses her narrative in a way that shows she sees herself as clearly separate from her students. Vignettes #4-1 and #4-2 help to define the “focus” element of story themes because, while each shows educators interested in supporting and guiding students, each also reveals differences in perspectives about learning. While vignette #4-1 illustrates a teacher seamlessly integrated into her classroom pedagogy, vignette #4-2 shows a teacher and her actions separate from her students. Yet, both educators express concern for students and desire to use technology to create learning experiences that meet student needs.

Section B.2 Technology view

Technology was woven deeply into all narratives shared during these interviews. However, not all educators viewed technology the same way. While some considered technology to be transformative and critical to learning success, others viewed it as detrimental to the student’s learning experience and a catalyst for what they view as an erosion of education and scholarship. A third group seemed to see technology as unrelated to, or at least on the margin of, their work or teaching practice. These educators talked about technology as one of many resource tools, rather than as a logical extension to pedagogy. The three vignettes shown below illustrate respectively negative, positive and neutral views of information technology as a learning resource. Each illustrates how educators convey a particular view of technology as it relates to their professional lives:

Vignette #4-3 (negative): Overall, the people who’ve had that job (pause) well, you just go ‘guys’! Because [Independent School] has gone so totally in this direction, you can’t function without them, because they put you into that position where everything has to be done on the computer. To me, my job was more people oriented. It was serving the people there and the computer was just a way of doing it, whereas I think [Independent School] in general, is definitely—like I said—that’s their main concern. I mean you don’t spend that much money on anything without making it a priority. And it does concern me, because look at the money that’s gone into that place, and it doesn’t run any better now than it did before. (Interview #2, 7:25)

This administrator’s story conveys concern about a perceived priority shift in the organization: from people to technology. Her narrative expresses concern about technology innovation

occurring in her workplace and she conveys worry that organizational priorities are shifting into unknown and threatening territory. This vignette illustrates a negative view of technology because it shows an educator connecting experiences with technology innovation to concerns about professional identity and the growing gap she perceives between the job priorities she has identified and her interpretation of organization changing priorities.

In contrast, educators who shared narratives that portrayed technology innovation as positive told stories about opportunity, excitement and learning in which they asserted that many, if not all, aspects of work could be enhanced or even transformed through the addition of technology innovation to the classroom. In vignette #4-4 (below), the educator connects opportunity and community to technology. This educator also expresses technology innovation in the classroom as illustrative of the school's mission to build compassionate and caring students:

Vignette #4-4 (positive): *I think that [Independent School] is taking that next step to link a child with a computer with the world around them. So often [Independent School] talks about finding out more about the world, creating the whole or teaching the whole person, giving the whole experience to a child. Well, a child having the ability to study an earthquake on the Big Island and compare it to an earthquake in another part of the country, comparing the devastation there with the devastation here may put things into perspective that a class discussion may not, may not just do.*

A child has the ability to see first hand to see what happens with a tidal wave, like in Indonesia, those types of things. A child, a child sees something first-hand, that's where I think the real learning takes place.

We can always talk about it, discuss it, how we should work on the poverty and the homelessness, but when you see actual pictures, you see interviews and streaming video, it becomes real to them and now becomes something that's a part of their lives, especially with the little kids. They sometimes equate what's happening, what they see as in their neighborhood. If we can see the whole world as being in our neighborhood, I think that's in [our] mission statement, to make sure that we are taking care of the next generation. (Interview #3, 2:55)

A third and neutral perspective of technology innovation is shown in vignette #4-5. Here, it is considered essential but not overly glamorous or exciting. The educator does not express awe or intimidation, much less excitement, about the technology tools available to her. Instead, in the

narrative below, she expresses technology as integrated elements of her classroom and the learning strategies she uses each day:

***Vignette #4-5 (neutral):** [I see the goal of technology is] to make it (pause) as essential as a pencil. Technology is just there. It's not something fancy that we go to every once and a while. It's a part of learning and it helps the high end, it helps the low end, it helps the middle. And, it just facilitates more learning ... (Interview #11, 4:37)*

This educator recognizes technology as a core aspect in her classroom resource kit. However, she sees technology as an element within a larger system, rather than as the driver of classroom activity. Her educational plan is guided by pedagogy, student need and teaching philosophy. Specific technology tools she has access to, often made available through collaboration with her colleagues, support curriculum. She is neither inspired by nor intimidated by the technology innovation in her workplace. Instead, she plans her lessons to reach students in the manner she feels is most effective in achieving her teaching goals. Her narrative conveys no pressure to use technology. For her, if the best teaching solution is technology-driven, fine. If not, fine. Given the tremendous administrative emphasis being placed on the need for pervasive technology in this organization, I found it significant that some educators continued to emphasize curriculum over technology.

Section B.3 Professional Development

As with technology view, I found educators held strong but varied opinions about professional development. Most talked about or referred to professional development, either as it was connected to technology innovation or simply as they perceived it as part of their ongoing in-service training. Three vignettes, which express neutral, positive and negative perspectives about professional development, and the programs and opportunities at Independent School, are provided as illustrations. These vignettes help to characterize the professional identities of the educators I interviewed as they shared educator perspectives about professional development and its reinforcing capabilities for the organization. The vignettes illustrate how these educators interpreted events to which they are invited and their observations of the activities their

colleagues participate in (or not), both of which influence their understanding of the organization's priorities and its relationship to their work.

Vignette #4-6 and #4-7 depict professional development as an important element in an educator's ongoing training and thus illustrates a neutral view:

Vignette #4-6 (neutral): Well, I just got back from NECC, in June, which is the National Educating Computers Conference, which is the biggest one. Twenty thousand people at the conference center in Washington, DC. It's huge. And, yeah, I go somewhere every year. And, it's rejuvenating and it's enlightening and it helps me keep up with it. But, you know we read, we have journals, I belong to professional organizations. So, I mean, I think that's part of our job. (Interview #15, 14:20)

While she acknowledged the benefits she derived, "it's rejuvenating and it's enlightening and it helps me keep up with it," she also conveyed a view that she and her colleagues should be active participants in all kinds of professional development opportunities, either as leaders or participants. Earlier in the interview, she had expressed this perspective more directly:

Vignette #4-7 (neutral): All summer training is 'own time.' And, as teachers, we do it on our own time, too. And, as teachers, that was on our own time, too. I presented three workshops, not there but helping [specific grades] and that was on my own time. We don't get paid for any of that extra stuff. (Interview 9, 38:36)

Her perspective of her profession is that it is one of constant learning and growth through routine participation in professional development activities. She is not coaxed or challenged to attend conferences, to read journals or to lead seminars. She also does not seek recognition for her efforts beyond that which occurs in the course of the workday and does not express concerns about access to development opportunities.

Vignette #4-8 (on the following page) illustrates a positive perspective of professional development. The educator expresses joy at being invited to serve on a professional development committee and about valuing the connections she gained from participation in development activities:

Vignette #4-8 (positive): *I've been a part of the lab school for the last, since it started. And, so I've listened and taken part in wonderful discussions with leaders in technology in education. And, I think that's great. And, I love the fact that every kid has a laptop. I love the fact that I'm getting 10 iPods this year for my classroom, so that I can hand them out. (Interview #11, 22:10)*

This educator connected professional development activities with recognition and access. She talked about being recognized as an innovative teacher because she was invited to participate in a small, by-invitation committee. She treated her invitation to join the committee as though it were a pass that granted access to leaders in the field. She also talked linked her experiences to her students, suggesting they, too, benefitted from her participation: “I love fact that I’m getting 10 iPods this year for my classroom.”

The professional development opportunities discussed in vignette #4-9 (below) differs from the previous two illustrations. This vignette conveys a concern about access and availability. The educator also connects professional development to her view of her colleagues, who she feels are not sufficiently innovative in their teaching or use of technology. She suggests that a lack of incentives and insufficient requirements to motivate faculty to participate in professional development programs, in addition to limited offerings, might be the cause:

Vignette #4-9 (negative): *(long pause) Uhm, I'm not as positive about our professional development as I would like to be. Uhm (pause), I think there's professional development, if you want to go get it, in different ways, not just the official professional development days. But, there are things going on and people you can talk to and learn from and people who will hold classes and things.*

But, there are still a lot of people and I don't know if it's because down here, uhm, we're about to face. We're in the midst of a major shift of retirements and people fading out, moving on and transitioning. Not fading out, transitioning! Transitioning is a better word (laughs) to their next endeavors (pause) (Interview #9, 42:25)

This third vignette illustrates how blurry the lines can be between one aspect of the organization and another. The educator appeared to want to be candid as she shared her thoughts about the professional development program. However, she also appeared to feel some conflict criticizing

Independent School and her colleagues. Our conversation had not included discussion of her colleagues until talk shifted to the professional development program. When this educator began to convey her thoughts about professional development, she commented about both development opportunities and her observations about how ineffective it was. She associated the current professional development program with some of the problems she had with “outdated” colleagues. She cited the lack of requirement to participate, uneven participation and limited offerings as evidence to support her view.

As the interview continued, this educator resumed talking about her own professional development efforts. In vignette #4-16 (on page 83), she shares her expectation that educators in this school should participate in professional development opportunities as they pursue excellence in their work. Vignette #4-16 appears to contradict vignette #4-9. However, rather than interpret these passages as evidence of inconsistency, we allow them to illustrate the complexity of relationships within an organization and myriad of expectations and outcomes that exist. In fact, it is these variations that add to our understanding of professional identity as it relates to technology innovation.

Section B.4 Summary – Elements of story themes

Story themes help us consider how educators view their professional lives in an organization experiencing technology innovation. Throughout the interviews, I was aware that, while individual stories may possess elements of a particular perspective (e.g., student-focused vs. self-focused), in the course of a single interview, each educator shared several different types of stories, which reflected multiple and sometimes conflicting understandings. Accordingly, using a single story to illustrate an aspect of analysis does not suggest that educators possess single-minded perspectives. Rather, using a single story as illustration helps us to tease apart the multiple and myriad reasons for the challenges that underpin technology innovation in any organization, and in particular in the middle school of this organization. By first separating and

identifying specific themes, we are able to trace patterns and look for alignment, as well as gaps, between themes.

The second level of analysis, where groupings of story themes are considered, is the subject of chapter five. In the following section, I outline each of the nine story themes that emerged from the interviews. I provide a definition of the theme, as well as a vignette (or two) to illustrate how that theme was expressed in the interviews.

Section C. Nine story themes

Each of the nine story themes was identified using the analysis plan detailed in chapter three. Narratives that constitute story themes express perspectives about self and work and are driven by and reflective of the participants' professional identities. While classroom teachers, technology specialists and administrators each told stories that did not always align with typical assumptions about organizational role, the stories they told did connect with transitional understandings of technology innovation. From these understandings, patterns, which became story themes, emerged. This section defines and illustrates each story theme found in the data.

Section C.1 Student Learning

Sometimes educators share stories about students to illustrate an experience with technology innovation. When students are a story's central focus, then the story theme may be "student learning." Talk about students, specific student learning experiences, with or without technology, and emphasis on learning that occurs illustrate the "student learning" story theme. These stories may also include general observations about the likeability of students, the classroom environment or enjoyment working with young people. However, such comments are ancillary, rather than central to the story. The language used in these narratives is also student-focused. Most stories do not include "I" statements. Typically, stories include "child," "children," "student," or, less formally, "the kids" or even "my kids." Emphasis is placed clearly on the

learner and not the educator, whether or not the participant is a classroom teacher, technology specialist or administrator.

In vignette #4-10 (below), a teacher shares a student's learning experience as though she is part of the process, too. Her narrative conveys humility; she claims no credit for teaching the student well. Her tone is one of absorption with her students; she discovers along with them. This narrative represents the story theme "student learning" because the educator's story conveys her focus on students, their engagement with learning and their successful acquisition of skills. Subordinate to the students and their successes is the learning environment she created to facilitate learning:

***Vignette #4-10:** Because it gives us the hands on, right then and there. We don't understand it, we don't get it, we more clarification, we live here on an island and sometimes we are reading a novel set in the Midwest and we don't know what a sickle is or a plow, pulled by a horse or something like that. We can go right online and pull up that image. And, they can create the images in their heads then, as they're reading. So, that the reading becomes more realistic and they can visualize it. (Interview #11, 2:23)*

Similarly, the educator, whose interview provided the vignette #4-11 (below), is engaged fully with her students and does not comment on her own role in the learning process. As with the vignette #4-1 (on page 70) and also #4-10 (above), when the educator must include herself in a story, she uses "we" rather than "I."

Her excitement about the learning occurring in her classroom is palpable. As this story unfolded during our conversation, the classroom teacher became more animated about the discoveries her students were making and the successes they enjoyed with hands-on technology research. Her memories were so positive, she began gesturing with her arms, speaking in a lively voice and laughing. Throughout the tale, she did not reference her own cleverness at creating an effective lesson plan or using technology well nor did she seem interested in seeking recognition for designing an outstanding teaching moment. Her focus was exclusively on her students' experiences:

***Vignette #4-11:** Well, you know whether it's taking a sample or figuring out proportions. Doing like, the last one we did, the last week of school. We'd done probably and there was a lot of simulation for probably and also half-lives you know but this one was that famous one about door #1, 2 and 3. And, if you pick one and it's not the right one, do you change or do you stick? But what was neat is that kids got online and could immediately find out all sorts of background on that. Actually play it. It would tabulate it all and they could try out their own guess about it and then they would come up with different sites that would give the mathematical aspects of that. You know the richness of that was just amazing! (Interview #8, 5:17)*

In vignette #4-12 (below), a technology specialist shares a classroom project. Her connection is with the students and their teacher. Her focus is so direct it is as though she was part of the teaching process and not someone who provides indirect support to the teacher and students and is essentially one step removed from the lesson. Although she did not participate in the lesson, she shared the narrative as though the assignment was her own. She expressed a view that her work as a technology specialist, supporting the middle school, connected her personally and directly to the assignment. Interestingly, although she did not teach the lesson and was not always present in the classroom when the lesson was being conducted, she shared the story as though she was directing the activity and participating with the students:

***Vignette #4-12:** That's where they actually start off with the research. And then, from there, they go ahead and they create a PowerPoint project, based on their research. And, from there, they actually create an iMovie that is actually put into the PowerPoint. And then, from there, they do actually end up presenting it to the rest of the class and basically, it's using the technology skills to show, to showcase their learning and it does use the computer and it uses multiple facets of the technology to do it. Uhm. So, and the kids at this point have most of the skills, so [the math teacher] can jump right in and say, "OK, this is what we're going to do ..." And, and she doesn't have to worry about teaching the skills. (Interview #5, 5:11)*

Clearly, students are at the center of this narrative about technology use in the classroom. The educator does not specify that she taught the kids to use the technology and she mentions the classroom teacher simply to support her point about the students' skill, rather than to position herself or the teacher as a central part of the story. Looking at the theme elements, her emphasis is on student (rather than self) and she conveys a positive view of technology. There is no direct reference to professional development, which is normal, as not all vignettes are excerpted from

stories that incorporate balanced expression of the three theme elements (focus, technology view, professional development).

Section C.2 My Kids

Students are also featured in “my kids” stories. While the story focus is less oriented toward specific learning, most still illustrate experiences with information technology. Educators use nurturing language in these narratives as they convey a wider view of teaching and learning. Included in this theme are stories about kids in general, the classroom and the overall school experience. In each of these stories, enthusiasm about working with students and middle school learners, in particular, is evident. Words chosen to express thoughts are emotional, “I love” or “I hate,” and convey the educator’s connection with students. Students are presented as important people, deserving of compassion, almost empathy, for their school learning experience (e.g., their personalities and their issues). However, while stories themed “student learning” place roughly balanced emphasis on students and their learning, “my kids” stories focus more on the kids themselves and less on their learning. Professional development may also be present, but only as it connects to enriching the environment for kids.

Vignette #4-13 illustrates a teacher’s empathy toward struggling readers. During our conversation, she spoke passionately about her students and their efforts to overcome reading challenges. Her narrative articulates her students’ need for support. I was surprised about how concerned she seemed as she talked. Before and after the interview, while she was very polite, she was also quite reserved. Her fervent declaration was unexpected:

Vignette #4-13: *I’ve been working with kids who are struggling here and instead of thinking we can do it the old way and that they are just going to get it, we have to put the tools in place that will support the kids who are struggling. And, to even help our other kids go farther and, uhm, I think teachers don’t necessarily realize how important the audio part is, and how much that really does help (with emphasis). And, so I’d like to see some of our texts and some of our novels, I would love to see them be able to listen to them and not always having to read them. Cuz, I, listening and reading at the same time, constitutes reading for me. Whereas, others think ‘no, you just read it out of that text and that’s just reading.’*

But, I think that for some kids, they have to hear it, they are better when they hear it. So, understanding the differences. I don't necessarily know what I would do, but I think that we need to explore (pause) different ways to teach reading and comprehending. (Interview #11, 14:36)

When educators shared narratives under the “my kids” story theme, they talked with enthusiasm and passion and conveyed a sense of advocacy. The tone and tenor of the stories embodied the message, “My kids need me. I am a lioness who protects her cubs,” more than, “This story is about creating an environment to support student learning.” Vignette #4-13 (above) illustrates concern about the lack of appropriate technology tools available to support her students. Her narrative conveys a sense that she is uniquely qualified to assess what was needed for her students and why. Her narrative is framed by thoughts about past technology acquisitions, which she considered to serve only the creative interests of adults, rather the learning needs of her kids, or students in general. She was prepared to advocate for a specific set of technology tools. Note, the placement of the teacher, as advocate, within the story, shifts the them from “student learning” to “my kids.”

A technology specialist shares a story themed “my kids” in vignette #4-14 (below). This educator shared his stories with a quiet passion, conveying concern for student welfare. The narrative depicts students as young, vulnerable and in need of guidance and illustrates how the “my kids” story theme incorporates a participant’s understanding of the student/teacher interchange in a way that mutes emphasis on pedagogy. This story differs from a “student learning” story because emphasis is placed the broad learning environment and the student’s experiences outside the classroom. His story conveys understanding of the risks accompanying significant technology use in schools. Yet, he articulates comfort with these risks because he assigns responsibility to the adults to set boundaries, teach restraint and push students toward maturity. This narrative is about students and conveys a positive technology view. Because its focus is student well being, rather than student learning, it illustrates the “my kids” story theme:

***Vignette #4-14:** Students are really engaged with the software and they love what they have with the laptop. But, they don't know their limits and they don't know the limits of the technology. So, they don't know when to stop.*

And, so there's this, well it becomes skewed on the part of a lot of kids because they this laptop, this powerful tool with them all the time. But, it's not just a learning tool to them. It's their social life. It's how they connect with their friends. It's how they make friends and it's how they keep friends.

And, so, I think where the school's at now is it's not about making converts and saying, 'Why don't you try this out?' It's now, 'Watch what you're doing with this thing. Slow down a bit. Don't get too far afield from what we're trying to do with it.' (Interview #16, 10:15)

Section C.3 Summer School

The “summer school” story theme focuses on curriculum and engagement with other adults. The story focus shifts from student to self. While students attend summer school and participate in educator created summer programs, students are not typically featured and frequently not even mentioned in stories. The stories share experiences testing new curriculum for student learning or excitement about professional development. In both types of stories, the participant and other adults feature more prominently than students. While these stories convey passion for teaching, joy is associated with colleagues, new technologies or new professional skills.

The same educator shared vignette #4-15 (below) and vignette #4-11 (on page 79). Comparing two stories, told by the same person, allows us to learn more about how story themes are defined. Vignette #4-15 is a “summer school” story because it conveys excitement about professional development (leading a summer school creative learning project) and it places the educator as its center. Students are not present. Conversely, vignette #4-11 is a “student learning” story. It emphasizes students; the teacher is absent entirely. In conversation, while this teacher was always enthusiastic and generally student-focused, she expressed similar enthusiasm for professional development. Vignette #4-15 is a “summer school” themed story because it focuses on the educator and her summer school experience:

***Vignette #4-15** That's when I started [teaching summer school], encouraged by my colleagues. 'Cuz [teacher] had done one for students going into eighth with all her math club stuff and math challenge. So, she was saying, 'You know, this really works.' And I thought, 'I've always wanted a laboratory to try some of this stuff out.' So, I did it for years. And, you know, every summer I would try new stuff out and a lot of it became part of our curriculum. (Interview #8, 33:47)*

Consistent with other summer school stories, this vignette celebrates collegial affiliations associated with summer school colleagues rather than working with students. The educator describes her experience using positive and affirming language, articulating joy at discovering new, creative paths for professional development. Interestingly, as I listened to this educator's stories, I could almost hear the mental line she drew to separate her regular school year focus (e.g., her students as illustrated in vignette #4-11; "student learning") from her summer focus (e.g., herself as illustrated in vignette #4-15; "summer school"). Her excitement about her work was consistent across both stories. However, her focus shifted.

A similar shift in emphasis can be seen in vignette #4-16 (below) about professional development. It illustrates a teacher's ability to initiate learning. She draws on the organizational script to justify her keen participation in summer professional development opportunities, citing the school's goal to create lifelong learners of faculty, staff and students:

***Vignette #4-16:** There's like different levels of that question, I think the overriding characteristic, I think at [Independent School] is that they want their teachers and their students and I would imagine the staff people, but I don't know I haven't experienced that as much, but I would imagine they want us 'to be all that they can be' for lack of a better cliché uhm, you know.*

So they encourage you to be, to continue learning and continue growing. And, I think when we do that it rubs off on the kids. You know, we don't get stagnant. They want us to be independent thinkers, just the same as the kids. And, uhm, which sometimes can be problematic, if you are trying to run the school (laughs) But since I don't run the school ... (Interview #9, 39:28)

When sharing this story, the educator became truly excited. She talked enthusiastically about role switching and her keen interest in working as a technology specialist, if only temporarily. While

it is unclear whether her enthusiasm was related to a desire to try something new or because she felt the technology specialist “grass was greener,” she clearly enjoyed the opportunity to become a technical expert, even if only briefly.

Section C.4 Let’s Meet!

The story theme “let’s meet” includes narratives about curriculum or professional development, each of which has a focus on self. These stories are not at all about students. The central theme of “let’s meet” stories is a desire for and satisfaction with meetings, conferences and other opportunities to gather with colleagues. Some participants were particularly keen to discuss professional development, personal growth opportunities and engagement with peers. They talked about participation in conferences and learning projects, and sometimes they shared narratives about initiatives they undertook independently. “Let’s meet” stories were not generally about classroom experiences, students or student learning.

The two narratives that follow incorporate self and professional development to express a perspective about technology fairs. Professional development to encourage collaboration among faculty, administrators and technology specialists, as they explored technology use in the classroom, is the topic of vignette #4-17 (below). This educator spoke positively, yet wistfully, remembering the collaboration and sharing at technology fairs and the opportunity a few teachers were given to showcase their interest in and success with technology. As a classroom teacher, he valued the technology fair design that “let you experiment, and ideas float.” He saw these events as supporting teacher learning and talked about his iNotebook presentation and the joy he felt when his colleagues adopted his suggestions. He indicated that “flexibility to try new things” without being mandated to do so was important. This vignette illustrates “let’s meet” because its main elements emphasize gathering with colleagues to experiment, share and learn:

Vignette #4-17: *It’s almost like resource fairs, a technology fair, ah, where [tools and technology] being used in different grade levels [were shared]. In the beginning, it was up to us to integrate, use, describe how we wanted to use it. And, I kind of liked that. It gave us the flexibility to try new things. They were very open with (pause), ‘Inspiration’*

was a writing tool that came in and it was embraced by a few in the beginning. And then, once others saw it, then everybody used it. And that's what's nice about [Independent School].

They let you experiment, and ideas float. Teachers can always bring in ideas. I used this iNotebook, taking notes on the computer and I believe that [teacher] did it also in his class. But I presented it at the Fair and people picked it up.

So they give you the ability to experiment and (pause) and to share your ideas. I don't think they so much mandated 'You must do this!' You know, I can't ever remember a time when they said, 'You must do this,' other than 'you must run through PowerPoint at certain grade levels.' (Interview #3, 13:50)

It is important to remember that all interviews contain multiple stories, many of which include elements from more than one story theme. Had the emphasis of vignette #4-17 been the teacher's technology skill or technology leadership, then the narrative may have been more illustrative of either the "tech toys" (C.5) or "show off" (C.7) story themes.

Vignette #4-18 (below) expresses an educator's view about the importance of and appreciation for professional development opportunities and the chance to collaborate with and learn from other educators:

Vignette #4-18: *I think one of the most important things that we can do and that we need to do is to maintain professional development and the support of the teachers. I don't think there is enough of me! Well, not me but our [technology specialist] people are around and we are spread too thin.*

And that's what I heard over and over again at the conference that I went to. Some people do three school districts or three schools within a district or whatever.

We want people to use the technology, to learn all the new tools and there's not enough. The other thing I would do is allow more time for it. One, the support, to give the support, but also to allow time within the week, the month, the day, to give the support [laptop program]. Not just, we do it here but to have the teachers to have the opportunity to see good practices and best practices and to actually have time to do hands on learning with all that we want them to do.

We had Promethean training last week and that was the best thing. And now, when I go into the classrooms today, I see the teachers using what they learned. But, you know, it takes time to do that. It takes time. (Interview #15, 36:56)

Much of this specialist's interview centered on valuing collaboration between technology specialists and classroom teachers to incorporate technology into curriculum. While frequently she blurred the different work tasks of teachers and specialists, particularly when talking about teaching a lesson and developing skills, in the vignette (above) she expresses clearly the priority she places on providing collaborative opportunities and support. Her assertion is that successful innovation in classroom settings is dependent on teachers collaborating with and receiving support from technology specialists. The vignette also illustrates her assumptions about access to professional development opportunities. Her "let's meet" story conveys a view that teachers and specialists need to meet together in school settings to make innovation happen. However, it also assumes a professional development setting where she can also meet with other technology specialists.

Section C.5 Technology Toys

Similar to "let's meet" stories, narratives in this section focus on the educator and other adults. Stories themed "tech toys" also emphasize participant relationships with technology. Participant views of technology may be positive or negative but "tech toys" themed stories express a connection with technology itself, although not necessarily with other people who work with it. Whether or not participants use much technology in their day-to-day work, these stories express strong opinions about the technology experience, what it is or appears to be. Often "tech toys" stories infer judgment about the positive or negative impact of technology on the school, its students, its employees, and its culture. It was in analyzing "tech toys" stories from the pilot study that the first clear link between professional identity and information technology emerged.

While "tech toys" narratives may refer to professional development, the main elements present focus on self and, typically, a strongly held technology view. Vignette #4-19 (below) illustrates

this perspective through a classroom teacher's narrative, which conveys full immersion in his own experience with technology:

***Vignette #4-19:** If you had been in here 24-hours ago, you would have seen this whole carpet. It was filled with boxes. It was like 'geek Christmas' for me. I just got boxes of some new technology stuff. I just get rained on with new technology stuff, which is just so exciting, which I get from lots of different sources. I've got a [professional development] grant this year for something and I've CPS, the clicker people, who just adore me. (Interview #20, 20:21)*

When I analyzed this interview initially, I developed the theme label "tech toys," as it captures perfectly the focus of this story and others like it: conveying great personal joy (focus on self) by having the freedom to play (positive technology view) with technology and being free to learn about new tools (positive view of professional development). This teacher is an active participant in many different professional development activities and, prior to our interview, had received a grant to purchase technology tools to "play with" in his classroom. The narrative does not mention students. Throughout our conversation, references to students were typically provided as evidence of an outcome or to compare (favorably) this teacher's students to other teachers' students.

Vignette #4-20a (below) conveys similar passion for technology and shares many of the elements of vignette #4-19. The educator is clearly excited about her technology experience. She makes a connection between her professional identity and her active exploration of technology. She is very focused on how she uses technology, how she sees technology and how much fun she has exploring new technology and sharing her discoveries with the school's IT staff. She sees her personal interest in technology as interwoven with her classroom technology use and she argues the entire school needs to adopt her view:

***Vignette #4-20a:** Exactly! It's an extension; it's a tool like anything else. The computer is like your [mobile] phone, your cell phone, you've got to know how to manipulate all the way through, front and back. To be able to use dual platforms is great, and I think that's our job, but it's going to take the faculty to embrace it as well and that's the hard part. (Interview #1, 23:55)*

Vignette #4-20b (below) occurred earlier in the interview. It is part of a story about advocacy for technology in classrooms. In her story, she positioned herself as pushing for innovation, suggesting she was uniquely capable of understanding the technology innovation needed and why. She referred to her students only to support her argument, rather than as the focus of her story:

***Vignette #4-20b:** I was like, you know, ‘come into my classroom and see what I’m doing and he was extremely helpful and supportive. And then once, well whatever happened in IT and then when [a new CIO] came, again it was another, and it always seemed like now he’s the guy I need to convince. But, when [CIO] came, he had all these cool toys, all the NEW (emphasis) hardware – not just Mac’s, he actually branched out to all the different other things.*

At that time, I was taking some classes at UH, and I was just doing this for professional development – you know not to get another degree or anything. But I was learning so much that I’d bring to [the CIO] and he’d go ‘oh my gosh’ and I’d show him what I had learned and then it was just like here’s another program and it will enhance PowerPoint and here’s what you can do, you can make these animation characters talk to the kids. And, you know then [the former head] would say ‘but how is this (pause) Again, you are just delivering the information’ But I’d say, ‘yeah – but the kids love it!’ (laughs). (Interview #1, 8:07)

Similarly, in vignette #4-21 (below) a teacher expresses his comfort being different than some of his colleagues in his technology approach. He refers to himself as an “outlier,” as he sees himself ahead of the technology curve, at least in this learning environment. He also connects his ability to use technology to his professional identity and, throughout the interview, his talk reflected his view that technology innovation means ubiquitous use, not simply classroom learning. He sees himself as a technology champion and he suggested that many of his colleagues do not appreciate his vision:

***Vignette #4-21:** I’m an outlier, uhm, because, I mean, you know, many of our teachers have been here X number of years, you know. I had them – coming through sixth, seventh and eighth grade. So, it’s not, it’s not about ‘for the kids.’ It’s not about using technology ‘in school.’ It’s about using technology all the time. For the teachers, who are well seasoned (chuckles), it’s about the technology here on campus because they don’t use it like that outside.*

I mean I just sat with two teachers at lunch today, teaching them how to Skype. There, you know, what Skype is, the whole concept around it? They are there just for, just for informal you know to say 'hi,' keeping in touch with friends, our kids are just you know (sighs) ... (Interview #10; 10:06)

This illustration, like vignettes #4-19 and #4-20, shows confidence with technology, using it and also experimenting with it. He decision to share his lunchtime Skype conversation, in which he supports his colleagues, suggests that while he is comfortable with the tools, he is not focused on being recognized for his skill. Had the story been expressed with more emphasis on the educator's expertise, it may have been themed a "show off" story (C.7). Because the narrative conveys the educator's joy using technology, and it is not about seeking recognition, it is illustrates the "tech toys" story theme.

Section C.6 Just Ask!

Stories themed "just ask" emphasize access to information technology resources. They focus on the educator and typically also convey a positive technology view. "Just ask" stories convey participant understandings of technology innovation in relation to their work. Stories typically reveal a link between the participants' professional identity and their views of technology use—either their own or a colleague's. Often anecdotes about the organization conferring different kinds of technology resources are included to reveal reinforcement activities. It is this key aspect – a story's orientation to access and support rather than the tools themselves – that separates the story theme "just ask" from "tech toys." "Tech toys" stories focus on the technology and the participant's prowess at using it. "Just ask!" stories are about power and access.

Stories emphasize people, not hardware or software, and viewpoints are subjective and not necessarily informed by fact. Technology is expressed as a reward for effort or, negatively, as a cost of working in this community. Of importance appears to be a connection between the participant and technology, as a reflection of being "in" or "out," and suggests an assumption that technology use provides access to power, recognition and reward. Essentially, technology

use is rewarded, as educators receive more technology and more recognition. Lack of use reduces and recognition.

Vignette #4-22 (on the following page) illustrates professional identity connected to technology use. An educator is recognized for her efforts to try new technology, to use it in her classroom and to share her experiences with her colleagues. This narrative conveys classroom technology use as exemplifying excellence. The narrative expresses an understanding that using technology leads to an enhanced profile among the professional community and also an expectation that because she is innovative and willing to try new information technologies she should be rewarded:

***Vignette #4-22:** I was supported all along even with [CIO], she was fabulous. I'm mean, she's the one who let me to have more computers in my classroom than were being allotted to people. If you came into my classroom, those computers were always being used, you'd think we have enough computers when they gave us those laptops but, and I don't know about the other [classrooms], but our classrooms, they were ALWAYS (emphasis) being used! (Interview #1, 24:45)*

As with other story themes, “just ask” includes negative as well as positive illustrations. Vignette #4-23 (below) illustrates a teacher’s feelings of abandonment, from support and recognition. Her narrative attributes her isolation to her inability to follow the school’s technology trend, and the corollary exclusion that resulted. Although she is young and a relatively new teacher, she expresses a sense of being overwhelmed by technology, despite the encouragement offered. Rather than feeling invigorated by the resources available or the opportunities provided to explore technology and to develop curriculum to leverage its capabilities, her stories convey apathy and stress. Perhaps offered ironically or as a challenge to the school, the vignette includes a comment that connects technology success with her worth as a person:

***Vignette #4-23:** Maybe offering too big of a menu (pause) because (pause) I can't even think of all the different things that there are but at various meetings, I've heard of so many different things and just for me, you know, maybe I'm a terrible person but (pause) it just kind of puts me in this state of apathy, like 'oh, that's cool, oh, that's cool. Oh, that's cool.' And, like I don't know where to start, you know.*

So, yeah, but maybe it kind of goes to that thing about who you are going to see as your resource. You know, like maybe if, uhm, if there were only four things to try, you're gonna be more likely, your going to have lots of people doing (pause) some of those things.

So, you have more colleagues around to do it to see as your resources as opposed to having an option of (pause) 10 things and then the people around you are only going to be doing maybe one of them, and not necessarily the particular one that you were going to do. (Interview #7, 14:46)

Vignette #4-23 illustrates a negative view of technology that, while present, was less frequently shared than the neutral or positive stories. Most stories that were considered to reflect the “just ask” theme expressed positive views, as shown in the following illustration, vignette #4-24 (below). Delight in the abundance of technology available (to those who know how to acquire it) is evident. This narrative expresses pleasure at being able to seek out and find technology tools. The story from which this vignette was drawn was only tenuously connected to the question I asked and the initial response provided. However, it seemed important to this teacher to share how easily she could get her hands on new technology. She expressed delight at both the access she had to technology and also to her ability to creatively use the tools once acquired:

Vignette #4-24: *No, that wasn't with the Flip camera though that was the actual GPS. I can't remember who it was and it was really funny because then I remember we had used them and I asked [the technology specialist] because [director of technology instruction] was gone.*

So I said '[Name], do you know where [the director of technology instruction] keeps these things?' and, he said, "well, I don't know, but I could email her and ask her. And, if she tells me where then are in her room, I can get [her secretary] to let me in." So, he emails her and she says 'I don't have any Flip cameras.'

And, then I'm like I know we HAD (emphasis) them! So then I asked [the summer IT director], 'Where did we get them?!' (Interview# 9, 34:54)

In addition to illustrating the “just ask” story theme because it emphasizes knowing who to go to for technology, it also illustrates the educator’s personal initiative and recognition. This educator talked a lot about her friendships with colleagues outside of her primary community and also with high-level administrators. Her stories revealed the connection she made between collegial

relationships with those in positions of power and access to technology resources, which, ultimately, supported her pursuit of teaching excellence as she defined it.

Section C.7 Show Off

Evident pride in technology use is a key feature of the story theme “show off.” During interviews, participants who told “show off” stories usually became quite animated. They appeared to be energized by the technology they had access to and enjoyed opportunities to showcase their projects and successes to colleagues, administrators, parents, and even school supporters and others outside the direct, academic community. At times, participants could seem almost boastful about their creative successes and their cleverness at mastering and, frequently, pushing information technology use in the classroom. Occasionally, some claimed they had invented new technology uses.

“Show off” stories differ from the other story themes. These narratives articulate a belief that the educator considers himself to be different or special and perhaps even accountable to a higher calling because of his creativity. Stories express comfort with attention and praise. Although each story theme possesses some unique and some overlapping elements, the “show off” story theme stands out because it is the only one to include boastful narratives that praise the talents of the storyteller. Regardless of organizational role, educators in this community tend to be self-effacing, to some degree. This cultural practice seems at odds with “show off” stories, which position educators as self-interested rebels. Because of this, I was surprised by some of the “show off” stories because they often presented the educator comfortable claiming the spotlight to celebrate their efforts and achievements.

The me-centeredness of a “show off” story is illustrated in vignette #4-25 (below). The teacher conveys her delight at being invited back, during her sabbatical, to showcase to her colleagues her blossoming technology skills. All story theme elements are present in this vignette: self is the narrative focus, the technology view is clearly positive and two aspects of professional

development are featured. First, senior administrators support her sabbatical course work and, second, she is invited to showcase her achievements to her colleagues:

***Vignette #4-25:** When I was on sabbatical, I came [back to Independent School] to show the other teachers what I was doing. I was like, ‘this is a SmartBoard – which [the former CIO] brought and I’m like this is how you use it and the teachers were like ‘this is crazy, it’s like a circus – and it was. But kids just LOVED (emphasis) it.’ (Interview #1, 14:34)*

Vignette #4-26 (on the following page) is similarly framed, although in this illustration support is implied, rather than specified. Here, a classroom teacher shares his excitement about work. He does not talk about working with students, facilitating learning or even meeting with colleagues. Instead, he’s excited about the freedom and flexibility of his workday, the opportunity to do what he wants in the manner he chooses and the recognition he receives for his many and diverse talents. The narrative contains elements of self and positive technology view. He expresses perfect contentment being at the center of all things:

***Vignette #4-26:** There is no other job in the world that would allow me to be as creative and flexible. I’m an historian. I’m a standup comedian. I’m a scientist. There’s no other job. People often say you should go into graphic design; you should go into computers. But then, my job would completely change. (Interview #20, 19:54)*

While visiting his classroom, this teacher showed me a variety of technology tools. He seemed truly absorbed by these tools and all the creative opportunities of each resource. His narratives assigned students a very minor role; he devoted his energy to his classroom and its technologies, which he said was the only one where this myriad of technology could be found. His stories positioned him as separate from his colleagues. For much of the interview, it appeared as though he wanted to be seen as significantly separate. Narratives emphasize teacher with his technology and his identity. Classroom, students, colleagues, and curriculum are ancillary.

The last two story themes differ from the other seven because of the sense of separation they convey. “Outside looking in” stories express marginalization, as though the educator is “window shopping.” Narratives convey observation of the mainstream and the decision not to “buy.” “Out

with the old” stories are more toxic and communicate isolation and stress, rather than simply separation. “Outside looking in” is considered first below, followed by “out with the old.”

Section C.8 Outside Looking In

Narratives that illustrate the “outside looking in” story theme share educator views about being on the margin in one of two ways. First, some tell of being so far ahead of the innovation curve they cannot be part of a typical educator group. These stories convey awareness of views that do not align with the conventional thinking at Independent School. These stories also convey a perception of self as innovator or technology champion, suggesting that being on the outside is a matter of choice.

Other narratives illustrating the “outside looking in” story theme are less positive as they express participant feelings of non-voluntary exclusion. These stories convey a view that certain educators are separate, even segregated. Participants talked about how their approach to work caused them to be left out of the mainstream community. Sometimes, narratives suggested others had compelled their isolation. Some of these narratives also included observations about colleagues who were “in,” connecting technology use to inclusion and recognition.

Vignette #4-27 (below) illustrates the “outside looking in” story theme because it communicates an educator’s voluntary separation. The narrative shows her perceived command of the technology lexicon and, although she does not use technology terms like “requirements determination” in her story, she expresses clearly her frustration at what she perceives to be the information technology department’s inability to listen to teachers. Her tone became pejorative as she described the committee ignoring the grading software she had found in favor of one they sourced themselves. She appeared mollified when she revealed that, in the end, she chose her own grading software and not the one the school provided:

Illustration #4-27: *Well, I understand why the school has chosen to move so slowly (pause) But, I know they had a tech group but I really don't feel like our input well, it's almost as if we didn't make an impression. Or, like the questions they asked us or they asked to look at some things that were kind of cool, but they were like 'here's this*

fabulous grade book program' [and] we were like 'yeah – but here are these features that I want – can you make it happen' That's what I would have like them to do, to listen and find a vendor for that. (Interview #1, 19:00)

Vignette #4-28 (on the following page) illustrates another view of the “outside looking in” story theme through its expression of resignation and uncertainty. The narrative positions technology as a barrier for the educator. Although she is aware of the tools available, she discusses them as though they are items on a shopping list. She is detached from the resources, almost to the point of being disinterested. When telling this story, her voice had a wistful tone. Following Wenger’s (1990) view of outliers, this educator’s narratives convey understanding that she exists on the margin of this community. She attributes her situation to technology:

Vignette #4-28: *(with a very tentative and somewhat resigned tone) OK, so, I think that there are just so many different tools available. So, many pieces like, there's a Smartboard and, uhm, and then there's the iPods. There were those, there are those libraries of video iPods that you can check out. And, uhm, then there's – not the hardware stuff – but the software stuff like Moodle, and, uhm, all the various Wikis, and blogs and all of that. And so, I feel that the more that's available, they want to encourage everybody to use a much of that as possible. (Interview #7, 3:02)*

This educator was extremely reluctant to talk about technology. Although she was young and teaching in a technologically well-equipped classroom, her discomfort with information technology was evident from the beginning of our conversation. Her narrative illustrates the “outside looking in” story theme because it shows how she observes the accepted and recognized undertakings of her colleagues while acknowledging that similar effort is not possible for her. Wenger (1999) writes about the different types of marginalization in a community of practice. This educator illustrates the pain associated with being a forced outlier. Her stories are important to consider as oftentimes initiatives to foster innovation create a community of haves and have-nots, as well as spotlighting those who are achieving, while leaving out those who are less successful, regardless of whether or not they are trying. Accordingly, this interview and the stories it generates are important to this study because of all it does not convey about innovation.

Section C.9 Out with the Old

The last theme identified was “out with the old.” As the label suggests, this theme is illustrated by narratives that express anger and frustration, mixed on occasion with pointed comments about changes occurring in the organization. “Out with the old” stories share, like the other story themes, participant views about work, colleagues and understandings of technology innovation in educational settings. The views these educators have about what is important seem frequently to be at odds with their perceptions of organization’s priorities.

The elements characterizing this story theme are a focus on self, a negative technology view and a negative view of professional development. Stories that comprise the “out with the old” theme are significantly darker in tone than “outside looking in.” Someone telling an “outside looking in” story may hope to be less marginalized at some point or may simply enjoy being outside, at least in the short term. More deterministic, “out with the old” stories suggest technology innovation is pushing the organization in the wrong direction. Not all participants who told “out with the old” stories were opposed to technology use inside or outside the classroom. However, when “out with the old” stories were told there was clear misalignment between the storyteller’s technology vision and the organization’s vision.

Three vignettes below illustrate “out with the old.” Each conveys isolation and resentment as well as harsh judgment about Independent School’s technology innovation strategy. Vignettes #4-29 and #4-30 were selected from the same interview. During our conversation, the teacher could not keep bitterness or loneliness out of his stories. His narratives tell of isolation and declining reputation, and they express loss as he mourns a cherished community-like culture, which, he feels, has been supplanted through organizational changes and employee turnover.

Vignette #4-29 (below) articulates this teacher’s feelings of isolation, which he attributes to barriers created by redesigned classrooms and workspaces and changed organizational structure, rather than his own (rather vocal) animosity toward the technology innovation occurring:

Vignette #4-29: *The teaming thing is fine, but it was the larger community that made things thrive. (To himself) Where does this happen? The lounge—and I've brought this up several times. You could say it's a place where teachers go to escape from the kids, but it was also a place where teachers would go to be with other teachers, to hear arguments, hear discussions, put out tendrils. Now there are what I call 'cave dwellers' (Interview #17, 27:10)*

Vignette #4-30 (on the following page) is expressed in a similarly negative tone. However, in this narrative he expresses frustration at the creation of a “help desk,” intended to offer (and track) technology support provided to faculty, staff, students, and the school community. The addition of the help desk prompted a significant decline in the number of faculty and staff seeking this teacher’s assistance with their technology problems. While he sees himself as a technology leader, he resents the help desk, its tickets and the barrier he feels it creates for him. Although he says his colleagues prefer to seek his guidance on matters of technology, the reality is that with the advent of the help desk, his knowledge power diminished significantly:

Vignette #4-30: *When IT started the (pause) having us do those tickets, I told [the senior administrator] 'that's fine, but you are still going still going to have the 'black market tech' and people are going to come to me 'cause they don't need to go to IT. And, they can't get a ticket filled that quickly. [The duplicating shop] is one where often there will be a problem with inDesign and [the staff] will come to me with a tech question and more often than not, I'll be able to solve it. (Interview #17, 15:27)*

The genesis of vignette #4-31 (below) differs from the previous two. This teacher, relatively new to the school, is unfamiliar with previous structures (including its faculty lounge). Her sense of isolation emerges from a belief that her lack of technology use in her classroom places her at a disadvantage. In this vignette, her skepticism about the attention given to the tech-oriented teachers is evident:

Vignette #4-31: *Yes. I would say that. I feel that. I feel that that's the case and, I feel that obviously kids, that obviously kids enjoy (pause) interacting with their computers, uhm, and so that might be another reason why people who choose to go that way are maybe more celebrated because, maybe it seems that what they are doing may appeal to the kids more.*

Or, tap into a mood that they are very comfortable with. So, and in the middle school there is a Faculty Tech Club. So, like on the first Tuesday of every month,

or something like that, teachers can choose to go to this tech club and talk about whatever the topic of the month is. So if you, so if a bunch of users, a bunch of intranet users want together to share ideas about intranet (Interview 7, 4:17)

Throughout the interview, this teacher spoke about technology and teachers, who she understood were considered to be innovative, with a somewhat disapproving tone. Her own view of teaching is at odds with the various celebrations of technology-oriented educators she's observing, as well as the vast resources she perceived as being allocated (e.g., the number of technology specialists and the professional development opportunities provide for technology training) to support these teachers. This dichotomy confused her because two of her core pedagogical values suggest that her situation should be different than it is. First, she believes that writing with pen and paper is an integral element of a scholarly English classroom. Second, she is confident that she was hired, at least in part, because she was not a technology-focused teacher. Her narratives suggest that her understanding of her value to her students and the school is that she does not aggressively incorporate technology into her classroom. Because of these firmly held convictions, on occasion, she seems to resent (or at least grow weary of) having to defend her lack of technology enthusiasm.

Section D: Summary and Implications

In this chapter, I introduced nine story themes to illustrate how educators associated an understanding of technology innovation occurring in a learning environment with their personal professional identities. The story themes were derived from interview data and articulate patterns drawn from the myriad perspectives of educators as they talked about their work and technology innovation.

Each theme was defined by multiple interviews. While some themes were more discrete than others, each theme is defined by a story focus, a view of technology and an understanding of organizational goals as observed through professional development activities and opportunities. Considering each theme separately allows us to see how educators connect their understanding

of the technology innovation they are experiencing with their understanding of their work and their professional identities. However, identity and organizational relationships are transitional and complicated. Consideration of groups of themes, present in a single interview, can be helpful to our understanding of technology innovation in this organization. The nine story themes defined in chapter four will provide the foundation for the identity lenses to be discussed in detail in chapter five.

Chapter 5

Story Themes, Identity and Talk about Innovation

An identity then, is a layering of events of participation ... As we encounter our effects on the world and develop our relations with others, these layers build upon each other to produce our identity as a very complex interweaving of participative experience ... In the same way that meaning exists in its negotiation, identity exists – not as an object in and of itself – but in the constant work of negotiating the self.

- Etienne Wenger (1999 p 151)

In chapter four, I defined nine story themes that emerged through whole story analyses of data from 20 qualitative interviews. By exploring how teachers, technology specialists and administrators talked about technology innovation as it related to their work, their students and their relationships with colleagues, I identified specific story themes, each of which was connected in some way with perceptions of professional identity. In this chapter, I reanalyze the data to consider story theme patterns and how they align across interviews. When investigating the implications of technology innovation for professional identity it is helpful to look for patterns and themes in work narratives, which suggest the presence of an identity lens. It is important to remember that an identity lens is a perspective at a particular point in time and in a specific context. It is not fixed. Nor is it a personality profile. All educators at times will think about their work and consider the efforts of their colleagues through different lenses.

This chapter identifies and discusses four identity lenses, each of which helps us understand how educators interpret their experiences, at a particular point in time, related to technology innovation. In section A, I outline how an identity lens integrates story themes to provide a broader view of professional identity as it influences and is influenced by technology innovation. In section B, each of the four identity lenses is illustrated using vignettes from the interviews. This analysis highlights that, while the lenses are helpful to our understanding of professional identity in educational settings, they are not “personality profiles.” Instead, we see that an identity lens is a snapshot of a perspective, and educators use different lenses in various ways at different times. In section C, I summarize this analysis.

Section A: How story themes form an identity lens

In this section, as an introduction to the data outlined in this chapter, I define how I theorized the identity lenses from groupings of the story themes presented in chapter four (figure 4-1).

Because identity lenses extend from groupings of story themes, they are defined using the same dimensions used to identify story themes: focus, technology view and professional development. Essentially, identity lenses amalgamate story themes by drawing together story theme patterns, as they are present in an interview. This process of identifying lenses was possible because of the whole story analysis method I used to study the data that enabled me to see how educator perceptions of technology innovation were influenced by their professional identities and how professional identity was being shaped and reconsidered during this time of change.

Section A.1 Defining an identity lens

I identified three analytic dimensions evident in each of the story themes and used these to identify story themes and then I grouped different combinations of story themes into identity lenses, according to the patterns present in participant interviews. As outlined in chapter four, the dimension “focus” indicates the focus of the story, from the storyteller’s perspective. For example, students were clearly the focus of some stories, whereas self (the storyteller) was the focus of others.

The dimension “technology view” indicates the storyteller’s perception of technology as it relates to the technology innovation occurring in this school setting. Those who considered technology to be positive were open to exploring new information technologies in their work. Those who expressed a negative technology view connect new information technologies with negative work experiences. A third possible technology view is neutral, which means the storyteller does not consider technology to be central to his work and, thus, does not articulate strong feelings about it.

The “professional development” dimension indicates the storyteller’s perception of training opportunities, broadly defined. Positive suggests satisfaction with opportunities and access to those opportunities. Negative suggests dissatisfaction with either the opportunities available or access to opportunities or both. Neutral suggests disinterest or perceptions of being disconnected from professional development opportunities. The basic patterns that emerged are shown in figure 5-1 (below):

Figure 5-1: Elements of Identity Lenses

		Nurture	Evolve	Innovate	Outside
Focus	Student	Work is about the interests and needs of students			
	Self		Work is an opportunity to collaborate	Work is an opportunity to explore technology	Work is an exclusive place where some are “in” others are “out”
Technology View	Positive	Technology supports student learning	Technology is a catalyst for collaboration	Technology is the center of work and the focus of interests	
	Neutral	Technology should be used only if it supports students			Technology practices and use may be not be all that great
	Negative				Technology is a significant barrier to career success
Professional Development	Self	Seeks PD regularly; Focus – student learning; curriculum		Seeks PD regularly; Focus – personal creative courses	
	Colleagues		Seeks PD regularly; Focus – collaboration (e.g., Conferences)		
	None				Does not participate in PD other than what is required

While I focused my analysis initially on the nine individual story themes, I found the themes in isolation revealed only a partial picture of the participants’ perspectives. As I transcribed the data, I saw patterns of story themes begin to emerge both within and across the interviews. These patterns hinted at more complex relationships, which touched upon educator views of professional identity, reflections about observations made about their colleagues’ efforts, the technology innovation occurring in this organization, and organizational signals that reinforced

technology innovation activities.

I identified four patterns, which draw together different combinations of dimensions to characterized four identity lenses: nurture, evolve, innovate, and outside. Each lens suggests a perspective, at a particular point in time, of an educator's understandings of professional identity (as it relates to technology innovation) in this organizational setting. The lenses are not prescriptive; instead, they are fluid and shift with time and new information. They cannot be observed explicitly nor used to classify behavior. Rather, the lenses offer a means to discuss the way teachers, technology specialists and administrators in this community talk about their experiences as they participate in technology innovation in their organization and work to make sense of it *vis-à-vis* their professional identities.

Section B. Professional identity seen through shifting lenses

Below, I define each of the lenses and provide illustrations from the interviews to articulate the breadth and depth of each lens and to demonstrate how identity lenses reveal information about educator understandings of information technology innovation and its connection to their professional identities.

As in chapter four, the “vignettes” provided as illustration below are not entire stories. They are relevant passages extracted from the interview text to augment the discussion of data. Also as in chapter four, to facilitate discussion of the passage, story and narrative are used as synonyms.

Section B.1 Nurture

Narratives that characterize the “nurture lens” feature a strong and pedagogically centered connection with students. The “nurture lens” is comprised of student-oriented story themes as seen in narratives about student learning, the students themselves, and summer programs that provide educators a living lab for creative curriculum development for students. Most narratives include details about class lessons or exercises involving creative learning opportunities. They may also convey challenges students experience in the classroom. The “nurture lens” considers

the educator less centrally than the students. Often the educator is implicit to the story, a seamless or invisible part of the learning process.

The story themes most commonly associated with it are “student learning,” “my kids” and “summer school.” Stories focus on students, convey a positive or neutral view of technology in the classroom and as a learning tool, and express moderate to strong support for professional development. Taken together, when these educators look at their work through the “nurture lens,” they tell stories that position students at the center. They articulate their experiences, relationships, organizational signals, and technology innovations by considering first its connection to nurturing students through their learning experiences. Whether educators talk about attending conferences, working with colleagues or addressing student-learning issues, the “nurture lens” is apparent only when the student and student needs are at the core of the story.

When educators see their work through a “nurture lens” they talk about professional development, conveying excitement about developing student-centered curriculum or acquiring learning tools for students. They talk about being eager to translate conference sessions into creative lesson plans and exciting classroom experiences. Teachers talk about students, curricula and learning without mentioning themselves. Technology specialists also talk about students and teachers, but not themselves. Administrators tell stories about students, teachers and technology specialists. They place complete emphasis on the students, positioning themselves as implicit in the learning process. As illustrated below (#5-1), the “nurture lens” focuses on students:

***Vignette #5-1** And then, there’s another program – Geometry Sketchpad, which they use, you know, all the way through doctorates in math. But, for these kids, to be able to animate geometry and to be able to animate, you know, if I change this angle, you know, what automatically happens? You know, what used to take so much effort to teach is just instant now! (Interview #8, 8:00, Student Learning)*

The “nurture lens,” through which these educators consider their profession and the language they use to articulate their experiences with technology, emphasizes the student and the student’s educational journey. They provide examples featuring students, viewing technology as part of student learning and in terms of student needs. As illustrated by the technology specialist’s

narrative below (#5-2), the “nurture lens” does not consider adults; it references them only as they support or enable learning for the student:

***Vignette #5-2** But one of the things I will say is that I think technology can and is doing for us in the middle school is allowing options, choices, uhm, different ways of doing things to address some of the core goals, the instructional goals and learning goals of the school and ... about what we see as the goal for technology in the school, I see it, I see it as giving people options.*

... Every teacher is able to find those tools and those things that will work best for them as a teacher and we seem to encourage that students also find those things and we help them find those things that address their learning or help them with their learning ... (Interview #6, 3:45, Student Learning)

The vignettes below also illustrate the “nurture lens.” When asked to articulate a technology vision, these educators expressed their understanding of the school’s vision by conveying specific examples of classroom-based technology. Each teacher responded with a discipline-centered illustration of technology use. Neither teacher inserted herself in the learning process nor did they speak about the technology directly. Both shared narratives that connected technology directly with the student, as shown here in vignettes #5-3 and #5-4:

***Vignette #5-3** So the idea is not that I don’t want them to carry around a textbook at all, it’s just, I think, the idea is to have them kind of integrate technology with their learning as seamlessly as you can and it just turns out that there all these pluses that makes these different learning styles easier. I find that kids who aren’t well organized can keep folders on their desktops, you know, this is, you know, how you have digital natives—well, they’re definitely digital natives and it makes terrific sense to them.*

And I think, I am an older teacher and I think being able to use the technology they are so readily adapted to anyway as an educational tool, as part of it I think that really makes a difference. I think for some kids, who may not be able to manage papers, books and all that, they can manage a laptop very well.

So, our goal is to (pause) you know, the use of Internet is fabulous for this. Very often I can find applets or interactive things that will what I’m trying to teach and I just put a link on Moodle and they click and off they go. (Interview #8, 3:53, My Kids)

***Vignette #5-4** For a while there, technology was all the bells and whistles, let’s make the cool iMovie and let’s make the podcast. Let’s do that. But, for me, those are the fun things that we do and sometimes people don’t recognize all the background work that*

goes into using technology to help. So, to make that iMovie, we've got to write a script, we've got to know a plan, we've got to have background knowledge and we've got to do research.

So, all that compiles together to make that fun stuff and I think that in the beginning that's what technology was, it was like "let's show all the cool stuff" And I think, personally, for me, it's all the nitty gritty stuff that we can do, that I like doing. It's not so much the end product for me. It's the process. What process have you gone through, what have you learned? What extensions have you taken? What risks have you taken? Have you grown as a student? (Interview #11, 6:10, Student Learning)

Vignette #5-5 (below) conveys a similar understanding, this time from the perspective of a technology specialist:

Vignette #5-5 *It's one our goals, or one of my goals, is to help students identify what is the best tool for what they are trying to do and what they know and what and addressing their learning and their learning differences and how the technology can help them there (Interview #6, 6:00, Student Learning)*

Professional development is also oriented toward student learning. Summer teaching opportunities, for example, are not seen only in terms of extra income or creative expression but rather as a living lab to develop new curriculum for students. Because the “nurture lens” is student-oriented, it is evident when talk is about collaboration with others, taking courses or joining professional organizations in an ongoing quest to improve student learning. As illustrated briefly here (#5-6), summer teaching is considered a vehicle to develop successful learning tools and lessons for students:

Vignette #5-6 *And, I thought I've always wanted a laboratory to try some of this stuff out. So, I did it for years. And, you know, every summer I would try new stuff out and a lot of it became part of our curriculum. So, I think, it is really important that you have this safe place to try stuff out. (Interview #8, 33:47, Summer School)*

Vignette #5-7 (below) illustrates how a “nurture lens” work view shapes understanding of identity and organizational goals. This educator, focused on the importance of student learning, expresses thoughtfully her feelings about organizational vision and mission, and broad organizational goals, compared with the activities of her classroom. She articulates appreciation

of the pressures that organizational administrators may impose, while suggesting that global concepts have little to do with her day-to-day experiences with her students and their learning adventures:

***Vignette #5-7** I think the administration also has the goal of (pause) they do have the goal of – well, it depends on which branch of the administration you are talking about. But, they do have the goal of thinking about global leadership and technology everywhere and they like the phrase ‘a culture of technology’ where it’s seamless and you can use its tools wherever and whenever and they don’t break down.*

I think teachers and administrators who are in charge of instructional leadership see it as primarily—well, teachers are who are actually thinking about technology, see it as a way of differentiating instruction. And, in some ways, it’s still as grand experiment on that level. I know that the junior school, and especially fourth grade, feels that they did that experiment and we did get the results.

I’m more skeptical. I don’t know that we’ve really seen the outcome of that experiment yet. I believe in it, because theoretically it seems like it should be, it seems like it should be possible to better achieve differentiation if you had this range of tools that technology offers. But, it’s not going to be possible unless you also change teaching practices. In fact, if you just were to change the teaching practices – without the technology – a lot would be possible, too. (Interview #14, 15:57, Student Learning)

The “nurture lens” is evident in this illustration as the educator expresses her understanding of the competing roles and goals within her educational setting set against her own understanding of her work. She positions herself as mindful always of her students and their learning needs. She conveys awareness of position power at the school but her narrative suggests it holds little interest for her. She is skeptical of quickly reached conclusions, particularly as they pertain to student education, and she feels no pressure to incorporate technology into her classroom beyond that which she considers to be truly beneficial to her students. Although “I” appears within the text, the educator does not place herself at the center of the story. Rather, she is simply using that storytelling device to attribute her thoughts to their owner.

Section B.1.1 Illustrating the “nurture lens”

Interview #21 illustrates how narratives may be expressed when an educator views her work through a “nurture lens.” A classroom teacher share her vision of a twenty-first century learner as

it aligns with her understanding of the school's strategy to educate its students. During our conversation, I was struck by how passionately she spoke about her students, her colleagues, the school's leadership, and the administration's approach to education. Her narrative conveyed fervently embodied humility and gratitude. She was open and collegial when talking about her students and her teaching. She repeatedly and enthusiastically offered to share her classroom tools and resources with me, to pass along copies of journal articles and to give me access to her secure class intranet. When asked to share an example of her view of the school's approach to technology in a learning environment, she began with a story about a school meeting where the principal had spoken about recent research on "right brain" learning and the need to incorporate creativity into the curriculum to support the learning needs of students for the new millennium.

Looking at work through a "nurture lens" means talk is all about students, not about teachers, ego or the amount of work involved to develop a student-centered curriculum:

"And, so I thought to myself, whatever means I use, that's definitely what I'm going to try to do. So, I want to say, in terms of technology, that's my goal. To use it in a way, or teach the kids to use it so they have a means of expressing themselves in their learning" (7:11).

She continues, expressing similar enthusiasm for student learning with no regard for the additional work required of her. She shared an assignment she developed to allow students many options to demonstrate specific learning outcomes (e.g., iMovie, PowerPoint, PodCast, or essay):

"And, you know, I was very pleased. In fact, they just finished [the free format assignment] last cycle. So, I'm in the process of reflecting now and thinking, OK, there are some things that I would need to tweak for next year. But, for the most part, I was really pleased with how it turned out" (8:24).

Both quotes illustrate a view of teaching centered on students. She considers students, learning, teaching, colleagues, and technology from many viewpoints. During a typical interview, most educators shared many different stories. What they emphasize (or omit) helped me to identify the lenses through which they considered their professional identity. The "nurture lens," for

example, is present in talk about working with students as well as in narratives that convey an appreciation for the students themselves, whether or not they are learning. In vignette #5-8 (below), she conveys empathy for the students who, in a technology-rich environment, attempt to learn skills using technologies while also trying to understand traditional ways:

***Vignette #5-8** “However, there is an article, and I’ll tab it in a magazine for you. I forget the title, but it’s something like, ‘What would Socrates do?’ or ‘What would Socrates think?’ you know because everything is at their fingertips a lot of the kids just basically, well the gist of the article is that they’re losing the basics, because [the answers can be found through technology and it] is so readily available for them.*

So, that’s an ah-ha for me. Because, I’m like, ‘yah, that’s totally true.’ You know because they have all this technology but they’re not used to finding [the answers]” (Interview #21, 9:40, Student Learning).

She also talked about the importance of staying current with educational research, referencing frequently journal articles and making connections between the readings and experiences with her students. Her bond with her students was real and sincere and extends past the end of the workday. The “nurture lens” is evident in the extended narrative below, which illustrates how she understands her work through her commitment to her students:

***Vignette #5-9** “So, the kids can see it visually (pause) and then in [the science teacher’s] class, he’s doing the traditional outline and I’m doing the webbing, because I’m more of a visual person anyway. But, it works. So, we have them throw it on to (pause) they have to do it, they have to draw it out. You know, and sometimes, too, they have another piece of folder paper next to it, so they can expand their web. And, that’s fine. I want it to look like that, so they can see it.*

But, it was teaching them, so, like, you have your square, you know, that’s your topic (gestures to an imaginary piece of paper representing the assignment). And, it was several things like, let’s change the shape or let’s change the ... (pause). Because when you look at it, it looks like a disease broke out on your piece of paper.

Are you going to look at it again? I don’t think you’re going to look at it again. I don’t think you are going to use it for studying for a test. But, if you have it organized, it’s different colors, it’s different shapes, you know, (pause), how, (pause) how easy is it?

(She turns her head to make it seem as though she's speaking with a student) You know, I can't even find your starting point when I look at it. I don't want to look at it. It freaks me out. You're scaring me (emphasis). It was simple things like that. So, trimester one and trimester two, they're just doing old stuff, like back in the olden days (chuckles).

You know, we've had paper and pencil and used to do it the old fashioned way. As a matter of fact, when I was in college and we took our exams, we had to purchase these blue exam books. You know, I had to purchase maybe five for an English class because we were writing papers and our responses were, you know, so lengthy, you know.

And the kids (whispers), 'you mean you didn't have a laptop?' 'No (strong emphasis)! We sat there for two hours and we wrote everything for our exam.' (Interview #21, 13:24, Student Learning)

Her complete immersion in her story, combined with her interest in student learning, characterizes the “nurture lens.” The need to look out for the best interests of students and the notion that an educator’s role extends beyond teaching a particular subject was a theme that occurred again and again during this and other interviews crafted through a “nurture lens.”

In vignette #5-10 (below), she talks about adjusting her teaching style to help students become more attentive to the lesson planned. She speaks fondly of her digitally immersed students’ need to “set the computer aside,” even just for a bit. The tone and manner of speech suggests concern and fondness. She speaks in an almost motherly fashion, conveying affection and appreciation for the students as people, rather than simply charges she has been assigned to teach:

Vignette #5-10 *“Yeah. You know, but to teach it and you know, I found that just closing it and putting in on the side for just a little, and having them take out the paper that they are just a little more focused on the content I’m trying to teach them, whether it be finding latitude and longitude or how to read and then pick out just the important details ... (pause)*

MAM: So, are you saying that some content is best taught with tech and some with pen and paper and some both?

Well, yes. I think it is fair to say that. But, also, I think it's a mindset thought, because our kids are growing up in the digital age. That just putting it on the side, just for a little bit, it changes their focus (pause) I've seen that in class.

MAM: I'm going to try that.

(With enthusiasm) It changes it. It does. Just putting it on the side. You know, they don't have to put it in their bag, just as long as they shut the (gestures to the lid), and they don't see the screen, you know. Then, they're tuned in to the skill or the topic that I'm trying to teach (pause)" (Interview #21, 26:26, My Kids).

The opportunity to learn during summer, to experiment with new technologies and to develop curriculum as seen through a “nurture lens,” is shown in vignette #5-11 (below). Here, the educator extends her enthusiasm to includes access to resources available during summer for educators to learn, to experiment and to create for their kids:

***Vignette #5-11** There is! Actually, here in the middle school. And, I don't know if it's just the availability of technology resources. Like, this summer, I took a GPS class. [Guest speaker] was here and [director of instructional technology] coordinated the Lab School. And, uhm, I took a GPS course from her last summer and it was very overwhelming so this year (with emphasis) I thought, OK, I'm really, I'm gonna learn how to use this and because I'm very old fashioned, I'm going to take out the map and when we go on our trip, I'm going to find out way to Point B, using my map.*

I remember going on family vacations back East, and my dad would get very mad at my mom. Remember at AAA, you could order those maps and they used to highlight it for you.

MAM: I remember.

I don't think they are in business anymore. Or, they must do it online. You know, the AAA map, or the trip coordinators.

Yeah. So, anyway, I took the class and I asked [the director of instructional technology] if I could use the GPS in my summer school class because I taught, I was teaching that new seventh grade orientation class, so all brand new seventh graders.

And, I was teaching this class and it was just to orient them to campus. So, I did a little worksheet and it had clues on it that they had to use their GPS to locate it.

MAM: Oh, can you give me one?

Yeah. I have an electronic file. Yeah. It was, it was, what did I call it? I called it [name]. Because I don't know if you do geocache. It's an online thing and so this title is kind of a

spoofoff that. Yeah. And so, she promised to allow me to use it if I promised to blog about it on the Lab School. So, I did. I blogged about it on the Lab School [blog].

And so that worked really well. And so what we did was, after we did that I brought them back to the classroom and then we put it on Google Earth. So, they can kind of see. They can mark their waypoints, you know, wherever they were on campus. And then we taught them how to add pictures, using HTML language, you know to kind of link it up to another picture online.

MAM: Oh cool.

Yeah. So, that was a lot of fun. You know, but it was taking ...

MAM: But, it was you, giving up your summer ...

Yeah. But it was fun (with emphasis). And, you know, and it was funny because I didn't realize that [the director of instructional technology] had that program where you could program just one GPS and you load it to your computer and then you plug the others in so [teacher colleague] and I walked around campus with 12 GPS around on necks and we'd stop at each one and mark the way point on each GPS unit, you know. (chuckles) But, it was OK. It worked out fine. But, it was a learning experience for all of us (Interview #21, 22:16, Summer School).

The educator talks about professional development as an important part of her craft. Her narrative expresses summer work as a regular part of her work. The focus is not measuring her use of technology against her colleagues. Rather, she expresses interest in measuring her students' progress.

Section B.1.2 Summarizing the “nurture lens”

As illustrated, when educators see their work through a “nurture lens,” they share stories about: student learning, the kids themselves and summer school. Relationships are focused on learning and teaching. Professional development can be varied but is oriented toward student needs and student learning. The “nurture lens” suggests a view of work connected directly with students. Stories can be characterized as showing:

- Strong empathy for students;

- Keen interest both in student learning and in students as people,
- Little interest in the educator herself or her work to create an interesting, challenging, supportive, and creative learning environment;
- Strong interest in technology as a valued learning tool, but no specific interest in technology itself, other than as it provides new, helpful or needed support to students;
- Openness to sharing stories about her work; and
- Demonstrated interest in professional development in an ongoing quest to become better equipped to provide the proper support for her students.

Educators who view the world from a consistent “evolve lens” also talk about student learning and summer school; however, as I outline in the next section (B.2), their stories emphasize the educator’s journey and experiences and are markedly different in focus because the attention is given to the educator rather than centering on the student.

Section B.2 Evolve

Educators who consider their work through an “evolve lens” share narratives that characterize work as a place for creative collaboration. Stories highlight conferences, collaboration and professional development, more than on students. Several educators shared career stories or transformative learning experiences, although some also talked about work in their classrooms with students. Understanding work through an “evolve lens,” leads to stories about colleagues as central to development and core to the joy of work. Narratives emphasized colleagues as providing inspiration as well as comfort, encouragement and support, particularly related to experimenting with technology.

Narratives indicative of the “evolve lens” highlighted the extent to which educators reflect on their own practice and their contributions to the learning process. Whereas narratives where a “nurture lens” is present embed educators into stories, seamlessly intertwined with curriculum in the pedagogical experience, an “evolve lens” perspective separates educators from the process;

educators are independent entities, sometimes connected with students or colleagues and sometimes not. Analyzing the patterns present in the narratives, I found often inclusion of self-differentiated “nurture lens” from “evolve lens” narratives. As noted, other elements evident in narratives characterizing the “evolve lens” emphasize being reassured and supported or simply enjoying engagement with colleagues.

The “evolve lens” emerged from analysis as educators talked about their evolving careers. An “evolve lens” is evident in narratives about collaboration with colleagues, learning new tools and technologies, attending conferences, and participating in professional development opportunities. “Evolve lenses” may also include narratives about students or summer learning but only in relation to the role each plays in supporting or illustrating the educator’s ever-changing and growing career. Summer learning narratives, for example, frequently were offered to illustrate how educators were given the opportunity to experiment with different work roles.

While many of these narratives emphasized projects with colleagues and technology innovation, several also conveyed apprehensiveness with respect to risk-taking. Joy associated with innovation and working with colleagues innovate was diminished somewhat by concerns about taking chances. Yet, this risk-taking also seemed to add an element of excitement and reward. It is as if these educators need to say, “Here is my great idea and it is been validated as a good idea by my colleagues.”

An educator who views her work through an “evolve lens” will tell stories that identify educators as reflective professional. She sees herself, her practice and her students as separate entities. Vignette #5-12 (below) illustrates a technology specialist identifying herself and her skill separately from teachers and students. She delineates roles, knowledge and experience, placing the strongest emphasis on herself. The specialist’s awareness of herself is so evident, she implies she has position power to change the composition of a teaching team (which, organizationally, she does not):

Vignette #5-12 Now, the way the teams are set up though, it may be only one teacher that is doing that. But, I’m fine with that. So, it might be technology teacher and a non-

technology teacher. But, they are a team. But, the kids are still getting the same skills. But, it's in the background. The teachers are not aware of it. The students are not aware of it. The only people who are aware of it are [the other technology specialists] and I. It's our goal to have that continuation, to have that transition between the grade levels. So, that they have similar experiences. (Interview #5, 7:58, Show Off)

Incorporating personal thoughts and reflections into narratives suggests the presence of an “evolve lens.” Similarly, vignette #5-13 (below) conveys awareness of self, as a reflective process, rather than as part of pedagogy. In thinking about her classroom, this educator first reflects on her own processes and goals and then tries to articulate what the students were achieving in a particular assignment. She clearly views herself as separate from her students. She also acknowledges the significant role she plays in their learning:

Vignette #5-13 *Sometimes, it's just a total, spur of the moment. I'm thinking, I do, I tweak this a little bit, you know. The whole thing with the Flip cameras was just sort of (pause) I remember we had used them in the summer and I thought OK, normally we send them out with interview sheets to ask people questions and I send them home to talk to relatives and stuff. And, I thought, let's do it faster. Let's do this and see how it goes. And, they all loved it. They said it was great! (Interview #9, 34:09, Tech Toys)*

As noted, the inclusion of self in this narrative contrasts sharply with narratives that typify a narrative associated with a “nurture lens.” The distinction between the two lenses is important because, although similar technology resources were used and an equally creative assignment was devised, “evolve lens” narratives separate the educator as a professional guiding the process, while “nurture lens” narratives embed the educator in the process. The differences in perspective these narratives reveal can have significant implications for technology innovation in the classroom.

Another distinction is the attention educators give to receiving support and reassurance through association work and professional affiliations. While some narratives noted organizational support, others conveyed support received through conference attendance, educator-directed professional development funds and recognition of service and association membership. These narratives revealed a connection between the educator's service work and her understanding of the organizational value of membership in professional organizations.

In general, narratives that articulate the “evolve lens” highlight voluntary, creative use of technology tools while remaining cautious about technology risk-taking. Narratives suggest uneasiness with experimentation. The “evolve lens” is apparent in narratives that articulate efforts to balance accepted teaching practice and classroom management with a desire to be seen as a technology innovator. Seeking reinforcement for current work and actionable information about the future direction of teaching and pedagogy are also present. Narratives about summer teaching and learning opportunities reveal another difference among lenses. Vignette #5-14 (below), connects summer sessions with opportunities for educators to try new professional roles and to collaborate with colleagues or meet new people, rather than as a vehicle to support exploring specific curriculum opportunities (“nurture lens”):

***Vignette #5-14** And, I’m more social so I go and sit with people I sort of know, uhm, and I get to know other people. And then, through the technology, I’ve gotten to know a lot of people. And then, I have worked in the high school, in the summer I’ve taught social studies for a while and then this technology thing is great because then you do get to work with different people, uhm, I got to meet lots of the tech people downstairs and just the teachers and helping them ... (Interview #9, 41:12, Let’s Meet!)*

Vignette #5-15 (below) also connects technology work to ways to connect with colleagues. These narratives suggest an understanding of technology as a means of connecting with other educators. They emphasize personal professional development and collaboration over either students (“nurture lens”) or experimentation (“innovate lens”):

***Vignette #5-15** Well, the laptop program, it totally, we started with the lab setting and once we had the laptop program, everything went out of the lab and into the classroom, that’s been the biggest change because, I was in the lab, I was in Bishop. I was in Kelley lab. That was my first job here. I was there for five years, and then they brought me over here to do the pilot for the first set of laptops, that was in sixth grade. (Interview #5, 12:50, Tech Toys)*

Vignette #5-16 (below) recounts an experience working with colleagues for two decades. The project aim was to consider how computers might be used in classrooms. This narrative is particularly interesting because it sheds light on the informal, natural way this organization managed technology innovation in the classroom in the 1980s. The educator talks about working

with colleagues, having fun experimenting and inventing summer school classes to test ideas about teaching with technology:

Vignette #5-16 I would, I would certainly credit [colleagues] for their thinking, because they, well we decided we would not start out by giving teachers computers, we would start out by putting computers in the classroom that the kids could use and working with the kids. And then when we had the group of computers together, that enabled us to do the traveling lab kind of thing and that was fun.

... we were sort of inventing as we went along and it's not like there weren't other models around but we were trying to do it based upon [our] outlook on kids and teaching and that kind of thing, which is quite different from some schools, you know.

So that is where that came from, and then, in 1984, we invented a summer class, where we got all the computers that were use in during the year and put them in an, in a classroom and [teacher] taught a class in 'Writing without a pencil,' I think it was called and that was our first experience with every kid having a computer and that was before there were such things as laptops, there were no laptops, at that point. So, uh, it was really successful in, if you looked at it, the kids were writing more, even in that short a space of time and the boys were responding well because they liked the technology and, I think that was probably the point that class went on for 20 years ... (Interview #12, 11:11, Summer School)

The evolution of this educator's career and the encouragement and support he felt he received along the way are core to his narrative. He talks about his own journey ("self"), as well as his experiences with technology. Students are mentioned in his narrative to support his technology experimentation illustration. During the interview, this educator shared a variety of memories about his experiences, his fondness and his admiration for his colleagues.

An "evolve lens" has implications for technology innovation. Educators, who view their work through this lens, tell stories about inventing things, conveying a sense of freedom and while they view technology as positive, priority is given to personal growth and collaboration.

Section B.2.1 Illustrating the "evolve lens"

The interview (#15) used in this section was conducted with a technology specialist who is formerly a classroom teacher. Her stories convey a long held interest in technology—from her

earliest days in the classroom to her current role helping teachers to develop technology-based curriculum and guiding students to incorporate technology into their day-to-day school lives. I interviewed her in her computer lab. The technology tools she used in her work surrounded us as we talked. Her love of learning and technology was clear from the outset:

***Vignette #5-17** And so all [my] technology is basically self-taught. So, I have just gravitated toward it, basically all my life. Even when I was in [grade], which is a long time ago, I had one computer in my classroom and we rotated it and we did it. And, I was always ... I always loved the technology aspects and so, uhm, it's basically my job to learn new, introduce to teachers new, support them with projects. They come to me and say 'I have an idea of what I want to do' and I marry the technology with the curriculum. So, I don't have a curriculum per se, because I'm teaching the technology with their curriculum, which is the stuff you see all around the room. (Interview #15, 5:45, Tech Toys)*

Throughout our conversation, her narratives emphasized attending conferences, staying current with technology for learning and actively participating in professional development opportunities, as shown in the following excerpt:

***Vignette #5-18** Oh yes, and I have a master's in curriculum and instruction from the University [name] and tons of PD [professional development], which is mostly been technical.*

MAM: So, do you take PD as just what we do?

Yeah, well we always. Well, I just got back from [conference acronym] June, which is the [conference name], which is the biggest one. Twenty thousand people at the conference center in Washington, DC. It's huge. And, yeah, I go somewhere every year. And, it's rejuvenating and it's enlightening and it helps me keep up with it. But, you know we read, we have journals, I belong to professional organizations. So, I mean, I think that's part of our job. (Interview #15, 14:00, Let's Meet!)

Throughout the extended narrative that follows, the educator did not once mention students or student learning. Her interest was clearly centered on her own technology experience, her colleagues and the organization's view of innovation. This educator's narratives are consistent with an "evolve lens." Her stories, as shown in vignette #5-19 (below), convey an understanding

of work that demonstrates interest in her own development and joy derived from collaborating in creative technology adventures:

Vignette #5-19 I think we've always tried to push the button here. And, you'll have to glean whatever you want out of this. Because (pause) well. I don't know.

When I was in [grade], we had [grade level supervisor I] and [grade level supervisor II] as supervisors and with them we were using TI, Texas Instruments, with Logo Software. We had Bank Street Writer. Okay. But, it was always our, there was always someone who had this mindset that we would be a leader out there. There was always someone who was trying to push the button, and encourage us as teachers to do this.

After that, it was [direction of information technology I]. So, [first name] always had this vision that [Independent School] could do this. [Independent School] could lead. We had the students. We had the teachers. And, and I know this isn't true everywhere, but we also had the capability to say, "We're going to do this."

OK. Not just the "talk, talk, talk ..." forever. But, really, "Let's just do this." And, it was because of [first name], then, that we piloted the 1:1 program in [grade] back then, 15 years ago (pause) With me, and (pause) well, it was a grant that we wrote 15 years ago. (Interview #15, 18:15, Let's Meet!)

As she reflected on the experience, she focused almost entirely on the people. She identified key project members by name and shared many of their organizational titles. Although this information was not core to the story, it was important to her. She also identified the two project software programs: "Logo Software," a programming language, and "Bank Street Writer," a word-processing program developed for Apple in 1981. Although it is no longer produced, during the 1980s "Bank Street Writer" was the leading word processing program used in American schools (Anderson 1983). Similarly, "Logo Software," enjoys a storied history. It was developed initially at a MIT-affiliated research lab, mandated to create a family of educational programming languages that could evolve in response to the ever-changing needs of educational communities (MIT Media Lab 2000). Although neither program nor the Texas Instruments hardware associated with it are still used, the educator shared this narrative because she fondly remembered specific details of a 30-year old innovation project of which she had been an important part. This project may have changed the course of this educator's career and, thus, it provides a helpful illustration of identity consistent with an "evolve lens."

When asked about the characteristics that make technology innovation successful in an educational setting, she responded with an extended narrative (vignette #5-20, below) that revealed her strong interest in professional development. She emphasized the importance of professional development, providing technology specialists to guide technology implementation, allowing time for training and practice, and easing the pressure on classroom teachers:

***Vignette #5-20** Right. Well I (pause) well I would just. I think one of the most important things that we can do and that we need to do is to maintain professional development and the support of the teachers. I don't think there is enough of me! Well, not me but our TRT people are around and we are spread too thin.*

And that's what I heard over and over again at the conference that I went to. Some people do three school districts or three schools within a district or whatever.

We want people to use the technology, to learn all the new tools and there's not enough the other thing I would do is allow more time for it. One, the support – to give the support, but also to allow time within the week, the month, the day, to give the support 1:1. Not just, we do it here but to have the teachers to have the opportunity to see good practices and best practices and to actually have time to do hands on learning with all that we want them to do (Interview #15, 26:34, Let's Meet!).

She continued her story (vignette #5-21, below) with a detailed illustration to explain how Independent School puts into action these values by providing summer training for its teachers. She emphasized that session leaders and participants attend sessions voluntarily, without pay:

Vignette #5-21 We had [technology] training last week and that was the best thing. And now, when I go into the classrooms today, I see the teachers using what they learned. But, you know, it takes time to do that. It takes time ...

MAM: So, when all those teachers came in last week to do that, that was on their own time?

Yes. All summer training is "own time." And, as teachers, we do it on our own time, too. And, as teachers, that was on our own time, too. I presented three workshops not there but helping [grade level] and that was on my own time. We don't get paid for any of that extra stuff. (Interview #15, 28:56, Summer School)

She connected the willingness of other educators and her own enthusiasm for summer workshops to a culture that encourages excellence. She suggested the freedom afforded to educators to

develop and implement technology-based curriculum served as a positive example of how excellence is supported at her school. She admitted that time was the community's main restriction. Lack of time to incorporate all the interesting things her colleagues were working on seemed to be the only significant drawback she experienced:

Vignette #5-22 Yes. And, it's a culture of wanting to do it because you yourself are looking for growth because when whenever I teach something, I learn. So, I'm going to learn from that experience (pause) therefore (pause) so, you know (pause)

I think one is that the population is driven! (laughs) You know, our population, everyone excels or is bound and determined to excel at whatever we're going to do. So, going back to our leadership. Our leadership provides that impetus to make us do that. And, so I think, uhm, that time is a negative. I mean, there is never enough time in part because we are so driven to fit in as much as we can on whatever we are doing. So, time is a real hindrance.

To make us more successful at what we're doing, because there isn't enough time in the day – without taking time from ourselves – to get better at whatever we're doing and to make ourselves go forward. So, I feel that time is a negative.

Uhm. And, (pause) I think that just the climate here at [Independent School] where we don't have a set of standards; we don't have a set curriculum. I mean we do, we have our map, which gives us the big picture and our big understandings. But no one is dictating how we present. How we do it. We have our goals and we know what we'd like to achieve. But no one says we're going to test next week. As least we don't here (laughs and then pauses), test next week to accomplish that. And, a child does not go forth to the next grade with this set of scores, like no child left behind is doing. A set of scores that shows the child is doing exactly where he falls on the day he is tested (Interview #15, 36:56, Let's Meet).

Section B.2.2 Summarizing the “evolve lens”

As illustrated, the three narrative themes that comprise the “evolve lens” are: let's meet, summer school and, to a lesser degree, my kids. These themes are also present in the interviews comprising other lenses. However, they characterize the “evolve lens” when together they convey a keen interest in progressive career paths, creative freedom and the opportunity to try out new roles and responsibilities at work. Relationships are focused on learning, creativity and

collaboration. Some stories may include students but generally the emphasis is on the storyteller, her practice and anecdotes about experiences collaborating with colleagues.

Overall, when educators view their work through an “evolve lens,” they tell stories like those included in this section. Professional development opportunities are pursued with enthusiasm and success and the performance of a colleague is measured by the degree to which time is invested in additional education through workshops, committees, professional association work, and conferences.

Narratives convey positive accounts of experiences developing projects, attending conferences or leading workshops because the professional context is seen through a lens focused on learning. The “evolve lens” suggests a view of work that provides professional growth. Stories can be characterized as showing:

- Interest in learning about new teaching and curriculum practices;
- Keen interest working with colleagues;
- Appreciation for resources to attend conferences, participate in workshops and subscribe to professional journals;
- Strong interest in technology as a new skill to acquire and as an opportunity to try something new—either alone or, more likely, with colleagues;
- Openness to sharing stories about work experiences and projects; and
- Little expressed interest in the students or their learning processes except as connected to the technology tools being explored.

In the following section, the identity lens “innovate” (section B.3) will be discussed. Educators who view work through an “innovate lens” share narratives that possess elements similar to those characterizing an “evolve lens.” However, a central difference can be seen in the joy derived from personal exploration of technology, which is evident in “innovate lens” narratives,

compared to the satisfaction garnered through innovating with colleagues, which is present in “evolve lens” narratives.

Section B.3 Innovate

When educators view their work through an “innovate lens” they share the positive view of technology experimentation frequently evident in “evolve lens” narratives. However, the “innovate lens” is more clearly present when narratives depict innovation as exciting, creative, challenging, worthy of interest, and something to celebrate. Frequently, these narratives also have little or nothing to do with teaching practice or learning and frequently are told without any reference to students or classrooms or pedagogy. In interviews, narratives consistent with an “innovate lens,” included enthusiastic talk about individual experiences with technology and the personal and professional benefits that accrued through creativity. During analysis, I found an “innovate lens” present in narratives that associated innovation success with recognition.

The “innovate lens” is evident in narratives that portray the storyteller as skilled and clever, possessing prowess with the newest, latest, most innovative tools. Stories about rule breaking and groundbreaking, pushing the envelope and special projects feature are consistent with the “innovate lens” as well. The relevant narrative themes for the “innovate lens” are: “tech toys,” “just ask,” “show off,” and to a slightly lesser degree “let’s meet.” Most educators who see work through an “innovate lens” share narratives of creativity, learning and success. The focus of these narratives is almost entirely personal expressions of self and individual experience. Narratives convey a clear interest in success, independence, absence of rules, and recognition. As well, narratives may also express enjoyment derived from celebrating achievements.

These stories differ in two significant ways from “evolve lens” narratives. First, while these narratives also express a significantly positive view of the technology, an “innovate lens” narrative rarely includes details about colleagues, learning or students. Second, although professional development is also considered to be a benefit, “innovate lens” narratives are not

about school-sponsored activities. A third departure from an “evolve lens” narrative is recognition. “Innovate lens” stories celebrate the storyteller directly and the narrative is framed to assuage the storyteller’s need for recognition.

In interviews, I found educators who predominantly viewed technology innovation through an “innovate lens” told stories about technology successes as well as how impressed the organization’s leaders were with their accomplishments. This lens is evident when work is presented as a creative enterprise where innovation and technology exist creatively. Little emphasis is placed on the use of technology for teaching. “Innovate lens” narratives sometimes convey awareness of tension that exists between a storyteller, who presents herself as uniquely capable of achieving specific innovation goals, and her understanding of organizational values related to recognizing technology gifts. Vignette #5-23 (below) illustrates this tension. The narrative conveys assertiveness and fierce advocacy for technology resources to innovate. Yet, it also suggests support, suggesting that organizational leadership has recognized this educator because of her successful technology use as well as her leadership:

***Vignette #5-23** I just know that from a support perspective, all I know is that [principal] supported me. You know, a few years ago I went into him and said ‘you know, here you’ve asked me to do this, this and this and I’ve done it, I’ve done everything you’ve asked me to do. But my colleagues, they don’t give a rip! That’s just the bottom line. Here I am, and we were meeting and I had shown them this is what the technology can do but they’re not going to do it. They’re up to here being the parent of three kids and the teacher of 100.’ (Interview #1, 27:00, Just Ask)*

“Innovate lens” narratives seldom mention students and little indication is given regarding connecting technology to the classroom, learning strategies or teaching practice as illustrated in vignette #5-24 (below):

***Vignette #5-24** What I did was, uhm, each day, well each morning, because we are one day ahead, I was able to Photo Booth myself, talking to the kids, uhm, letting them know what they needed to do and what they needed to take care of and that [name], uhm, a student in my class was in charge of hooking up the laptop, her laptop each day and shooting it up on the LCD projector to see [me] from his hotel room and ah, if you have questions, post your questions to Moodle, our blog inform tool and to uh. Say, you know, I don’t understand this part about it.’ But, everyone can see the form, so often the other*

kids are answering the questions and I'm just observing all of this happening in front of me (Interview #10, 4:10, Tech Toys)

This narrative illustrates two important aspects present in “innovate lens” narratives. First, it conveys a strong sense of self. The educator does not even mention a lesson plan or a subject being studied or how the students are managing with their teacher away. Second, technology jargon is woven throughout the narrative. The self-focus and jargon helped identify this narrative as illustrating an “innovate lens” rather than either “nurture” or “evolve” lens. The narrative is about the educator and his technology skill.

The use of jargon also indicates how the educator perceives innovation. While this classroom teacher is not a programmer, he talks about the tools available to him in a way that suggests he has a comfort with technology and is creative in using it. He outlines his cobbled-together videoconferencing strategy to illustrate his creativity, which emphasizes his comfort with technology, his ability to imagine new uses for existing tools and his willingness to experiment.

Vignette #5-25 (below) is part of a response to my question about classroom innovation. The narrative conveys a singular focus: technology. Through this extended narrative, students are referenced just once (“Kids love it because it engages them”). There is just one, indirect, reference to curriculum and learning (“Because it encompasses all the medical fields, it’s the sciences, it’s the math, it’s prototyping, it’s manufacturing, it’s art, it’s graphics, it’s movies, it’s animatronics ...”). The narrative connects the educator’s view of innovation with his professional identity (“And, not just people with my skills because to do what I do – not many people could pull it off right now.”):

***Vignette #5-25** This, well, this is going to sound a little radical, but I think [specific technology] is dead. It will be. I mean when we first got into computers, we got all wrapped up into some things, like word processing and typing programs, because it utilized the hardware and it was a learning process and I think in some ways what we are doing with [technology] is the same thing. It’s actually attractive because it fulfills all*

those needs and you can teach anything with robotics, it's interdisciplinary. Kids love it because it engages them. It has all the different factors.

But, I think we going to move beyond that eventually and start looking at things more broadly ... like teaching engineering processes from kindergarten on up, instead of just teaching [technology] in the middle school. Because it encompasses all the medical fields, it's the sciences, it's the math, it's prototyping, it's manufacturing, it's art, it's graphics, it's movies, it's animatronics – making things look alive when they're not. I mean there are so many things you can do with that.

So, I just think calling it [technology] is a little limiting and I think that's where we are headed is to expand it and also going to open it up to a lot more people. And, not just people with my skills because to do what I do – not many people could pull it off right now. But, if we were to have, say, just an engineering class that taught how to create 3D environments, somebody with that particular skill could do it.

Let's say you wanted to have a 3D prototyping shop where you envision something and then, with a CAD program, you'd created and then you actually make it with some kind of material. Somebody would have to know how to run CAD programs and then run that machine. So, I don't know, that's where I think things are going to go. (Interview #16, 30:31 Tech Toys; Show Off)

Common to all narratives in which an “innovate lens” is present is a connection between work and new technology, as well as recognition. In vignette #5-26 (below), the educator asserts strongly a need for support. Stepping out of her classroom to obtain resources was a point of pride, rather than something she felt shy about. This element of advocacy for self uniquely illustrates the presence of an “innovate lens”:

Vignette #5-26 *He was the one that I needed to convince that these were the tools, the additional tools that I needed and in my classroom. I was like, you know, 'come into my classroom and see what I'm doing ... and then, once, well whatever happened in IT and then when [a new director] came. Again it was another, and it always seemed like now he's the guy I need to convince. But, when [new director] came, he had all these cool toys, all the NEW hardware – not just Mac's, he actually branched out to all the different other things.*

At that time, I was taking some classes at [the university], and I was just doing this for professional development – you know not to get another degree or anything. But I was learning so much that I'd bring to [new director] and he'd go 'oh my gosh' and I'd show him what I had learned and then it was just like here's another program and will enhance PowerPoint and here's what you can do, you can make these animation characters talk to the kids. (Interview #1, 8:00, Just Ask)

Educators in this community typically are passionate about their craft. However, they vary in the focus of their zeal. Accordingly, “innovate” as an identity lens is present in narratives that convey energy and a keenness to try new information technology. The main focus of stories is personal exploration of technology. Many of the conversations participants shared were personal stories of achievement, creativity, innovation, or (with some glee) rule breaking.

Section B.3.1 Illustrating the “innovate lens”

Text from an interview (#10) with a classroom teacher who believes he uses technology in an advanced way is provided in this section. The interview begins with me asking him to share a story he feels illustrates what the school is trying to achieve through technology use. Rather than sharing a story about his students (which might be considered to suggest a “nurture lens” view of work) or about the school’s professional development program to advance technology use (which might align with an “evolve lens” work view), he begins with a story about a trip he took to Asia and the technology strategies he used to communicate to his students during his absence:

***Vignette #5-27** It was, uhm, a perfect, a perfect little story to tell is my experience in [country] last week because my substitute [name], uhm, was here for the first week of school. And, I decided to give her a hard copy of my plans, my one plan and it pretty much consisted of one sheet of paper for the entire cycle. I said, ‘actually the kids have all the substitute teaching plans and, uhm, they can direct you to the Web site and you can follow along. But, they know exactly what to do.’ (Interview #10, 6:23, Show Off)*

Educators I interviewed who primarily viewed their work through an “innovate lens” shared narratives that often, quite confidently, articulated an understanding that they possessed special gifts, which enabled them to push technology further than their colleagues. The educator whose interview is shared in this section talked about using instant messaging, email and texting as evidence of how well he communicated with his students and also who he is as a person and a professional. He showed no interest in what others might be doing to leverage technology in a similar way. His perspective is consistent with educators who view their workplaces as a space for personal innovation and creativity, rather than collaboration.

Educators who viewed their work through an “innovate lens” occasionally shared narratives in which they incorporated colleagues or students into their narratives. A typical pattern emerged: following a particularly exuberant and enthusiastic tale about a technology adventure, talk shifted – sometimes rather abruptly – to experiences with colleagues or students. The more enthusiasm given to the technology story, the more emphasis placed on the follow-up people story, as seen in vignette #5-28 (below), which reveals the ongoing tension between the educator’s vocation (and its inherent people-centeredness) and his passionate interest in technology in the classroom, as illustrated in the following passage:

***Vignette #5-28** Uhm, for me it has just because I feel, you know I, I feel I’m coming through that age I guess, a little bit you know the IM-ing and the emailing and the texting and all that. It’s kind of like, just do it, you know I’m OK not having a laptop all day. And talking to my kids and you know, it’s posted or this or that, you know. I don’t need the tangible laptop but I know it’s around and it’s just there and it’s always been there (pause)*

MAM: But from [Independent School’s] perspective, do you think the school has always been there? Like not necessarily you, think about your colleagues. Think about the community ...

No, no, no, no. No, it’s not. I’m an outlier, uhm, because, I mean, you know, amount of our teachers have been here X number of years, you know I had them – coming through [middle school]. So, it’s not, it’s not about for the kids, it’s not about using technology ‘in school,’ it’s about using technology all the time. For the teachers – who (pause) are well seasoned – it’s about the technology here on campus because they don’t use it like that outside.

I mean I just sat with two teachers at lunch today teaching them how to Skype. They’re, you know, what Skype is, the whole concept around it. They’re, they’re just for, just for (pause) informal you know to say ‘hi’ – keeping in touch with friends, our kids are just, you know. (Interview #10, 9:20, Show Off)

This narrative also illustrates the educator’s perception of his technology use compared with his colleagues. This view – educator as innovator – is central to an “innovate lens.” Narratives where the “innovate lens” is present range from educators accepting that their personal technology skills set them apart from their peers to disapproval of the lack of skill among colleagues. In the

illustration above, the educator speaks pejoratively about other teachers and their lack of prowess with Skype. Knowing that outright criticism might appear harsh, he couches his comments, presenting himself as a benevolent colleague who willingly offers assistance.

The “innovate lens” is also present in narratives about passionate pursuit of new technologies, willingness to incorporate new technologies into the classroom and a keen interest in sharing experience with others. This teacher’s narrative expresses pleasure at his ability to embrace and exploit technology in his classroom. He shows little interest in past practices or the traditional teaching methods used; he presents himself as a digital wizard and his colleagues as digitally backward. I asked about the school’s technology vision and the role of the technology support teacher, he expressed his opinion strongly, shown in vignette #5-29 (below):

Vignette #5-29 *Yes. I’m not a [technology support teacher]. I relinquished that title.*

MAM: Were you ever?

Yes! (emphasis) ... the first year. And, I told the supervisors that I thought it was a waste of time for me to be a [technology support teacher]. I think you should put people in those positions —where they are meeting with [technology company]— who are not technologically savvy but they are learning all these things at the same time. It’s a great benefit.

MAM: You’ll find it on your own ...

Yeah. Yeah. Put some pressure on those people. I mean, why do I need to learn, I mean I sit there in those [technology] meetings and I’m like it. Oh, yeah. Yes, Wiki - yes, I know, like, it is just rote. Got it, yes, I know ...

MAM: So, have they chosen a teacher who’s not tech savvy?

Yes. They put [teacher] on it and she’s now just gone and I’m hoping that they’ll switch to someone else.

MAM: So, then, as a school again—and thinking about your own experiences and your own leadership and then some of your colleagues who maybe aren’t where you are, where’s the school. Are we there yet?

We want to. We're not there yet. We want to be there. I don't, I don't. There's a vision for it. There's but (pause) ...

MAM: What's the vision do you think?

(pause) Well (pause), You know I can't even put my finger on it, what that, what that is. I know it's about making sure, right now. It's about flooding people, I mean, for example, I've been working with some of the [grade level] teams on, some of these kids who are having trouble in school and one of the reasons is, uhm, that in the team space there's a [subject] teacher who posts things on [the intranet], there's an [subject] teacher who posts, who has Google docs for all the writing and there's another teacher who doesn't do any has regular cycle sheets (Interview #10, 11:30, Show Off).

The last elements of his interview express the challenge of continually staying on the forefront of educational technology. He does not spend much time with this part of his narrative, as he is less interested in speculating about organizational ideas that do not involve him directly.

Section A.3.1 Summarizing the “innovate lens”

As outlined, the four narrative themes that comprise the “innovate lens” are: technology toys, just ask, show off, and – to a lesser degree – let’s meet. While these themes are also seen in other interviews, they are core to the “innovate lens” because they convey a focused interest on freedom to explore creative technology use with few organizational obligations, other than embracing opportunities to celebrate and share achievements. The essence of work satisfaction is found in access to new tools, toys and the freedom to choose to play and to adopt or abandon. Also consistent with an “innovate lens” view are relationships with suppliers and external product developers or organizational leaders who can provide access to resources. Professional development features in some narratives but is generally of a type not related to school offerings or local associations.

Overall, the narratives of the “innovate” identity lens reveal a creative and passionate interest in technology experimentation. These narratives also express valuing freedom in the workplace, which allows access to new technology that may or may not be incorporated into the classroom. Conferences and collaborations will feature less prominently than access to technology or the

technology itself. This professional context is seen through a lens focused entirely on technology and creative freedom. When educators discuss technology innovation through the “innovate lens” they can become so enthusiastic about their experiences they appear to be showing off, making the storyteller appear self-centered. “Identity lens” narratives can be characterized as showing:

- Strong interest in new technology, whether or not it has an apparent classroom use;
- Little interest in the school’s organizational structure or its practices beyond the freedom it affords its faculty and staff;
- Strong interest in freedom to pursue creative technology interests;
- Short attention span for anything not directly related to technology, new technology or the educator’s work;
- Openness to sharing stories about work, in particular technology successes; and
- Interest in atypical professional development (e.g., less interest in school PD; more interest in self-directed development opportunities).

Section B.4 Outside

Educators who share narratives where an “outside lens” is evident align to a degree with “innovate lens” narratives in that they also focus on self. However, while “innovate lens” narratives articulate a choice to be apart from the collective, “outside lens” narratives express educator stories about forced marginalization. Educators whose interviews indicated the “outside lens” may or may not be new to the school. Regardless of tenure, they suggested that they work outside the community, or at its margins. Story themes relevant to “outside lens” narratives include “outside looking in” and “out with the old.”

Initially, I was surprised at the educators’ candor in telling their stories. However, as Riessman noted (1993), it was apparent these educators needed to share their experiences. Despite the range of perspectives about technology shared in these narratives – some positive, some negative and some neutral – the “outside lens” was evident when the story catalyst was a need to share

occurrences in which the educator was overlooked, excluded or otherwise subordinated. I found narratives about professional development had similar characteristics. In general, educators who generally viewed their work through an “outside lens,” did not talk about professional development offerings as appropriate, appealing or relevant to their work. Some narratives also expressed a perception that distribution was uneven, signaling support for some educators and lack of support for others. All types of stories conveyed a sense of separation or isolation.

The “outside lens” may also present in stories in which the educator expresses deep commitment to her work. However, these narratives also articulate a perspective that suggests the storyteller feels left behind or, more seriously, the educator has been betrayed by the organization. These narratives sometimes were dramatic tales in which the educator told me about giving everything to the organization and receiving no thanks or recognition for her efforts. These narratives convey the educator’s acute awareness of perceived inequities in recognition and thanks.

The “outside lens” is present in narratives that express tension between the educator’s perceived need to stand up for her views and a desire for reassurance. Regardless of organizational role, educators “outside lens” stories expressed a sense that the organization was moving away from them. As they provided illustrations and responded to my questions, they defended their views of technology innovation, while simultaneously seeking reassurance that their views were valid. The administrator, whose story is excerpted in vignette #5-30 (below), illustrates competing themes:

***Vignette #5-30** I almost got a bit insulted when they went to hire my replacement (because, like I said, they never asked me) and that was part of it because they were looking for somebody with REAL COMPUTER EXPERIENCE (her emphasis). And, it was almost as if they didn’t think that I was capable, you know, that I was an “old timer” that wasn’t capable of learning, or something. And, I was like ‘well, you never asked me to do anything, how come this is suddenly so important?’ (Interview #2, 9:30, Out with the Old)*

A recurring theme with “out with the old,” was that the school was phasing out long-term employees rather than train them to use the new technology tools being adopted. While this

educator was careful not to exaggerate the extent of technology problems, she was keen to maintain her own creditably as a valued and contributing member of the organization. While the public story of this educator's impending departure focused on a long-planned and happy retirement, during the interview, the educator alternated between reinforcing the public story and sharing a tale about being forced out because of technology.

She offered several anecdotes in which she shared her view of the incompetence of technology staff assigned to help her. She also added stories about her own, technology free, problem-solving skills. Her anger and resentment at the school's technology strategy, both tools and staffing, is evident in her narrative, which is continued, below:

***Vignette #5-31** There is definitely an emphasis now, when they hire anybody anymore that's the main qualification she had to have is experience with technology, you know computer experience and that kind of stuff and I don't agree. And, I tried to say I don't think that's correct. This is a people job. You've GOT to have somebody who deals with people well. Usually when I put computer with people in my head, I get a [technology specialist], and I think of please DON'T do that!*

Overall, the people who've had that job, well, you just go 'guys'! Because [Independent School] has gone so totally in this direction, you can't function without them, because they put you into that position where everything has to be done on the computer.

To me, my job was more people oriented, it was serving the people there and the computer was just a way of doing it, whereas I think [Independent School] in general, is definitely – like I said – that's their main concern. I mean you don't spend that much money on anything without making it a priority. And, it does concern me, because look at the money that's gone into that place, and it doesn't run any better now than it did before. (Interview #2, 6:45, Out with the Old)

This extended illustration includes the main elements of a narrative in which the “outside lens” is present. When talking about her work this educator defends her view of her work (“This is a people job.”), she is critical of the current organizational direction (“... when they hire anybody anymore that's the main qualification ... experience with technology, you know computer experience ... and I don't agree.”) and she seeks reassurance for her perspective (“To me, my job

was more people oriented, it was serving the people there and the computer was just a way of doing it ...”). While she speaks with vehemence about her stance, she nonetheless seeks reassurance and perhaps even validation of her views.

Not all narratives were shared with such intensity, although frustration and sometimes incomprehension were consistent elements across narratives in which the “outside lens” was evident. As Wenger suggests: “Experiences of non-participation are an inevitable part of life, but they take on a different kind of importance when participation and non-participation interact to define each other” (1999 p 165). In vignette #5-17 (below), the educator’s reluctance to discuss technology and the organization’s direction is palpable:

***Vignette #5-32** No. It feels new. I don’t know that I can identify why that feels new. But, maybe just the, the way people receive the ideas. It just seems as though the people are receiving them as new ideas, uhm, and I guess because I know that people get excited when they hear these ideas. I think the professional development opportunities when we talk about technology and they give you this menu of all these different things you could do and it’s “WOW that’s cool! That’s cool. That’s cool.*

It’s just a matter of taking the time to figure out how to implement it and figure out how to use it and be savvy with that things and, uhm. So, I think, that’s the way it feels new to me because it’s like these are new ideas and people are like, “oh-oh ... “ you know, and then ... (pause)

How many of them they latch on to, I don’t know ... (pause, and then to herself) ... Why do I feel that the school might be making a push toward that? Hmmm, well, I don’t know, I don’t like study what’s going on in the world of education. But, I would assume that we’re not alone. I would assume that everybody’s headed in that direction ... (pause)

Like (pause) everybody’s pushing the envelope and in a place where we’ve got, really, pretty rich resources. It might seem like [Independent School] might be looked to, like, as a place where, if we weren’t doing it, it would be ‘Why are you not doing it? What are you waiting for? There’s nothing to hold you back. You should be doing it.’ (Interview #7, 6:59, Outside Looking In)

While the administrator’s anger, expressed in vignette #5-31, centered on the organization’s supposed push to rid itself of “old” employees, the classroom teacher, in vignette #5-32, talked about technology as though she were observing through a window the activity occurring inside.

Although she was asked about current practices, her narrative did not articulate her own actions. Rather, she chooses to speculate about how other organizational members might see innovation. She spoke about understanding how others might get excited about new technology and the professional development opportunities that accompanied these initiatives. She attempted to rationalize their enthusiasm by suggesting that innovation is expected in an environment where resources are abundant.

As she continued her narrative, she conveyed her view of the organization's priorities and her thoughts about how resources might be channeled to achieve innovation goals. Her narrative is particularly interesting because, in the interview, she communicated her struggle to grasp the school's many areas of emphasis. When sharing her perspective, she conveyed disinterest in technology innovation in a tone that suggested technology was not interesting to her and, therefore, not really worth her time or energy, as seen in vignette #5-33 (below):

***Vignette #5-33** So, if people were trying to encourage more teachers to get on board, how should they go about doing it, type of thing? (extended pause) Yeah. It seems as an institution they do a lot to sort of foster that kind of activity. It's just a matter of whether or not, I feel as if a lot things at [Independent School] Independent School are so, uhm, we're very, we're very, we're very careful with this optional business. You don't want to, you don't wanna tell anybody what to do. You just want to make it the environment where you hope it will flourish (said with affected voice and hand motions)*

Yes, the (flourishing hand motions), uhm. So, you know, I don't know, it's kind of like you can sort of sit there and always feel the very politically correct way of saying "do this." If you don't feel like it's going to squelch your creativity, if you don't feel like it's going to ruin your own personal individual needs because we wanna maintain those, too.

So, I guess, really, I mean, I can't think of anything else they really would do, unless, unless, unless if that were really, if that were really the focus. Then I suppose more of the professional development would be focused that way. Because I feel like when we meet professionally. There's a few different issues on the table, you know, like, in one way you are being pulled to do sustainability and green stuff and in [the middle school] we talk a lot about organization and are our kids organized and how do we get them more organized.

Uhm, and then, and a whole faculty there's this technology stuff that we talk about. So, I suppose, if it were really a priority, we'd be more focused on that rather than saying 'Oh,

do this! Oh, do this! Oh, do this!' We'd say 'just, do that.' (Interview #7, 9:45, *Outside Looking In*)

This story contrasts from the earlier vignettes (#5-30 and #5-31) because, while both educators viewed their work through an “outside lens,” the lenses are constructed differently. Wenger defines two kinds of non-participation: peripherality and marginality (1999). Peripherality, is non-participation as simply less than full participation. Wenger suggests that newer community members may be only peripherally involved in the community but they are on an inward trajectory, leading eventually to fuller participation. Marginality is static exclusion where the community member is not moving toward fuller participation. Following Wenger, the administrator is on the margin while the teacher may be the periphery. If she chooses not to assume a greater role in the organization, and continues to struggle with the organizational culture and its priorities, she may also find herself marginalized.

Narratives in which the “outside lens” is present aid our understanding of technology innovation in this organization. The literature suggests that when technology is used as a Trojan horse for organizational change (Ottenbreit-Leftwich 2010), educators will see through ruse and respond accordingly. Vignette #5-34 (below) shows that some perceive innovation as a Trojan horse:

***Vignette #5-34** In some ways, and I think this is another goal of the administration, it's to leverage the influx of technology as a way to push teachers to regenerate their thinking about what it means and what a classroom can look like.*

*I know [principal] had explicitly said, at one point when we got the laptops, this is a huge moment and a huge opportunity to completely rethink the way you think about your teaching. And he said to the teachers, that this is one of the few opportunities ever in your career with this much momentum to do this. (Interview #14, 15:57, *Technology Toys*)*

Not all feel this challenge to rethink is negative. While some feel the push for technology innovation has left them behind and they resent the attention and accolades technology leaders receive, others resent those who they see as dragging their feet to resist change (vignette #5-35 below):

***Vignette #5-35** I said, ‘They have no room in their lives for that, they have too much on their plates.’ So, I said, ‘Look, I appreciate everything you’ve given me, but I’m alone in this.’*

And although he understood, he said, ‘Don’t give up, keep talking to them, keep showing them. The shift is going to come as we get the new teachers, the ones who had their laptops in college.’ (Interview #1, 27:00, Out with the Old)

Both vignette #5-34 and #5-35 convey an awareness of the challenges transformative innovation poses for organizations and the frustration that educators on both sides of the innovation curve feel as they work to understand the opportunities and consequences of adopting or not adopting new technologies in the classroom. Of particular interest in this study is the connection that educators, regardless of narrative form shared, made between information technology adoption and professional identity.

Section B.4.1 Illustrating the “outside lens”

The interview provided here (#7), illustrates the challenge some educators experienced with transformation occurring at Independent School. This classroom teacher clearly is not comfortable with technology innovation and obligation to change the way she teaches. During initial analysis of the data, my notes included phrases like: “feels overwhelmed,” “is concerned about future expectations” and “cannot see tech in her classroom.” I asked her to share a story to convey her understanding of the school’s goals for technology innovation. She paused before answering, seeming not to comprehend the question. She clearly wanted to be thoughtful but was not comfortable with the topic or question. The tone of her narrative, excerpted in vignette #5-36 (below), was wistful resentful, and a sense of marginalization was apparent. For several seconds, she simply paused, trying to think about to say:

***Vignette #5-36** OK. So, I think that there are just so many different tools available. So many pieces (pause) ... Like, there’s a Smartboard and, uhm (pause) and then there’s the iPods. There were those, there are those library of video iPods that you can check out (pause) and, uhm, then there’s not the hardware stuff but the software stuff like [the intranet] (pause) and, uhm, all the various Wikis (pause) and blogs and all of that (pause) and so I feel that the more that that’s available. They want to encourage everybody to use a much of that as possible. Because it’s all available, uhm (pause). So,*

you know (pause) some people kind of (pause) munch on it a little and do some (pause) and some people do a LOT (emphasis). And, I do feel that the people who do a lot are sort of held up to a different (pause). They are definitely celebrated. I would say that.

(pause) Yes. I would say that. I feel that. I feel that that's the case and, I feel that obviously kids (pause) that obviously kids (pause) enjoy (pause) interacting with their computers, uhm, And so, (pause) that might be another reason why people who choose to go that way are maybe more celebrated (pause) because, maybe it seems that what they are doing may appeal to the kids more ...

Or, tap into a mood that they are very comfortable with (pause) so (pause) and in (pause) the middle school there is a [teachers'] tech club. So, like on the first Tuesday of every month, or something like that. Teachers can choose to go to this tech club and talk about whatever the topic of the month is. So if you, so if a bunch of users, a bunch of [intranet] users want together to share ideas about [Intranet] (pause) of a bunch of (pause) users of this particular Wiki want to get together and talk about how to use that Wiki (pause) or whatever, uhm... (Interview #7, 03:20, Outside Looking In)

Two aspects of this narrative were particularly interesting. She resisted imagining the scope of innovation occurring around her. Of the 20 interviews completed, this educator was the most hesitant to envision technology as a useful, transformative educational tool. While she seemed aware of technology conversations occurring, she was uninterested in participating in any of them. The second element that intrigued me was her preference to spend her professional development days avoiding innovation. Technology was not for her and, although she recognized others found it helpful, she did not see benefit for her. This awareness of “I know it’s popular, but it’s not for me” is the essence of the “outside looking in” story theme and indicates the educator views her work through the “outside lens.”

Throughout the interview, I could see her struggle to be polite and to respond to my questions, despite the separation she felt existed between her work and the school’s technology drive. In vignette #5-37 (on the following page), which began with an extended pause, she expresses understanding of the organization’s priority, yet suggests it is irrelevant to her and her work:

Vignette #5-37 *(pause until 10:05) Yeah. It seems as an institution they do a lot to sort of foster that kind of activity. It's just a matter of whether or not (pause) I feel as if (pause) a lot things at [Independent School] are so, uhm, we're very, we're very, we're very*

careful with this optional business. You don't want to, you don't wanna tell anybody what to do, you just want to make it the environment where you hope it will flourish (said with affected voice and gestures) ...

So, you know, I don't know it's kind of like you can sort of sit there and always feel the very politically correct way (pause) of saying 'do this.' If you don't feel like it's going to squelch your creativity, if you don't feel like it's going to ruin your own (pause) personal, individual needs because we wanna maintain those, too.

So I guess, really, I mean, I can't think of anything else they really would do, unless, unless, unless if that were really, if that were really the focus (pause) then I suppose more of the professional development would be focused that way. Because I feel like when we meet professionally, there's a few different issues on the table. You know, like, in one way you are being pulled to do sustainability and green stuff and in [grades six to eight] we talk a lot about organization and are our kids organized and how do we get them more organized ...

And then, and a whole faculty there's this technology stuff that we talk about. So, I suppose if it were really a priority, we'd be more focused on that rather than saying 'oh, do this! Oh, do this! Oh, do this!' We'd say 'just, do that'. (Interview #7, 9:56, Outside Looking In)

Section A.4.2 Summarizing the “outside lens”

As noted above, narratives in which an “outside lens” is evident might articulate either or both story themes discussed in this section. Although both themes are associated with marginalization, narratives vary widely in tone and content, revealing vastly different ways of expressing feelings and experiences. To protect the anonymity of those I interviewed, I have included only interview #7 to illustrate “outside lens” narratives. Stories from this interview illustrate mainly the “outside looking in” story theme. While other interviews contained interesting texts, parts of which are included in chapters four and five, sharing an extended narrative here would be challenging and may reveal the participant's identity. Regardless, it is helpful to note that “out with the old” stories align with “outside looking in” but contain more anger that results from the educator's understanding of his work experiences.

Organizations undergoing significant technology change, may find the perspectives of educators who view their work through an “outside lens” particularly challenging. When educators feel

their workplace is leaving them behind or intentionally excluding them, innovation efforts can be impeded through apathy or sabotage. Although the number of educators who view their work through an “outside lens” is small, the negative influence they can have on organizational outcomes could prove costly.

Narratives in which an “outside lens” is evident, talk about work as an experience in marginalization. Stories convey participating less than fully as an inevitable part of professional life. These narratives articulate comfort with pursuing a path that does not align perfectly with colleagues or the school’s leadership. They may also articulate truly stressful conditions, of being at odds with the organization’s direction and having a compulsion to voice disapproval. While the first type of narrative expresses differences between the educator’s view of technology transformation and the organization’s direction in a detached way, the second type of narratives is intensely personal. The language in these narratives emanates offense, anger, frustration, or displeasure. In general, narratives in which a n “outside lens” is present can be characterized as showing a:

- Self-centered focus;
- Keen sense of marginalization;
- Range of emotions, from wistfulness to anger;
- Perception that access to resources, as it relates to technology use, is unfair;
- Perceptions that recognition, as it relates to technology innovation activities, is unevenly provided;
- Willingness (even need) to sharing work stories; and
- Lack of participation in professional development, either provided by the organization or through outside organizations.

Section C: Summary and Implications

The nine themes introduced in chapter four illustrate the wide range of perspectives that educators hold about their work. These perspectives influence how educators view the

technology innovation occurring in their organization and the place they feel it has in their classrooms and work areas. However, a single story theme does not provide a broader view of the way educators understand their work and the role they have assigned technology in their professional lives. Using the identity lenses identified, we can see more clearly how different understandings of work and technology innovation shape educator perceptions of professional identity. As well, identity lenses outlined in this chapter allow us to observe how professional identity influences educator relationships with other educators, as well as how educators interpret and respond to technology transformation efforts in their organization.

In chapter five, I showed how the nine story themes aligned into identity lenses to clarify educators understanding of professional identity with respect to their work. I introduced four specific identity lenses, each of which reflected a set of understandings of work as shaped by work focus, technology view and professional development. For example, some educators considered their work through the eyes and interests of their students. Others consider their own experiences as a means of conveying understandings of technology innovation. In each interview, I found unique combinations of narratives and stories. Through analysis, I was able to see how the stories themes together formed patterns of understandings that influenced how the educators understood their work, their relationships with colleagues, their approach to technology, and also their view of professional development.

Chapter six will explore the specific organizational forums that facilitate identity negotiation in this organization. In chapter seven, I will discuss the implications of this data and outline considerations and opportunities for future research.

Chapter 6

Technology Innovation and Identity Negotiation

Narratives are the stories we tell in an effort to make sense of how we experience ourselves and how we would like to be understood in order to bring structure to our personal lives. We use these narratives both to construct and to negotiate individual identity ...

- Gunn Søreide (2006 p 529)

In chapter four, I introduced nine story themes that emerged when educators talked about their work and their experiences with technology innovation in an educational setting. In chapter five, I illustrated how different groupings of the story themes, termed identity lenses, helped us to gain insight regarding the influence of educators' perspectives as they sought to understand the transformation occurring around them and the implications of technology innovation and changing organizational priorities on their professional identities. These narratives, used to illustrate the influence of the educators' perspectives, included frequent references to specific aspects of the organization's culture and organizational values. This chapter explores how four professional and organizational values facilitate, impede or in some way bear upon professional identity negotiation in this organization related to technology innovation.

This chapter is organized as follows: in section A, I introduce the four organizational values and illustrate briefly their implications for professional identity negotiation. In section B, I summarize the key aspects of this chapter in preparation for the discussion of chapter seven.

Section A. Organizational values and identity negotiation

In a large and diverse educational organization, a variety of professional activities occur in the course of a workday. Generally, activities that matter are those extending from the enactment of organizational and professional values. Values, which are implicit, serve as important markers in a professional educational community. As introduced in chapter two, professional values frame an educator's view of his or her professional identity, as they are measure of attributes associated with a particular value set (e.g., trustworthiness or creative or student-focused). In an

organization, undergoing significant information technology transformation organizational values may shift, while, typically, a profession's values do not. Emerging organizational values might challenge or conflict with certain professional values, thus influencing identity negotiation.

Organizational and professional values influence how educators negotiate identity as they tell stories to make sense of their experiences. Educators engage with one another differently according to the activity and, necessarily, stories about experiences that matter to them also vary in significance and priority depending on the circumstance, agenda and those present. During interviews, educators observed that the stories they tell and those they are told shape perceptions and also influence ideas and actions. Some educators questioned the motivations of their colleagues because of the stories their colleagues shared. Others conveyed an awareness of the fluid nature of professional identity *vis-à-vis* the technology transformation occurring, connecting well-placed storytelling with identity formation. All expressed an understanding of the cost and consequences of an ill-timed story or a poorly selected audience. And, all suggested that organizational and professional values related to technology innovation at Independent School were in flux.

As educators shared their perceptions about these stories, I identified professional and organizational values that were particularly significant to identity negotiation in this community related to technology innovation. Each value, identified through analysis of the story themes and identity lenses, is connected with the organization's culture; each value influenced the educator's understanding of organizational goals and priorities. In this organizational context, analysis of stories referencing salient professional and organizational values provides a useful means to consider the implications of professional identity with respect to technology innovation as educators attempt to incorporate (or not) information technology in their work.

Analysis of the data illustrates identity negotiation as an ongoing process among educators and suggests that certain organizational values are more significant to identity negotiation, relative to

technology innovation, than others. In this chapter, I explore how educators view Independent School’s focus on technology innovation as augmenting or diminishing their professional identities, by considering stories about organizational values from both the educator’s organizational role well as the identity lenses employed to make sense of technology-related changes. This analysis includes examining how perceptions of technology innovation influence the educator’s understanding of organizational values. As specific organizational values are enacted in the day-to-day interactions among organizational members, the identity negotiation process occurs. Educators efforts to make sense of their experiences with the school’s information technology transformation mission, the changes this undertaking has prompted in their work and their relationships as well as the observations they make about the influence this transformation has on their professional identity occurs in forums framed by the professional and organizational values of this community.

Figure 6–1: Organizational Values and Identity Literature

Organizational & professional value	Definition (in the literature)	Implications for identity negotiation during information technology innovation (from the data)
Professional autonomy	A personal sense of freedom and discretion to control classroom activity and to act independently in planning and execution (Pearson & Hall 1993; Sweeney 2006; Wilches 2007)	<ul style="list-style-type: none"> • Perceived and actual changes to independence due to expectations for information technology use; • The emergence of new professional groups around technology innovation, with some overlap and conflict related to autonomy
Professional recognition	Demonstrated appreciation, gratitude and respect in both formal and informal situations (Hardin 1999; Kelchtermans & Ballet 2002)	<ul style="list-style-type: none"> • Organizational acknowledgment of effort, which varies and is subjectively assigned and interpreted • Perceived shift in recognition from traditional areas to technology innovation.
Collegiality	Involvement with colleagues, particularly referring to joint work that could be intellectual, social, sharing, or emotional (Clement & Vandenberghe 2000; Fallon 2009; Jarzabkowski 2002)	<ul style="list-style-type: none"> • Relationships with colleagues are important; they are constructed socially and vary according to time, common interest and organizational role. • Technology innovation projects increasingly a focus of collegiality.
Personal growth	A change in knowledge, belief, practice or strategy resulting from experimentation, reflection and/or collaboration (Clark & Hollingsworth 2002; Hudson-Ross 2010)	<ul style="list-style-type: none"> • Growth opportunities are many and widely varied; professional growth opportunities may be offered and accessed unevenly. • Increased organizational support for professional growth opportunities related to technology innovation.

I identified four values that were significant for identity negotiation in this organization. As shown in figure 6–1 (above), the salient values are: professional autonomy, professional

recognition, collegiality, and professional growth. The following sections define each value in this organizational context and illustrate the influence of each with respect to educator professional identity negotiation during information technology innovation.

Section A.1 Professional autonomy

Professional autonomy has been defined as a personal sense of freedom and discretion to control classroom activity and to act independently with respect to planning and execution (Pearson & Hall 1993; Sweeney 2006; Wilches 2007). In this organizational context, it refers to the extent to which educators are able to choose how they spend their workdays, the freedom they have to set priorities and to design curriculum and other work-focused tasks. Importantly, it refers to the choices educators have in determining how much technology they will use in their work and in what form as well as the manner of training and implementation.

Section A.1.1 Professional autonomy and organizational role

Aspects of professional autonomy in this organizational context, and revealed through the data, include freedom to control workspace, work content and technology use. They are summarized in figure 6-2 (below) according to professional group:

Figure 6-2: Aspects of *professional autonomy* related to negotiating technology innovation and professional identity at Independent School

	Teachers	Technologists	Administrators
Workspace	Control of classrooms	Access to and influence on own and others offices & classrooms	Control over offices
Work content	Design and implementation of curriculum	Selection and promotion of technology tools & technology practices	Influence with recognition of teacher autonomy
Technology use	Control over introduction and use; control over tools chosen and training	Ability to influence and promote technology use	Control over own use; mixed views of classroom use

Workspace, work content and technology use each provide an opportunity to negotiate professional identity as it is connected to information technology innovation in this setting. While in some respects, in an educational setting this seems to be self-evident, the reality in

many schools is changing as limits to professional autonomy are emerging a result of regulation and or public interest (Culp et. al. 2005; Ertmer 2005). While independent schools operate with fewer regulatory constraints, research has shown that in this environment, too, educator independence is experiencing pressure from outside sources (Cuban 2001). Regardless, educators – both administrators and classroom teachers – cite professional autonomy as a value and connect it directly to job satisfaction. The following vignettes provide excerpts from a classroom teacher, technology specialist and administrator, each talking about various aspects of professional autonomy. As shown below, teachers view their classrooms as private spaces over which they have exclusive domain. They value being free to determine what happens there, including the amount and method of technology use as shown in this vignette from chapter four (#4-26):

***Vignette #6–1** There is no other job in the world that would allow me to be as creative and flexible. I'm an historian. I'm a standup comedian. I'm a scientist. There's no other job. People often say you should go into graphic design; you should go into computers. But then, my job would completely change. (Interview #20, 19:54, Show Off – Innovate)*

Similarly, technology specialists, this community's newest professional group, value being able to move freely throughout the school community. While they are assigned specific workspaces, their organizational role grants them access to the classrooms and offices of their colleagues. They also have organizational authority to influence the technology tools selected for school-wide use and they design curriculum to train other educators and students on best practices:

***Vignette #6–2** I think that just the climate here at [Independent School] where we don't have a set of standards; we don't have a set curriculum. I mean we do, we have our map, which gives us the big picture and our big understandings. But no one is dictating how we present, how we do it. We have our goals and we know what we'd like to achieve. But no one says, 'We're going to test next week.' (Interview #15, 42:35, Let's Meet! – Evolve)*

Professional autonomy is also important to administrators, who value their private offices in part because truly private space is rare in school settings and, thus, is considered prestigious. Administrators also possess true organizational authority to influence both curriculum and technology choices for the school. At different times, their choices align with or against both

classroom teachers and technology specialists. While they frequently must address conflicting demands for technology products, they value the authority they have, which augments their professional autonomy:

***Vignette #6-3** And, the very first year, we started the laptop program. I was in on the ground floor ... Probably my favorite position of all was as supervisor, I would think. Just in terms of being able to have the tools and being able to move in a direction and think strategically. (Interview #19 6:49, Let's Meet – Evolve)*

Each interaction of educators provides an opportunity for identity negotiation. Educators conveyed their understanding of this complex negotiation process through talk about their work and reflections about the efforts of their colleagues. The narratives they shared highlighted the significance of professional autonomy to identity negotiation because it occurs recursively through consideration of changes to physical workspaces, evolving work content, the introduction of new colleagues and thus relationships, and the broad organizational mandate to incorporate technology into all aspects of work.

In the narrative that follows (vignette #6-4), a technology specialist outlines the vital organizational role he has nurturing change to advance technology transformation. He acknowledges the significance of professional autonomy as he the talks about the uncertain terrain he must traverse in his work with classroom teachers to ensure the transformation occurring is considered to be driven by educators, rather than by an administrative or technology agenda:

***Vignette #6-4** One thing that I've really appreciated in [our] school is that I've always felt that the teachers are given the opportunity to connect to technology in their own, individual and unique ways, without mandates, without, without, you know, I don't know, without a list of, that one must achieve proficiency in by a certain date. And, so it's been, well, it was a challenge at first because it really does entail getting to know everyone individually.*

I mean as the person who's helping people use technology, you know, I feel I've got to come to understand everyone and find and make the connection what is it, what tool or what activity can this person relate to or what can they grasp on to what will help them

you know, in this sort of long term movement toward using technology. And, I've felt that the climate here was really conducive to that. (Interview #6, 17:46, Let's Meet! – Evolve)

This vignette summarizes the process of identity negotiation as it occurs relative to professional autonomy. The technology specialist acknowledges the importance of allowing educators to “connect with the technology in their own, individual and unique ways.” He offers an important observation when he suggests that educators, who see themselves as motivated professionals with the capacity and freedom to design their own work, must be given similar freedom when they are asked to adopt significant technology-oriented changes to their practice.

Section A.1.2 Professional autonomy and identity lenses

While organizational role provides an opportunity to consider professional autonomy as a forum for identity negotiation, considering role alone offers an incomplete picture. As introduced in chapter five, the identity lenses, through which professionals in this community view their work, also influence the identity negotiation process. Accordingly, for each of the values identified, we must consider the implications for identity negotiation by examining both organizational role and identity lens. Figure 6–3 (below) shows aspects of professional autonomy according to each identity lens:

Figure 6–3: Aspects of professional autonomy from the perspective of an identity lens

	Nurture	Evolve	Innovate	Outside
Workspace	Welcoming; student-occupied spaces	Places to meet with colleagues and share ideas	Playgrounds for technology toys to be tested	Lonely places
Work content	Curriculum differentiated to meet student needs	Pilot projects and evaluations	Constantly changing; never the same thing twice	Varies
Technology use	Tools focused on student learning	Tools that are the “in” thing at conferences	Tools that are not yet at conferences	Varies

Examining professional autonomy from both perspectives, we can see tension inherent in this complex process. Workspace, work content and technology use enable professional identity negotiation connected to information technology innovation. However, organizational role and

identity lenses influence how professional autonomy, as an organizational value, is perceived. For example, considering professional autonomy through a “nurture lens” may refract this value positively, as educators embrace the freedom to incorporate technology. In this regard, organizational role is attenuated by identity lens, as shown in the vignette (below) from chapter five (#5-2):

Vignette #6-5 *But one of the things I will say is that I think technology can and is doing for us in the middle school is allowing options, choices, uhm, different ways of doing things to address some of the core goals, the instructional goals and learning goals of the school and ... about what we see as the goal for technology in the school, I see it, I see it as giving people options.*

... Every teacher is able to find those tools and those things that will work best for them as a teacher and we seem to encourage that students also find those things and we help them find those things that address their learning or help them with their learning ... (Interview #6, 3:45, Student Learning – Nurture)

Educators, who view work through an “outside lens,” may perceive freedom to adopt technology differently. The narrative below illustrates an educator’s frustration. She shares the value of professional autonomy but she is threatened by her perception of the technology transformation being imposed on her and its corollary influence on her professional identity. She is challenged to maintain her status with her colleagues despite choosing to avoid technology use in her work:

Vignette #6-6 *There is definitely an emphasis now, when they hire anybody anymore. (pause) That’s the main qualification she had to have is experience with technology, you know, computer experience and that kind of stuff. (pause) And, I don’t agree. And, I tried to say, ‘I don’t think that’s correct. (pause) This is a people job. You’ve GOT (emphasis) to have somebody who deals with people well.’ Usually when I put computer with people in my head, I get a [technology specialist], and I think, ‘Please DON’T (emphasis) do that!’ (Interview #2, 6:45, Out with the Old – Outside)*

The complex process of identity negotiation cannot be observed directly. However, we can find evidence of its presence when we consider organizational values, which influence identity negotiation. By integrating individual perspectives with organizational values, we can see why

some educators talk about technology as positive while others perceive it as threatening, or at least as a vehicle to force curriculum and behavioral changes or to redesign work.

While classrooms and administrative workspaces once were the exclusive domain of educational professionals, technology transformation has introduced new skills and positions into this community and the work of these professionals frequently crosses over into classrooms and offices. By necessity, workspaces are now shared. In vignette #6-7 (below), a classroom teacher who views his work through an “outside lens,” comments on the growth in the number of new, non-teaching professionals in the community. His narrative suggests their presence in the school poses a threat to the autonomous space of his classroom:

***Vignette #6-7** Our school has always gone beyond lip service about providing workshops and in-service training for the teachers here and they understood that early on. And [they] said, we will run summer programs. [And,] we have. If we were to look at the hiring of people, expanding the faculty and staff at this school, it would overwhelmingly be in technology and IT and all of that. I mean I know that fundraising has been a growth industry, but that probably pales in comparison to the number of people who've been hired on this campus to help with technology.*

Either people in offices like in IT, or people who directly work with children. I'm thinking about people like [technology specialist], people whose sole job is really to work with technology. And, I don't know if [technology lab supervisor] still does. (pause) I haven't seen [her] around in a long time. She used to have that role. [Colleague's name] also used to have that job ...

So, I think that's been a real growth industry in terms of new hires on our campus and that is people who support what our children are doing. I mean, our [technology]. I mean, we couldn't do that just by buying hardware, for goodness sake. We need to have support staff. So, we have guys who, every morning are up in the – oh, I always call it the wrong thing (Interview #18, 10:52, Outside Looking In – Outside)

This vignette illustrates a relationship between educator's value of professional autonomy and his understanding of organizational priorities, which influences professional identity negotiation. While he recognizes the importance of the broad transformation occurring in the school, his pejorative, even disapproving tone suggests he is not entirely comfortable with this professional group. He supports technology only as a student resource but does not them to interfere with his

classroom or curriculum. Further, he does not see his classroom as a place where extensive technology will be used. This negativity might be evidence that he feels the new professionals are impinging his professional autonomy – they have technology skills that he lacks; his narrative revealed a sense of conflict and unease, which was not a common perspective found in the interview data. However, his view was not singular, illustrating the complexity of professional identity negotiation with respect to professional autonomy.

Section A.2 Professional Recognition

Professional recognition has a variety of monikers and explanations in the literature, even within the social and behavioral sciences. Narrowly, it is defined as the right to practice as well as the professional status given to those who hold higher qualifications (Carter 1994; Vlăsceanu 2004). More broadly, it means such things as employee awards, recognition events and celebrations, which range in scale and formality, as well as the provision of supportive feedback and communication (Hodges 2005; Howze 2000; Rosengren et. al. 2007). In this study, professional recognition is the continuum of activities and communications that administrators, classroom teachers and technology specialists engage in to acknowledge their colleagues' pedagogical efforts to incorporate information technology into curriculum and teaching practice as well as in to other academic activities. Associated with professional recognition are the intentional efforts of organizational members to undertake activities they perceive will garner acknowledgement along with the organization's response to their efforts (providing or not the recognition desired). Observations about which colleagues and what actions are recognized can mitigate or augment the effectiveness of professional recognition and, relevant to my study, produce the conditions necessary for identity negotiation related to professional recognition.

The three aspects of professional recognition are shown in figures 6-4, 6-5 and 6-6 (on the following page). Figure 6-4 shows professional recognition as a channel through which organizational leaders reinforce activities they see as consistent with overall technology innovation goals.

Figure 6-4: Aspects of professional recognition associated with professional identity negotiation

Teachers	Technologists	Administrators
Educators who model desired creativity and enthusiasm and work to actively incorporate information technology into their work practices, receive professional recognition in the form of:		
Special Events: Invitations to participate in restricted events as well as opportunities to travel to conferences and other valued events		
Public Acknowledgement:		
<ul style="list-style-type: none"> • <i>Formal:</i> “Model” educators are featured at school-sponsored professional development events and profiled in school publications • <i>Somewhat formal:</i> Administrators and supervisors cite the educator’s behavior as a “model” anecdotally at school events, speeches and school-related publications. • <i>Informal:</i> Colleagues look to the educator as a “model” for technology excellence. 		
Resources		
<i>Classroom:</i> Additional technology resources are provided for student and teacher use; modeling – technology for personal use is provided.	<i>Technology:</i> Advanced technology tools and associated training are provided; modeling – technology for personal use is provided.	<i>Business:</i> modeling – technology for personal use is provided.

Figure 6-5 outlines the recognition-seeking activities of organizational members. Figure 6-6 illustrates the influence of identity lenses, recognizing that organizational members may attach more value to behaviors they associate with their professional identities whether or not such activities are featured elements of their role-based work.

Figure 6-5: Activities that garner recognition at Independent School

	Teachers	Technologists	Administrators
Curriculum	<ul style="list-style-type: none"> • Incorporating information technology into curriculum • Creative use of information technology 	<ul style="list-style-type: none"> • Developing technology tools for classroom and business use 	<ul style="list-style-type: none"> • Encouraging information technology use in the curriculum through policy or training incentives
Leadership & Mentoring	<ul style="list-style-type: none"> • Sharing information technology-focused curriculum & teaching practices with colleagues 	<ul style="list-style-type: none"> • Working with teachers, administrators and specialists to incorporate information technologies into teaching practice 	<ul style="list-style-type: none"> • Creating an environment that sharing information technology strategies

As shown in chapter five, educators’ identity lenses influence identity negotiation. Educators may find themselves recognized for activities they do not associate with their professional

identities; educators may also view the recognition as not meaningful or even inappropriate. This intersection, of recognition with educators and their efforts, provides a forum for identity negotiation *vis-à-vis* the value of professional recognition.

Figure 6-6: Professional recognition and identity lenses at Independent School

	Nurture lens	Evolve lens	Innovate lens	Outside lens
Activity	<ul style="list-style-type: none"> • Celebrate student success and achievement 	<ul style="list-style-type: none"> • Celebrate collaboration and partnerships 	<ul style="list-style-type: none"> • Celebrate creative technology use 	<ul style="list-style-type: none"> • Little acknowledgement or recognition
Recognition tool	<ul style="list-style-type: none"> • Provide additional classroom tools to recognize achievement 	<ul style="list-style-type: none"> • Provide conference travel or professional development opportunities 	<ul style="list-style-type: none"> • Provide new information technology tools and training 	<ul style="list-style-type: none"> • Little recognition provided

As with professional autonomy, educators willingly shared narratives to illustrate how they viewed the organization’s reinforcement of their actions as a way of negotiating and reconsidering their own and their colleagues’ professional identities. Professional recognition, as an organizational value, influences identity negotiation because educators approach their work in complex and varied ways and enjoy different types of acknowledgement for their efforts. The three overlapping aspects of professional recognition are important for identity negotiation because they pull together three distinct, but related, perspectives: the efforts of organizational members to interpret pedagogical priorities and implement actions that align with their aims and their understandings of the organization’s goals; the professional recognition extended by school administrators as they observe and affirm actions they see as consistent with their priorities and which influences the way organizational members recognize each other; and, the value educators place on the recognition of specific actions as well as actual recognition activities, which are enacted within the overall context of this educational community. The following sections will consider professional recognition activities first from the perspective of the educator’s organizational role and then from the perspective of professional identity lens.

Section A.2.1 Professional recognition and organizational role

Classroom teachers, technology specialists and administrators shared common ground when they talked about the professional recognition they valued. Several cited acknowledgement at school-related events and invitations to participate in exclusive gatherings as evidence of organizational affirmation. Receiving resources for classrooms, technology labs and offices also illustrated positive professional recognition, although they were mentioned less frequently. In vignette #6-8 (below), a classroom teacher shares her excitement at being included in an invitation-only planning session attended by high profile guest speakers, senior administrators and other dignitaries. During her interview, she shared easily stories about her classroom and teaching strategies and her view of herself as a creative and student-focused educator. However, although proud of it, she shyly shared her story of this invitation, referring to her participation self-deprecatingly (“and somehow [pause] I got invited and I was vey excited”):

***Vignette #6-8** And so the room was packed with all these people who had been invited and somehow (pause) I got invited and I was vey excited and one of the things that they talked about, somebody had asked them, "Well, what were you like in eighth grade or ninth grade? And, would you have known then where you going?" (Interview #9, 47:20, Let's Meet – Evolve)*

Vignette #6-9 (on the following page) expresses similar value at receiving recognition in the form of an event invitation. A classroom teacher cites her participation in an invitation-only learning lab designed to allow educators to test curriculum, collaborate with colleagues and to enjoy the opportunity to talk to and sometimes work with industry leaders who specialize in technology-based pedagogical strategies.

***Vignette #6-9** I'd say, in general, it supports it, I mean we have people like [name] who go out and search for wonderful, new innovations and she'll bring it back and she'll share with you and I've been a part of the lab school for the last, since it started. And, so I've listened and taken part in wonderful discussions with leaders in technology in education. And, I think that's great.*

And, I love the fact that every kid has a laptop. I love that fact that I'm getting 10 iPods this year for my classroom, so that I can hand them out. And, so I like that fact that

Independent School supports what we're doing to (Interview #11, 22:10, Let's Meet – Evolve)

Section A.2.2 Professional recognition and identity lenses

As with professional autonomy, educator identity lenses influence how professional recognition efforts are perceived. While educators typically are student-focused and less concerned with outside views of their efforts (de Sonneville 2007; Hartnell-Young 2006), recognition by others in the organization can be polarizing depending on who is celebrated and in what context. I found that educators viewed recognition positively when they observed it being given to colleagues who they perceived as similar to themselves. Although educators do not wear a professional identity label, nor can professional identity be observed, in interviews, educators talked positively about recognition given to educators who they saw as possessing similar educational visions. Most educators also implied that recognition they had received was appropriate and affirming of their own efforts. The exception to this pattern was found in the narratives of educators who viewed their work through an “outside lens.” They tended to express concern that their own efforts were not being sufficiently acknowledged and unease with the recognition they observed other colleagues receiving.

That educators freely shared their assessment of the organization’s recognition program is evidence of how significant professional recognition is to identity negotiation. The educators in this community observed closely the recognition they saw others receiving and they used this information to consider their own professional identities. Although accuracy in storytelling was less important to the storyteller than conveying an impression, these narratives – like vignette #6-10 (below) – illustrate the professional identity negotiation evident in the professional recognition forum and the consequences of subjective interpretation of recognition activities:

***Vignette #6-10** I don't need anything like that. Somebody else can do [that] here. But, right now, I'm using the room across the hall for my [classes] and after school uses it ... and, it works. And, it's OK. It's fine. But, it's not like having a [dedicated] room, where*

you have all the things needed, right there. I don't have room to store [supplied] and, uh, it's currently a multipurpose space, because some people come in and go out.

So, I'm not sure if I'm answering your question. Particularly, the school has been wonderful with its support. Look I've got 24 iMacs. And, [the administrator] was against it; he was against the idea of a lab. [He said,] 'Get the kids with their computers and let them have it.' But there are so many things that occur when the kids have the computers as opposed to having it in a place and they can come to. There's still a good reason for the lab. And, I've been so fortunate to have this. And, I've been able to arrange it so that over there is where we have our TV and sort of a meeting place. (Interview #17, 42:35, Out with the old – Outside)

Throughout the interview, this educator returned several times to notion that his own technology innovation efforts followed “the right path,” while contending that his colleagues were slow to adopt technology and when they did, they typically followed inappropriate, outdated or ill-advised paths. His frustration about not being recognized framed his narratives and his stories emphasized efforts to intentionally resist certain leadership directives. Although his text above purports self-sufficiency and lack of concern or interest in organizational approval (I do not “need anything like that”), his tone is petulant as he criticizes the classroom space and enumerates the limitations of his current assignment. His angst is also evident when he contradicts himself by asserting he received support from administrators and offering the many computers in his classroom as evidence. I found it interesting that he followed this assertion with a detailed account of a senior administrator’s opposition to his request for more space. Again, he justified his rebellious behavior by telling equating the computers he received as success because an administrator had opposed creation of his lab. That he received the technology anyway, for him, served as confirmation of support for his vision and not the administrator’s.

Consistent with the previous section, receiving classroom resources as a form of professional recognition, while valued, is not considered to be equal to receiving personal public acknowledgement. Also consistent with the previous section, this pattern of talk – resisting the system and justifying resistance – which repeated itself throughout the interview, illustrates how

this educator used professional recognition to test his understanding of organizational priorities and, in relation, reconsider his own professional identity.

Vignette #6-11 (below) offers another illustration of professional recognition, selected because a “nurture lens,” with its focus on students and student learning, is evident. This narrative illustrates how receiving technology resources is seen as recognizing student success. The educator viewed the resource gift as affirming of the student learning occurring in her classroom; she sees the iPods as support of her efforts to teach and to help students learn, rather than as a celebration of her personal greatness:

***Vignette #6-11** Yes. I was able to purchase 12 iPods for my class to use next year. Ten or 12, I don't remember how many. But, that kind of support means I can support my students who need the audio or if they need to make flashcards. But, the really nice thing is if they need to make flashcards, they can do it on their computer, too. Cuz, that (pause) well you don't necessarily want to pull out a big laptop. But, at least it's there. And, you can pull out your laptop and use the flashcards. And, on the screensaver the words can come across so you can learn the vocabulary words. You know, we can do all sorts of things to make it useful.*

Whereas in a public school, like in [big city], you had to write grants, and you had to do different things, you didn't necessarily get a computer per kid. Like, we had 15 computers and we shared them. So, I mean you use whatever you have, and you figure out ways to make it work. I think that's the creativity of being a teacher. So, the support here is really nice. And, then the guest speakers that come in are really nice. And, having someone else search for the technology to help you is wonderful (Interview #11, 23:59, Student Learning – Nurture)

This educator interprets receiving technology for her classroom as curriculum, student-focused recognition that affirms her efforts and her students' successes. She appreciates this recognition because it aligns with values she connects with her professional identity, which is centered on her students and her classroom. In this way, educators also consider the provision of technology resources as influencing identity negotiation. The educators shared frequently narratives that revealed a connection between access to technology resources and recognition. The telling aspect of identity negotiation as it relates to recognition is seen in the various ways these perspectives are conveyed.

As indicated in vignette #6-10 professional recognition influences identity negotiation because educators have subjective interpretations about the resources they receive. They form their own views about what precisely constitutes additional resources, who should receive these gifts and according to what merits. The educator whose narrative is shared in vignette #6-9 talked about appreciating the technology resources provided to her and she connected the resource allocation with her work with students. Her perspective, when compared with vignette #6-10, highlights the significantly different views that exist and underscores the reality that a single action can be interpreted in multiple ways. The educator in vignette #6-10 attributed the resources he received to his own advocacy and vocal resistance to an organizational strategy he perceived to be poorly designed and mandated. The way he personally connected with recognition suggests an “outside lens” is present because his narrative reveals a need for acceptance and validation. While the educator in vignette #6-9 ascribes her resource allocation to organizational acknowledgement her efforts, her colleague sees recognition as vindication. These diametrically opposed responses to an identical organizational reinforcement – the allocation of additional technology resources – illustrates how professional recognition activities, as a value provides, a forum for identity negotiation in this organization.

Regardless of perspective, the educators who shared their experiences in this study outlined a wide range of initiatives, which they felt were worthy of recognizing and an equally broad range of recognition opportunities they valued. Professional identity negotiation occurs in this environment as educators consider and review how their work is valued, as filtered through subjective assessment of recognition they receive for their work and observations they make about recognition their colleagues receive for their efforts. The most significant aspect of identity negotiation in this context is the challenge that educators face in attempting to rationalize their own views of work with what they infer about the organization’s priorities, as seen through the allocation of recognition to themselves and others.

Section A.3 Collegiality

Collegiality is defined as the range of ways that colleagues are involved with one another in a professional setting, with particular emphasis given to joint work and it incorporates activities that are intellectual, social, and emotional (Clement & Vandenberghe 2000; Fallon 2009; Jarzabkowski 2002). Colleagues are professionals who may or may not work at Independent School. While colleagues are typically teachers, technology specialists or administrators, they may also belong to other professional groups including college professors, professionals who work in service fields or industry specialists and they may work in any one of a number of disciplines or industries. Educators at Independent School consider a very wide range of professionals as possible collaborative partners. The projects they undertake also enjoy an equally broad definition. While project definitions necessarily include some technology and academic aim, the actual tasks and activities undertaken encompass a much broader scope.

While the surface function of collegiality is to advance pedagogy in some way, and in this organization is generally associated with technology transformation, the interview data suggests collegiality is frequently seen as opportunity for personal reflection and role reconsideration through projects that allow for the testing of uncharted career waters. Collegiality, as illustrated in figure 6-4 (below) is relevant to identity negotiation because educators who have the opportunity to work with their colleagues inside the organization and beyond it use collegiality as a forum to consider (and reconsider) their professional identities:

Figure 6-4: Collegiality

	Teachers	Technologists	Administrators
School-based projects	Steering and advisory committees that range from ad-hoc to ongoing and include strategic and tactical foci for such pedagogical priorities as developing curriculum to incorporate technology in an effort to aid student educational plans, tracking in math and science, 21 st century student skills, differentiated learning, etc.		
Profession-based projects	Steering and advisory committees that range from ad-hoc to ongoing and include strategic and tactical foci for such strategic initiatives as using technology to increase sustainability, to advance thinking and learning, to transform the school, to give back to the community, etc.		

The interview data contained a range of views about collegiality. Some considered it to be a natural extension and benefit of their work while others viewed it as an opportunity for leadership development or professional reinvention. A third interpretation of collegiality positioned this organizational value as a stressful and unwelcome experience. Clearly, although some narratives conveyed the opportunity to work with colleagues as undertaken with seemingly effortless ease, other narratives were expressed with forced enthusiasm. Three distinct patterns of talk about collegiality were present, regardless of the type of collegial relationship being discussed. The first pattern present characterized collaborative partnerships as essential to work; the relevant narratives showed educators immersing themselves in a wide range of collegial endeavors, so fully invested in their projects that effort and acknowledgement were uncoupled. Narratives featured details about the journey (as a creative adventure) and colleagues.

The second set of narratives expressed collegiality as valued but within a specific framework and constrained to prevent any impingement of professional autonomy. These narratives were framed by talk about achieving specific outcomes. Projects were defined as finite and focused, with clear beginnings and ends and well-defined roles and responsibilities. Narratives were pragmatic in tone and talk centered on project benefits and, occasionally, costs rather than on people or relationships. A third perspective of collegiality, expressed any form of collaborative work as stressful. This view, while present, was slightly veiled in the narratives. Most stories shared initially followed the organizational script by articulating support for teamwork and group undertakings. However, at some point during the storytelling, this third perspective did emerge and the educator's reticence to engage in collegial work was revealed.

Section A.3.1 Collegiality as a forum for professional identity negotiation

As outlined, educators in this setting exist in a dichotomous place where their organizational roles and their professional identities intersect. While organizationally, collegiality may be supported and even encouraged, the identity lenses of the respective participants influence the shape and ultimate success of collegial relationships. For example, the technology transformation

initiative prompted the organization to create technology specialist positions to facilitate the transformation. Among the specialist responsibilities was working with classroom teachers to create technology-based curriculum. While some classroom teachers embraced this opportunity, others did not. Vignettes #6-12 and #6-13 are from interviews with a classroom teacher and his technology specialist colleague, respectively. The narratives show how identity lenses influence organizational roles and how collegiality provides a forum for identity negotiation. The classroom teacher in vignette #6-12 (below) shares a story about collaborating to incorporate technology into an English lesson. He tries, with limited success, to express enthusiasm for the project and the collegial relationship with the specialist. It is clear he feels pressure to collaborate on a project that falls outside his comfort zone:

***Vignette #6-12** And, we videotaped this and we made a cool little movie of it called [editing your writing game]. And, we presented it in [at a conference] last year, [technology specialist] and I did. And now, we've enlisted one of [the high school language] teachers and she is translating it into Japanese and subtitling it. And, we're going to present it at a conference in [city and date] to present at a conference there.*

The [other country] wanted to see it because it shows a) how to use laptops, document projectors and Smartboards, and it also shows how to (pause) we think (pause) teach kids how to revise other's papers. I mean, peer editing for me as never worked. I mean, if you just, you say, 'OK, everybody read everybody else's papers.' And so kids will get a paper and read it and say, 'Oh, looks good to me. Or, 'Sounds weird, but I don't know what's wrong with it.' (Interview #13, 5:45, Outside Looking in – Outside)

This educator spent much of our conversation trying to convince me that he used technology extensively and that he was successful crafting an integrated curriculum. However, his narrative betrays him; he cannot explain how the project presentation actually works, even though he took credit for it. He wanted to be seen as tech-savvy, yet he was uncomfortable with technology terms and so struggled to explain the process. He considered extensive technology use to be asking his students to write their stories using a word processor in place of a pencil and notebook (see vignette #4-6 in chapter four). His limited interest in and exposure to technology tools prevent him from understanding the scope of the school's technology vision and nature of the tools available and in use at Independent School.

His understanding of technology is narrow, making him entirely dependent on his colleague for the technical aspects of the curriculum, the project implementation and the conference presentation. When I asked specific questions about the video project and digital presentation, he was forced to defer to his partner. His tone and the narrative text revealed that he was aware of his dependent position and he disliked it. Interestingly, he insisted he and his colleague were equal in terms of technology prowess.

Vignette #6-13 is taken from the technology specialist's interview. The narrative conveys well how much the specialist values collegiality and the relationships he has developed with his colleagues:

***Vignette #6-13** And how technology can be used for collaboration and information gathering and to a great extent I think that having the technology tools that we've had available here in the middle school – and by that I mean the [computer] program (pause) You know, it's really allowed the students and the teachers to step outside of the classroom and see what else is out there.*

And, you know, it's kind of an overused cliché – but, it's no longer about getting access to the technology as much as it is being able to sort of find your way through, navigate through it, as it were – and find the information one needs, when they need. So that's a new set of skills (pause) that everyone is trying to develop. (Interview #6, 6:13, Let's Meet! – Nurture)

Collegiality as an organizational value is illustrated in this passage as the technology specialist places value on both collaboration with colleagues and the shared learning that occurs through these initiatives. He expresses working with the classroom teachers as a mutually beneficial enterprise, which epitomizes collegiality as defined in this study. The easy, positive view of collegiality demonstrated by the technology specialist contrasts sharply with the classroom teacher's interview, which is shaped by a strong need to convince me that he enjoyed collaborating with the technology specialist and was skilled in using technology in his teaching.

Vignettes #6-12 and #6-13 illustrate how collegiality as a professional and organizational value influences identity negotiation in this organization. The classroom teacher was forced to

reconsider his own professional identity through his participation in a collaborative project with a technology specialist. The exercise took him outside the comfort of this classroom and set him up as a technology expert who presented at conferences, locally and nationally. While I could see he enjoyed receiving professional recognition and also the travel, he was comfortable only with the curriculum content of the lesson and not with the information technology aspects.

Collegiality is significant because it reveals how the traditional hierarchy between classroom teacher and technology specialist has shifted through Independent School's technology initiative, from "teacher assisted by specialist" to partner-presenters. As noted, traditionally, a teacher is master of her own classroom. Although others might visit the classroom to help with a lesson or to provide support, the classroom teacher is in a power position because the exchange occurs in space governed by the teacher. Collaboration on technology projects shifts the relationship between the two professionals. Because they are co-presenters, they are equals and, in some venues, power may even favor the technology specialist, particularly if the conferences they attend together are educational-technology rather than curriculum in focus.

While some educators find collaborating with other professional groups threatening to their professional identities, others viewed collegiality as essential to their work, particularly on technology projects. These educators are less concerned about ceding professional autonomy for the opportunity work with others and, in the process, test or reconsider professional identity. In fact, those who view collegiality as a necessary element of their work connect collaboration with satisfaction and professional growth. Vignette #6-14 (below) illustrates this perspective, as an educator shares a technology development story. As he talked he was fully immersed in his tale and his memories of the innovative technology project and colleagues whose company he enjoyed:

***Vignette #6-14** And we made some, and I would, I would certainly credit [Colleague] and [Colleague] for their thinking, because they, well we decided we would not start out by giving teachers computers, we would start out by putting computers in the classroom that the kids could use, and [then] working with the kids. And then, when we had the*

group of computers together, that enabled us to do the traveling lab kind of thing and that was fun.

We were sorting of inventing as we went along and it's not like there weren't other models around but we were trying to do it based upon [our] outlook on kids and teaching and that kind of thing, which is quite different from some schools, you know. (Interview #12, 12:23, Let's Meet! – Evolve)

The organizational value placed on collegiality is evident in this narrative. The educator's story does not highlight his organizational role *vis-à-vis* his colleagues nor does it suggest a need or interest in being recognized for his participation. Instead, he talked about valuing the rare privilege he was given to collaborate with colleagues to create what he perceived to be a groundbreaking program and to be able to do so without needing to follow previously established rules of practice. Collegiality is the essence his story. He values collaboration and the opportunity to work with his colleagues.

Vignette #6-15 (below) illustrates the second view of collegiality as a necessary but finite enterprise where projects are formed for specific, focused projects:

Vignette #6-15 *Well, that's the intent. Now, it doesn't always happen. But, that is definitely our goal, too. So our goal is to work with those teachers that need a little bit more help and get them going on the technologies. And, as a [technology specialist], I have the ability to do that I just have, just have to be VERY careful a lot of times (pause) because it's a balancing act for us. Number one, to be able to get into the classroom and number two to be able to pushing them gently in the right direction, without (pause) (Interview #5, 8:43, Let's Meet! – Evolve)*

This technology specialist talks about collegiality and collaborating with classroom teachers differently than the specialist in vignette #6-13. Her narrative reveals how she sees joint effort as a means to an end; she collaborates to achieve technology integration, rather than as a personally rewarding exercise. She sees inherent limitations with collaboration as she admits that, on occasion, she may not even get through the classroom door and thus, be denied the opportunity to collaborate. This narrative also illustrates the tension between professional autonomy and collegiality as values.

Her narrative also acknowledges the inherent imbalance in some collaborative relationships; without the classroom teacher's permission, access is impossible. She suggests that acquiring access to classes and teachers is "a balancing act," which she conveys as though she can be frustrated by this disparity. Several times, she paused to regroup or at least reconsider how best to frame her reply to my questions. While she appeared to understand collaboration as necessary, she seemed to prefer not to be so dependent on the cooperation of others for her success.

Vignette #6-15 is significant to identity negotiation because it characterizes the technology specialist's understanding of the hierarchy associated with space ownership (e.g., professional autonomy) juxtaposed with an interest in collaboration (e.g., collegiality). Vignette #6-16 (below) is also important. In it, an educator talks thoughtfully about the principal's efforts to create an environment that supports collaboration and creativity:

***Vignette #6-16** Yeah. Well, I've got to give [the principal] credit here for anything I've done, for at least instigating. Had he not been sincere about wanting people to entrepreneurial. I've been like that for a long time. That's why I got into [my own business]. Well, he allowed that and created the space for that to happen. So, I could do that. So, I could try things that hadn't happened here before. Like [course]. I was teaching [course] before I came to [Independent School]. It was my first teaching job back in [year]. But, [the public school district] never did it. And, when I got to [Independent School], I thought, 'this is going to be great.' But, it took my five years to convince anybody to try it. (Interview #16, 28:20, Just Ask – Evolve)*

Collegiality, as an organizational value, provides an opportunity for educators to consider and test ideas about their professional identities related to technology innovation. Collegiality influences identity negotiation in this setting as educators measure their work against that of their colleagues. By working closely with colleagues in collaborative relationships, educators are positioned to observe informally the interactions and reactions of educators as they interact with others. Educators can witness, after Goffman (1959), how their collaborative partners present themselves to others and, in turn, how others respond. Observing such exchanges enables educators to test and compare their own perceptions of colleagues and also provides an opportunity for self-reflection and identity negotiation.

The narratives in this section illustrated that while some educators found positive reinforcement of their identities through collegial relationships, others found their views of their own work challenged by the collaborative relationships they formed.

Section A.4 Professional growth

Professional growth is defined as a change in knowledge, belief, practice, or strategy resulting in-service learning that enables experimentation, reflection and/or collaboration (Clark & Hollingsworth 2002; Hudson-Ross 2010). Ongoing professional growth is at the core of good teaching as pedagogy and practice evolve and better strategies are developed for teaching and to engage students in learning (Dall’Alba & Sandberg 2006; Knapp 2003; van den Berg 2002; Wilson & Berne 1999). This learning community is no exception; a broad commitment to professional growth exists and is cited frequently as a benefit offered by Independent School.

Professional growth influences identity negotiation because, although learning opportunities are available fairly equitably to most educators, they are accessed differently and the career progress attributed to participation varies. Educators observe the professional growth opportunities accessed by their colleagues and subjectively assess the ensuing role changes. The aspects of professional growth that constitute the organizational value at Independent School are summarized in figure 6-5 (below):

Figure 6-5: Professional growth

	Teachers	Technologists	Administrators
Conferences	Membership conferences held annually in various locations; includes committee work and presentations		
Learning fellowships	Steering and advisory committees that range from ad-hoc to ongoing and include strategic and tactical foci		
Sabbaticals, job swaps & other undertakings	Steering and advisory committees that range from ad-hoc to ongoing and include strategic and tactical foci		

As the figure indicates, learning opportunities are roughly equally distributed across the three professional groups (with the exception of teaching sabbaticals), allowing professional growth to be a particularly direct influence on identity negotiation. Through conference attendance, information sessions and guest speakers organized by the school and the ability to reduce teaching or work load because of learning fellowships or committee appointments, educators in this community are able to consider their professional identities and observe expressions of their colleagues' identities as reflected through this organizational practice.

Section A.3.1 Professional growth and professional identity negotiation

As illustrated by the first three organizational values, to influence identity negotiation an organizational value must be definable, with a set of attributes, and it must be sufficiently multidimensional to support a myriad of interpretations. Professional growth satisfies both criteria as will be shown in the vignettes in this section. And, while the educators in this community possessed a range views about professional growth, many of their perspectives associated professional growth in some way with technology innovation – though not always positively. As shown in vignette #6-17 (below), this educator clearly interprets certain professional growth opportunities as obligatory, yet not truly valuable to her:

Vignette #6-17 So, it's definitely encouraged that way (pause). And then, it's encouraged through professional development. (pause) It wasn't this most recent professional development. But, (extended pause) I guess it's the professional development that whole school, not necessarily [grades six through eight] specific.

But the whole school development, I want, I feel like (pause) I'm not, I don't necessarily know if I'm mixing up last year's professional development with this year's but we definitely were in chapel one time, with that guy from Apple (pause) and I feel like there was another instance of that maybe this year, too [pause] you know that was last year that guy from Apple [spoke to us]... (pause) (Interview #7, 5:15, Outside looking in – Outside)

This passage is filled with pauses and hesitations. The classroom teacher is careful not to be critical of the school, yet she is trying to be honest in her reply and so cannot endorse an activity

she perceives to be unhelpful. While she wants to enjoy the learning opportunities presented, her comments suggest she is unsure where she fits with respect to integrating technology into her classroom. The pauses in her narrative suggest the uncertainty she felt as she tried to determine how much of the organizational script she should follow when talking with me.

Vignette #6-18 (below) reveals a different perspective about professional growth. This educator conveys dismay because she has observed many of her colleagues choosing not to participate in development or in-service activities. As noted in the discussion of vignette #6-8, this classroom teacher sees herself as a creative person who enjoys participating in conferences and professional development activities. Her narrative supports the value of professional growth but asserts a need for it to be required and perhaps for Independent School to create its own programs, tailored to meet the needs of its faculty and staff community:

***Vignette #6-18** (long pause) Uhm. I'm not as positive about (pause) our professional development as I would like to be. (pause) I think there's professional development, if you want to go get it, in different ways, not just the official professional development days. But, there are things going on and people you can talk to and learn from and people who will hold classes and things.*

But there are still a lot of people and I don't know if it's because down here (pause) we're about to face, we're in the midst of a major shift of retirements and people fading out, moving on and transitioning – not fading out, transitioning – transitioning is a better word (laughs), to their next endeavors and more, younger people, and so.

I don't know if this particular year, but there have been a lot. Even [the principal] has mentioned the numbers that they have to hire over the next five years, which is going to be (pause) astronomical. But, you know, we have some people who just (pause), you know, they've been doing it for so long. Some people, they just get in a rut and they say 'well I just don't need any more professional development, I know what I'm doing.'

And, you know, (pause) sometimes I think we could run our own. {Colleague} and I were talking about that this summer. [He] went to [a national education conference] and, you know, he said he thinks he's burnt out on [that conference]. They're pretty much (pause) it's like level one and we're like past (pause) how to you use Microsoft Word, and how do you use these things.

And I was like, 'Yeah! We could almost do our own. We don't need to go to conferences. We have so many people here who could just do it themselves. (pause) We're to the level now. (pause) How do you get technology to transform curriculum? Not, just how do you use technology in curriculum?' (Interview #9, 42:25, Let's Meet!/Just Ask – Evolve)

While this educator is critical of her colleagues' lack of interest in professional growth, she is careful not to appear to be negative. She conveys dissatisfaction with the current state, as it relates to organizational innovation practices and the absence of requirement for educators to participate in programs offered. Yet, she tried to present herself as positive, not as someone who speaks negatively about her colleagues.

Vignettes #6-17 and #6-18 illustrate how values related to professional growth influence identity negotiation. Both were taken from interviews with classroom teachers. In vignette #6-17, the classroom teacher indicates she uses very little technology in her classroom and that she has no plans to change her current practice in the near future. In vignette #6-18, the classroom teacher presents herself as using technology creatively. She told me she enjoyed trying out different technology tools and learning with her colleagues about new uses for technology in her classroom. While both teachers had personal experience with technology use, their perspectives about it were vastly different, illustrating the influence of professional growth on professional identity negotiation. Each educator connects technology innovation with professional growth and each assesses of how much or how well they view their colleagues' use of technology as well as the priority they feel the organization and their colleagues have placed on professional growth to learn how to incorporate technology into their work and their classrooms. This range of interpretations influences professional identity negotiation in this community.

In vignette #6-19 (below), a technology specialist talks about supporting classroom teachers to incorporate technology into their work. His perspective of his own work and that of his colleagues is based on experience. His narrative reveals how practice differs from theory and he articulates experiences drawn from interaction rather than a perspective acquired through

incomplete observations. His narrative articulates several important elements of identity negotiation. First, he focuses on the choices educators have regarding the speed and manner they use to experiment with and then adopt technology in their work. He also expresses an understanding of the duality he lives. While his role is to advance technology in the school, he knows he must first coax and cajoling classroom teachers and administrators into using it. In this regard, professional growth opportunities must sometimes be customized in a way to meet learning needs while respecting the professional autonomy and recognition needs of the educators:

***Vignette #6-19** Yeah, well, you know, [the technology is] there and people can come and choose to use it and when I feel it's being under utilized, you know, I'll put things out and I'll give people reasons to come, you know. And, so similarly with activities, with the use of technology, I'll watch everyone and see what everyone's doing and make sure that nobody's getting left behind. You know, or if someone is (pause) choosing not to use technology much, (pause) you know, it's sort of the challenge is to go in and find out why. What is it that their not, you know (pause) what is that they've not been shown that might help them.*

(pause) And, it could be a tool that helps them in their personal lives. That was one of the things that helped some of the teachers make that connection to the technology was how something like iPhoto, for themselves personally, organizing their own pictures. And the things that they were doing outside of their role as a teacher, you know, that was the in, that was what suddenly got them interested in what technology could do and how technology could help them in other ways and then you'd start seeing some of these tools being used with students in the classroom and then you'd see them once they'd reached a level of comfort, proficiency and confidence then they would try something different, you know.

And so identifying the pace of the individual, I guess that's something, that's something that I've seen other institutions where they're trying to make this organizational change, bringing technology in, and I've seen how, in some other institutions it hasn't worked very well, when the top down is really kind of pushing down, you know, 'by next year everyone will be doing this. And, by the year after that we'll all be doing that.'

Because then people, they don't have, they don't feel like they're, they're (pause) what's the word I'm looking for? When they are being told that they have to do this as opposed to coming to this conclusion on their own. (Interview #6, 18:21, Just Ask! – Nurture)

The last section of this vignette reinforces the notion of faculty as a community of independent professionals who work collegially together, rather than as employees who exist and must follow rules in a hierarchical organization. The technology specialist acknowledges that efforts to push technology will be met with resistance. Top-down approaches are not likely to succeed. Access to professional growth opportunities – and the corresponding pressures to achieve certain levels of proficiency – influences identity negotiation because of the pressure to innovate and the myriad opportunities provided to support innovation that suggest successful innovation should be manageable.

For example, senior teachers, with long records of outstanding classroom work find themselves in the vulnerable positions; they are novices in their attempts to integrate technology into their curricula. Similarly, administrators who are well-respected pedagogical leaders must look to younger, less experienced technology specialists, who may not have any teaching or educational administration backgrounds. The delicate balance of independence, creative freedom, professional autonomy and professional recognition can be observed through professional growth practices and, in this regard, allow us to observe the influence of professional growth on professional identity negotiation.

Some educators shared positive accounts of the wide range of professional development program options. A majority of educators interviewed felt comfortable sharing narratives about professional growth and many specifically noted courses and development opportunities available. As illustrated in vignette #6-20, these educators asserted that professional growth and renewal are encouraged by Independent School and that educators receive professional recognition when they commit time for growth:

Vignette #6-20 I mean, for me, her role has been fabulous. I went to a conference on reading; a bunch of us went. And it was K-8 and a bunch of us from [all the grades], there were [high school] teachers [and] there were [elementary school] teachers. And, we went there with a specific purpose to use iPods and help kids who were struggling. (Interview #11, 25:43, Just Ask! – Nurture)

This narrative conveys the educator's appreciation about the opportunity to attend a conference with a colleague who she respects. She talks about the benefit of having colleagues to work together to learn more about teaching struggling readers. The core of her narrative, though, is growth derived from attending the conference and learning how to use iPods for struggling readers.

In vignette #6-21 (below), an educator shares a positive view of ongoing professional development. She conveys an acceptance, even a sense of entitlement, about the opportunity she has to take university classes. It is clear she feels she has the right to acquire additional training to work towards an advanced degree or simply because it is something she wants to:

***Vignette #6-21** At that time, I was taking some classes at [the university], and I was just doing this for professional development – you know not to get another degree or anything. But I was learning so much that I'd bring to [the CIO] and he'd go 'oh my gosh' and I'd show him what I had learned and then it was just like here's another program and [it] will enhance PowerPoint and here's what you can do, you can make these animation characters talk to the kids (pause) and you know then [the curriculum director] would say 'but, how is this (pause, with sigh) again, you are just delivering the information' (pause) but I'd say, 'yeah – but the kids love it!' (laugh). (Interview #1, 8:02, Just Ask – Innovate)*

This educator's interview contained a number of themes, repeated in various forms. First, she talked about her drive to learn new ways to engage her students. She referred to a range of professional development courses she had taken and the benefit she derived in the form of support from key stakeholders. She also talked about receiving support and how certain administrators allowed her to have additional technology resources so she could experiment with incorporating technology into her teaching. She made a direct connection between her own efforts to use technology creatively in her classroom and the resources she received. While she also expressed frustration with her colleagues, the core of her narrative was her own professional growth, which was evidence of her commitment to her students and to teaching. She approached this particular theme from several different starting points. Each time she concluded her comments by expressing directly or indirectly her view that investing in professional

development signaled an educator's commitment and contribution to the organization. Her narrative illustrates how professional growth influences identity negotiation in this organization.

Section A.5 Summary

The four organizational values introduced in this section – professional autonomy, professional recognition, collegiality, and professional growth – each affect how educators test and recast their professional identity at Independent School, as they consider and evaluate their own identity by observing and reflecting on the actions of their colleagues. Identity negotiation is an ongoing, recursive process that occurs as organizational members interact with one another in the course of a workday. Specific organizational values are particularly salient to identity negotiation in this educational community, which has recently made a significant commitment to technology transformation and, as a result, caused significant shifts in organizational priorities and uncertainty in employee work roles.

This duality, the reconsideration of self, juxtaposed with observations and opinions about colleagues underpin, the process of identity negotiation. The educators at Independent School see their own actions reflected with those of their colleagues. Educators consider this interaction by telling stories to make sense of their experiences. The four organizational values introduced in this chapter frame these exchanges enabling identity negotiation to occur.

Section C. Summary

In this chapter, I introduced four organizational values, which provide a forum identity negotiation. They are professional autonomy, professional recognition, collegiality, and professional growth. For each, I defined the main aspects, key elements, organizational purpose as well as the educator's perspective. Using selected vignettes, I illustrated how each value serves as a forum to enable educators, who possess a wide-range of views about their own professional identities, to consider how their identities align with the organization's priorities and to test and rethink their views about work and teaching.

I also showed how the four organizational values, revealed differences in perspective among educators that shapes their understanding of organizational events and also their interactions with colleagues. I argued that each organizational value offers a unique path to understanding the experiences and perspectives of these educators and I suggested that priority should be given to the stories told about organizational values, which provide an opportunity for diverse organizational members to test and recast their own professional identities as they seek to understand the organization's view of their efforts and those of their colleagues.

In chapter seven, the discussion and conclusion will address the implications of the story themes, identity lenses and organizational values on educator professional identity with respect to technology innovation.

Chapter 7

Discussion and conclusion

Central to understanding teacher learning and development ... is the idea that teachers are participants in the community, taking on particular roles and responsibilities within it and using available resources to reproduce, improve, or even transform practice.

- William Penuel et. al (2009 p. 127)

In this study, I explored how educators—teachers, technology specialists and administrators—understood technology innovation in their work environment and I posited a connection between their understanding of innovation and the way they negotiate professional identity within their community. Using narrative analysis, I considered the way these educators talked about their work, the assumptions that underpinned their narratives and the organizational values that framed their conversations. I presented the results of this investigation in chapters four, five and six. This chapter discusses the implications and conclusions of my research and is arranged as follows: In Section A, I highlight the research by summarizing briefly my findings for each research question. In Section B, I consider the implications of these findings and reconnect my research to the relevant literature. The chapter concludes with Section C, which provides an overview of the study's contributions, limitations and future research possibilities.

Section A. Summary of findings

My first research question focused on the story themes evident when educators talked about their experiences with classroom technology innovation. In chapter four, I developed a framework for analyzing qualitative data from 20 interviews. This framework identified three main categories, focus, technology view and professional development. I sorted the data further by introducing sub-categories: focus—on student or self; technology view—positive, neutral or negative; and professional development—positive, negative, not available. Using this framework, I identified nine distinct story themes. Each theme was present in various forms in interviews as educators shared their experiences with, and understandings of, technology innovation in their work. Some themes were evident in a number of interviews, while others appeared in only a few. Exploring which themes were present within and across the narratives revealed that educators made connections between their professional identities and their understanding of the technology

transformation occurring in their organization. I also found that an educator's perspective influenced how he or she interpreted organizational initiatives and the stories colleagues told about initiatives.

My second research question explored how story themes aligned and what this alignment suggested about the influence of identity on how educators' perceived classroom technology innovation. By examining the nine story themes, I identified patterns that pointed to four perspectives about educational technologies related to professional identity. These perspectives served as prisms through which educators considered experiences, such as relationships with colleagues, technology innovation initiatives, as well as organizational events. In chapter five, I introduced "identity lenses," a term I chose to characterize the patterns, which I constructed from different groupings of the story themes. In that chapter, I defined the lenses (nurture, evolve, innovate, outside), outlined the composition of each and offered a number of story vignettes to illustrate how educators' identity lenses influenced their understanding of technology innovation. I noted that an identity lens incorporates common elements of the sensemaking stories educators shared, but should not be construed as attributes of individuals. Instead, my analysis illustrated how educators reflect on their experiences and interpret organizational goals related to technology innovation through these lenses.

My third research question examined how participants in this educational community negotiate their identities with respect to technology innovation in classrooms. In chapter six, I introduced four organizational values associated with identity negotiation and I illustrated how each value (professional autonomy, professional recognition, collegiality, and professional growth) influenced educators' understandings of organizational goals and evolving professional identities relative to technology innovation. I showed how the four organizational values catalyzed educators' thinking and shaped their narratives, impelling educators to reflect on their own practice, make assumptions about observations they had regarding their colleagues' practices and to test both against their interpretation of the organization's goals and priorities. In chapter six, I

also showed how the sensemaking practices of the educators led to the telling of certain stories, which were then recast and retold as they negotiated their professional identities. Each identity lens identified in chapter five frames suggests a broad perspective about an educator's view of work. I found that organizational values influenced how educators reconsidered, refined and tested their identity lenses and by extension, their professional identities.

In the following section, I discuss the implications of the story themes, identity lenses and organizational values on educators' understandings of transformative technology innovation as it relates to their professional identities and connects with the literature.

Section B. Implication of findings

In this section I outline the implications of the findings summarized in section A. In section B.1, I argue that storytelling is an important practice through which educators make sense of technology innovation and change in their work lives. In section B.2, I discuss the connection between identity negotiation and technology innovation, outlining the importance of place, community and values in this recursive process. In section B.3, I address the consequences for technology innovation and share briefly the strategies adopted by Independent School to facilitate transformation.

Section B.1 Identity and technology innovation

The pilot study I conducted, as a precursor to this research, highlighted professional identity as significant for educators, working together to innovate. I found that educators told stories in which they made direct connections between their experiences with information technology innovation and their view of themselves as professionals. This aspect, professional identity negotiated and reconsidered during information technology innovation, became the research focus, which I explored by analyzing the story themes of professional identity that emerged through educator narratives.

Identity is significant to who we are as people and as professionals. Researchers who have considered professional identity in school settings have generally focused on the professional identities of classroom teachers, emphasizing identity negotiation with students or other teachers, or challenges to balancing personal and professional identities (Clandinin & Connelly 1990; Guadelli & Ousley 2009; Preves & Stevenson 2009). Perceptions of professional identity bear upon the success of technology innovation because educators' identities influence the way they consider technology change and technology changes shift perceptions of educators and their roles.

The stories educators shared about their experiences with information technology innovation in this setting revealed a range of perspectives about technology and the place they found for it in their professional lives. Analysis of the stories identified nine theme, which characterize views of technology as it connects with professional identifies. Some educators connected positively with technology, while others did not. The perspective they adopted when considering innovation was influential and include the following elements: focus – self, students or others; technology view: neutral, positive or negative; and professional development: neutral, positive or negative.

Examining the story dimensions, I found patterns of story themes were present across stories and interviews. Tracing these patterns, I identity four distinct yet complementary views, which I characterized as identity lenses: nurture, evolve, innovate, and outside. Each lens, comprised of two or three story themes, provides a means to discuss the more complex perspectives that educators have about their work, their identities and technology innovation. My findings are consistent with other education research, has explored the implications of technology innovation for more than 30 years a range of challenges associated with successful technology innovation in educational setting (Barron et. al. 2003; Garthwait and Weller 2005; Maddux and Johnson 2009).

Many educators, who shared stories in this study, talked about their perceptions of changing values and priorities. While some found these new tools to enhance their work and also their

professional identities, others, appeared to be threatened by the changes. At Independent School, the introduction of a technology innovation initiative led to unanticipated outcomes, such the resistance of some educator to technology innovation, the evolution of other educators' careers as they embraced the technology training offered and assumed new organizational roles (e.g., classroom teacher turn technology champion). These findings are echoed in the literature, which suggests that technology can place limits on teacher autonomy and classroom freedom (Fitzer et. al. 2007; McNamara and O'Hara 2008).

Because Independent School has initiated significant technology transformation, I found connections among the story elements that tied together experiences of change with concepts of professional self, work practices and organizational messages. For example, many classroom teachers told stories that rationalized educational philosophies with understandings of the organization's aim for technology innovation. These stories included frequent references to the staff and training support they received, as well the professional recognition they felt they did or did not receive for their efforts. Several educators told stories with similar elements. Yet, the stories themselves varied significantly, depending on perspective. Teacher stories alone provided only a partial sketch of the transformation occurring in this organization. Consideration of administrator and technology specialist stories were necessary because, in this complex organization, the three professional groups are dependent on one another for success. The stories of both administrators and technology specialists provided insight about the innovation occurring and added context to the stories the teachers shared.

While I had anticipated finding alignment of educational vision within the professional groups I interviewed, I found instead that alignment exists across groups, rather than within. These finding add to the work of Orlikowski and Gash (1994), who studied the introduction of Lotus Notes into a business consultancy and found the use framed by specific assumptions that aligned according to job role (e.g., business consultant or IT specialists).

When I compared the narratives within each professional group, I anticipated finding alignment according to the group in a manner consistent with the work of Orlikowski and Gash (1994). However, I found the narratives aligned closely with understandings educators had about their professional identity and how they viewed their work, rather than with their current organizational roles. I found many educators talked about the variety of opportunities they had to experiment with new organizational roles. This “walking in another’s shoes” allowed them to develop an understanding of other organizational roles and also to experiment with and test new practices for their own work. Because of this broader view of work, I found they considered work situations acutely conscious of multiple influences, which extend well beyond classrooms or workspaces. However, despite this awareness, I found these assessments did not always extend to empathy for the roles or responsibilities of their colleagues.

Similarly, Davidson (2002) studied the interpretive frames of three different employees during requirements determination to understand how differences in perspective shaped needs. Extending from Davidson’s work to articulate a more individual view of perspective, I found that the concept of identity lenses was helpful in revealing how the story theme dimensions shape an educator’s view of an innovation and in finding that views are not necessarily aligned by organizational work role. Rather, individuals across work roles, rather than group within work roles, shared the dimensions.

Section B.1.1 Summary

In this section, I introduced the study focus, identity negotiation during technology innovation, which emerged as salient during the pilot study interviews. My initial analysis of data had revealed a connection, educators made, between their experiences with information technology innovation and their view of themselves as professionals. I outlined the literature related to identity and technology innovation, which included shifts in teacher identity resulting from changes to work, challenges to balancing personal and professional identities and the competing pressures educators during the course of a workday.

I discussed story themes, which emerged from the educator stories, and outlined patterns present in the themes that enabled me to identify specific identity lenses. Both the story themes and the identity lenses reveal how educators in this study site view their work and, in relation, how they consider the technology innovation occurring around them. I discussed also, how during experience technology innovation, some skills become more valued, while others decline in value. How educators make sense of these shifting priorities and their view of its impact on their work was revealed through the stories told.

An educator's professional role influences his interaction with information technology according to his focus (self, student or others), his view of the impact of the innovation (positive, neutral or negative) and organizational consequences (recognition or not). This insight highlighted two additional aspects of identity *vis-à-vis* technology innovation. First, not all educators see innovation equally in relation to their identities. When considering innovation, it is helpful to group versus individualistic perceptions. Second, the dimensions that shape how an innovation is considered with respect to identity is not necessarily aligned by work role. Rather, individuals across work roles, rather than group within work roles, shared the dimensions.

The narratives shared by the three professional groups I interviewed showed widely diverse perspectives about work practice, organizational aim and professional identity. By considering the sensemaking narratives shared individually rather than by organizational position, I was able to examine how the educators' perspectives varied and where their understandings about the transformation occurring did not correspond with the views they had about the organization's goals. In the following sections, I first outline the implications of a shifting organizational story and, second, I consider the variance in perspective within and across professional groups.

Section B.2 Identity negotiation and technology innovation

How we understand ourselves within the context of our organizations is an important consideration for technology innovation research, as many organizational members connect experiences with technology innovation to their own professional identities. These experiences and understandings also influence how individuals view their organizations. Seminal researchers in this area include Goffman and Giddins, whose work on the construction of identity as a socially driven enterprise as led to thousands of research publications.

In 1959, Goffman characterized identity as the performance a person gives in social settings in an effort to control the perceptions others form about him. His extended metaphor of actor and audience led to extensive research on the intended and unintended consequences of manipulating social situations in an attempt to create and manage an impression. Goffman believed that identity was a transient production of social interaction. More than 30 years later, Giddens (1991) argued similarly that identity is transient and reflexive, a notion he identified as the “narrative of the self.” Wenger (1991) incorporates the notion of identity into his work on communities of practice, in which he explores the ongoing negotiation of identity through social interactions. He suggests that identity evolves constantly as individuals test and refine their professional selves with respect to the communities to which they belong.

His work, which by necessity is associated with place, is related to the identity negotiation research of Clandinin and Connelly (1996) who talked about the physical spaces of the school setting in a way that suggested an influence on identity negotiation. They identified three types of stories classroom teachers told, which corresponded with the spaces they work in and relationships they negotiate in the course of a school day. Secret stories are stories told by teachers, typically to other teachers, in the private spaces of the classrooms. Sacred stories are essentially an organizational script and convey broad goals of the organization; these stories are frequently shared through personification as certain teacher’s actions are held up as

exemplars. These stories articulate the organization's values and culture and serve as a measuring point against which individual perspectives can be assessed. As organizations change, the sacred story may be recast in response to shifting organizational priorities. Cover stories are shared by teachers who use narratives to position themselves as experts in some area consistent with an accepted script for the school. Cover stories are a personal perspective that rationalizes the secret with the sacred.

I found that the places stories are told and the types of stories shared was also significant to identity negotiation related to technology innovation. I also found more than one sacred story competing for dominance because Independent School's technology vision was in transition. The school's sacred story was shifting from one that emphasized excellence in a college preparatory education to one that retained the notion of excellence but supplanted college preparatory with technology innovation. Further, it was evident from the secret and cover stories being shared at Independent School that educators had many and widely varied understandings of the emerging sacred story. The tension embedded in some of the stories told underscored the uncertainty some educators felt as they experienced these transitions and attempted to negotiate new understandings that included considering implications for their work.

These findings suggest that the communities of practice at Independent School, which influences identity negotiation includes not only colleagues who work in day-to-day relationships with one another (e.g., other classroom teachers) but also other professional groups (e.g., administrators and technology specialists). While, as Wenger (1991) notes, all communities are constantly being reconstituted as they are dynamic and fluid in nature, the importance of each aspect varied by individual. Some educators focused on student-teacher relationships as evidenced by "my kids" stories and the "nurture lens," while others considered colleagues more relevant to this negotiation. Essentially, within this one community, variance could be found in perspective and priority.

As I examined the stories of the educators, I identified organizational values influences identity negotiation. This is consistent with research on professional values, which Andland defined as “an expression of human intentionality, being enacted in forms of human behavior” (2010 p 462). Four organizational values at Independent School – professional autonomy, professional recognition, collegiality, and professional growth – each affect how educators test and recast their professional identity relative to technology innovation, as they consider and evaluate their own identity by observing and reflecting on the actions of their colleagues. Identity negotiation is an ongoing, recursive process that occurs as organizational members interact with one another in the course of a workday.

This duality, the reconsideration of self, juxtaposed with observations and opinions about colleagues underpin, the process of identity negotiation. The educators at Independent School see their own actions reflected with those of their colleagues. Educators consider this interaction by telling stories to make sense of their experiences. While organizational values influence identity, it is important to remember that identity varies over time and is different for each individual. The identity lens, while providing a means to discuss how individuals negotiate their identities, is also fluid. Some participants shared stories that remained fixed in the story theme articulated or the identity lens present. Others shared a wider range of stories suggesting that participants, as could “switched lenses” as they narrativized their own experiences with tech innovation, suggesting ongoing and dynamic sensemaking related to tech innovation.

Section B.2.1 Summary

In this section, I traced the identity construction research of Goffman (1959) and Giddens (1991) with communities of practice work of Wenger (1997) to articulate the importance of place to identity negotiation at Independent School. I outlined the community of practice at Independent School and the influences of different professional groups working together to innovate. I summarized the organizational values – professional autonomy, professional recognition, collegiality, professional growth – that influence identity negotiation and then outlined the

variance in perspective that occurs among the individuals, which is driven by their work view (or identity lens). I noted, that individual can switch lenses and also that lenses and perspective changes with time and new information.

Section B.3 Consequences for technology innovation

Educators I interviewed at Independent School saw themselves, first as autonomous professionals, and then, as role-oriented workers. Their self-view, as accomplished individuals possessing unique and complex identities, shaped by experience, education and values, is at the core of their perspectives and I found it present in each interview conducted. Educators at Independent School incorporated many experiences into their understanding of work, and their values augment their commitment to pursuing excellence in teaching practice, regardless of their current work role. Three organizational initiatives supported their efforts to innovate: a low-risk environment in which to test technology innovation and the curriculum, recognition of successes and behaviors that model organizational aim and support, in its broadest sense, for innovation activities. Each is discussed briefly in the following sections.

Section B.3.1 Innovation and low-risk experiments

Innovation requires risk taking. The challenges of implementing technology into a middle school are accompanied by pressures associated with parent expectations, conflicting messages about best practices, providing support to teachers and students as they incorporate the technology, as well as responding to issues when plans do not unfold as anticipated. Providing an opportunity for educators to experiment with technology tools and curriculum designed around technology as a pedagogical strategy is one way to mitigate some of stress of technology innovation.

I found a strong connection between positive educator talk about technology innovation and educator participation in low-risk experimentation initiatives. Regardless of organizational role, educators shared experiences about testing new tools and technologies corresponded with more

positive feelings about technology innovation in general. Similarly, educators who spoke about technology innovation as a negative experience in most cases also did not offer narratives about professional development opportunities or summer learning experiences.

The school offers a professional development program and summer session learning opportunities, which provide important conditions for the “living lab” testing of technology and technology-based curriculum and influence positively transformative technology innovation. Underpinning both programs is the notion of experimentation. Success is measured by participation and creativity, not by standardized tests or other assessments. Educators talked as openly and easily about their failed experiments as they did about successful initiatives. In many interviews, I found educators shared more detailed and animated accounts of the curriculum projects that did not work, seemingly reveling in the fun they had collaborating and trying to problem-solve or evaluate project challenges. They expressed satisfaction with the opportunity to experiment and to problem-solve without experiencing pressure to be “right.” They talked about modeling risk-taking behavior for students with phrases like “developing the confidence to fail” and citing Edison’s, “I haven’t failed, I’ve just found 10,000 ways that don’t work.” Clearly, they connected success with the opportunity to be creative and the support to sometimes fail.

Some educators noted that as helpful as they attempt to integrate technology into their curricula noted a low-risk environment for experimentation. Independent School created opportunities for its educators to experiment with new teaching tools and technology innovation in a collaborative environment. Experimentation and collaboration is low-risk; educators feel free to be creative without fear of negative consequences. These combined elements form an environment, which reinforces the professional identities of educators and provides the school with a vigorous and creative space for technology innovation. However, technology innovation in a lab setting will not necessarily lead to school-wide technology innovation.

Section B.3.2 Innovation and recognition

Recognition is a truly double-edged sword. Most administrators acknowledge its inherent value as an employee incentive tool, yet few agree about how best to do it without consequences associated with those who are not recognized (Bragg 2007; Kinnaman 1990). In addition, the complexities of determining how best to recognize effort and which behaviors to make exemplars, also poses significant challenge. Authenticity in reward is, of course, crucial; and Independent School has dedicated itself to crafting appropriate formal and informal recognition for its employees. Many educators interviewed cited specific recognition practices. To a large degree, their comments suggest that positive reinforcement achieves the outcomes desired. A very few educators were less enthusiastic because of concerns about who was recognized or the achievement acknowledged.

Educators commented most positively about recognition activities that related to participation in school-sponsored learning events, either during the school year or during the summer. Recognition for technology innovation comprised several activities, including formal acknowledgment in the school's employee newsletters, invitations to luncheons and other social celebrations. While these acknowledgements were cited occasionally, two types of recognition elicited much stronger responses. Several educators mentioned the invitation to take on a leadership role as an important and appreciated recognition tool. This specific, event-centered reinforcement was generally very well received by the educator and typically provided incentive to others to become more engaged in technology innovation projects.

Section B.3.3 Support

Educators provided several narratives to illustrate the types of direct, indirect and collaborative support they received or wished they had received. I was surprised at the importance educators placed on support because, although they expressed pleasure in collegiality, they were more vocal about valuing professional autonomy. They defined helpful support quite broadly, including everything from personal use of the school's technology for proficiency development

to workshops, summer classes, and informal gatherings to discuss innovation issues. They suggested that technology specialists should be available to teach them and work directly with students when software training was required and they talked about the importance of school leadership support.

One educator talked at length about the strategic support she received from the technology director and also her principal. She also shared a story about her adventures with technology innovation. While she was not dependent on “how to” training sessions to become comfortable with technology innovation, she said she did need support. She talked about needing affirmation from both technology specialists and her supervisor, particularly when she was investing in risk-taking and technology innovation on her own. She needed to know her efforts were worth it and worthy of recognizing. Her comments expressed an interesting distinction: she did not need training she needed support.

Several administrators and classroom teachers shared stories acknowledging the technology specialists. The vast majority indicated the specialist role was critical to successful technology innovation. While some were less keen to have technology specialists in their classrooms, they nonetheless agreed that technology specialists helped students sort out hardware and software issues. They also commented positively about technology specialists and specific software tools. Even classroom teachers who asserted comfort using technology tools in the classroom and curriculum indicated that they did not want to provide “tech support” for students themselves. Teachers especially appreciated being able to call a technology specialist to assist their students with technical problems so they could continue with their lessons.

Technology specialists told stories about wanting to work closely with classroom teachers and administrators to build lesson plans incorporating technology and of working with educators to imagine new ways to use technology for teaching. While some classroom teachers and administrators talked about appreciating the partnership opportunities possible with the

technology specialists, most conveyed a more divergent view of roles and opportunities. Teachers talked about themselves as teaching and the specialist as supporting. Administrators expressed similar views. Interestingly, the technology specialists clearly sensed the reticence of the other professional groups, interpreting the resistance as colleagues feeling threatened. Rather than expressing frustration or resentment, however, the technology specialists talked about the gentle choreography they created so they would be permitted to dance in the classrooms and offices with the teachers and administrators, respectively.

I was intrigued by the confidence the technology specialists expressed in their own view of their mission. Although not subordinate to teachers or administrators, at times they were treated as such. Rather than expressing offense, they simply conveyed empathy and adjusted their actions to respond to their colleagues' needs. One technology specialist told a story about how he finally managed to get a classroom teacher to use a technology tool in her classroom. With some pride, he outlined how he found a personal connection he could make by supporting teacher using technology (e.g., creating an iPhoto photo album of her grandchildren and then morphing the album into an iMovie). Once the teacher saw how easy and fun it was to make the movie, she was eager to use it with her students and was confident about adding it to her teaching tool kit.

Section B.3.4 Summary

In this section, I argued that the opportunity to test curriculum and technology tools, along with a targeted and well-executed recognition strategy to reinforce efforts that align with the school's technology strategy, augment an environment where innovation thrives. The primary characteristics necessary for experimentation are: low-risk, collaboration and time. Formal and informal recognition activities support low-risk experimentation by reinforcing initiatives and the people who do work that aligns with the school's goals. While executing successful recognition activities is inherently complex, I found most educator narratives included some talk about formal or informal recognition. Although there was less agreement about the type of recognition and who deserved it, this community expressed a strong connection among technology innovation, recognition and organizational goals.

Certain elements of support are important and embrace both strategic and tactical aspects of teaching and learning. Senior administrators need to be open and active in their support. They can use professional recognition to express support but their commitment needs to be strong, sincere and consistent. Second, resources need to be allocated to make a range of support possible. To this end, administrators need to recognize that the need for support will necessarily vary. Students need support, as well teachers and administrators. The kind of support needed will shift but never go away entirely.

The implementation framework for support must be flexible and the professionals who staff support positions need latitude in their work. Supporting flexible development must also include a reliable helpdesk for students. In this setting, technology specialists do not provide helpdesk services for students, but they may offer some helpdesk-like support to the faculty as a means to building a collaborative working relationship with them. Educators indicated that both helpdesk roles (for teacher and for students) were important. Technology specialists echoed this, for themselves and also through their observations of their colleagues.

Direct experience with teaching practice augmented by technology prowess might position technology specialists to be threatening, particularly to a classroom teacher who is insecure about information technology. However, the technology specialists who participated in this study understood well the fragile securities of some of their colleagues and provided evidence of their commitment to work towards the bigger school goals, rather than be blocked by pettiness. These technology specialists were able to behave confidently, because they too enjoyed organizational support for their work.

Section C. Conclusions

In this study, I used narrative analysis to investigate professional identity negotiation in an independent middle school undergoing significant technology transformation. Using a perspective extending from the work of Bruner (1991) and Reissman (1993), I developed a framework to analyze the stories told by educators—classroom teachers, technologists and administrators. I introduced nine story themes and four identity lenses, which emerged as educators told stories about their experiences with technology innovation. I then outlined four organizational values, which influenced identity negotiation during a time of transformative change. This data and analysis frames the contributions, limitations and call for future work below. This section outlines the contributions, limitations and opportunities for future research.

Section C.1 Contributions

This study offers four specific contributions. To theory, this study contributes the identity lens, introduced as an analytic concept used to investigate how professional may interpret and, thus act towards, technology change in their field and in their organization. While the identity lens was illustrated here in an educational context, the analytic concept has application in other professional environments, in which perspectives about work may be more closely associated with professional identity than an assigned organizational role.

To method, this study demonstrates an analytic approach using whole story analysis to identify and analyze identity lenses and to situate identity negotiation, through lenses, within the system of significant organizational values. The framework of looking at multiple professional groups, from a single case site, to allow specific organizational factors to emerge and feature in analysis contributes to both the approach and the method.

This study's empirical contribution is an interesting and relevant exploratory case study, which emphasizes identity negotiation in an environment where technology innovation, organizational values and professional relationships are considered. As with the methodological contribution,

this study's empirical contribution includes the rich data and findings associated with considering multiple professional groups who, though independent and discrete organizationally, must work together to innovate. This study considered the consequences of mutual dependence in a case site, rich with resources.

Finally, this study offers practitioner contributions. Organizational leaders hoping to promote and move forward with technology innovation in school settings may benefit from an understanding and appreciation of the importance and variety of identity lenses present at any time. Further, the study highlights how programs, policies, and support can support the variety of diverse professionals working in organizations today as they attempt to incorporate new classroom technologies into their practices. It is especially important to recognize employees who see their work through an "outside lens," as these individuals may be unwilling or unable to access support resources, and may become withdrawn from the organization.

Section C.2 Assumptions and limitations

As with all research projects, there are limits to generalizing of these empirical results. Specific limitations of this case study fall into three specific domains.

The first limitation is the case site, an independent school with resources and motivation to promote technology innovation goals. This is an interesting case per se, and it reveals that even in a well-funded school technology innovation may be problematic if it conflicts with organizational values and educators' professional identity. However, the case site is not representative (even of the whole school) and not other schools, and empirical findings cannot be empirically generalized (Lee and Baskerville 2003). However, analytic concept of identity lens and the methods used can be applied in other settings. More studies in different contexts will likely bring to light other identity lenses as well as other salient values, including fine tuning the definitions for each lens identified (e.g., What differences exist in the "nurture lens" comparing K-12 to post-secondary educators?)

Second, this study addressed only one area of professional service. Teaching has strong institutional and historical aspects, which are different from other professional contexts such as medicine, social work, law, engineering, and so on. Professional identity is significant in organizations where these and other types of professionals are present. However, the types of stories told, the types of identity lens that are evident in stories, and the implications for how professionals negotiate identity relative to technology innovation initiatives, are likely to differ in content among professional groups. The identity lens, as an analytic construct, may still be helpful in studies of technology innovation in such settings. Moreover, comparative studies may identify similarities between these findings and other “care-giver” professions (e.g., nursing) or where there is high professional autonomy (e.g., physicians).

Third, this study was a qualitative, interpretive work. As with all interpretive case study research, the findings and analysis emerge in large part through the sensemaking of the researcher(s). In this regard, my role as a member of the organization was both a valuable source of insights and access and a potential limitation. Familiarity with the organization provided me insights unavailable to external interviewers, but, as an insider, participants’ expectations had to be managed throughout the interview and analysis phases. Acknowledging the co-creating role of the interviewer does not mitigate the value of this type of research. Rather, as noted earlier, Mishler suggests the meaning of a context-situated narrative is more precise because fewer elements are left out; thus, the analysis is more focused and better illuminates the meaning-making elements of the story (Mishler 1986). To improve the rigor of my interpretive analysis, I participated in frequent and detailed reviews with my dissertation committee and rigorous use of methods qualitative and narrative analysis. These methods are detailed in Chapter 3 and the appendix. Data is reported in great detail, and in context, allowing the reader to arrive at his or her own interpretation as well.

Section C.3 Opportunities for future research

In this study, I conceptualized identity lens as an analytic concept to investigate how professionals may interpret and, thus act towards, technology change in their field and in their organization. I illustrated the identity lens concept through the analysis of stories professionals told about technology innovation, situated in a specific organizational context (i.e., an independent school) as well as a specific profession (i.e., education). The identity lenses identified are thus contextually situated and not exhaustive. Additional studies will be needed to identify additional lenses in other educational settings as well as factors that elicit or bring to salience particular lenses. Of particular concern, factors that elicit an “outsider” lens may indicate individuals’ or groups’ alienation and withdrawal from the organizational setting due to technology innovations. Studies situated in different professions may identify identify lenses common among in professions. Finally, more research will be needed to how generally useful identity-focused research is to understanding how professionals deal with technology innovation.

A second area of future research is the identification of relevant organizational values associated with identity negotiation and technology innovation. This study identified four organizational values that were salient to professional identity negotiation in this setting: professional autonomy, professional recognition, collegiality, and professional growth. Additional studies will be needed to identify additional, relevant organizational values related to professional identity negotiation during times of technology innovation.

Appendix A

Informant Invitation

Aloha (Name),

I am conducting research study to explore the use of information technology in K-12 organizations as part of my doctoral studies at the University of Hawai'i, Manoa under the direction of Dr. Elizabeth Davidson, Professor and Chair of the ITM Department, Shidler College of Business. While I have permission to use Independent School as a site for my research, this effort is not related to the school or to my work here. Questions about the study can be directed to Maureen (mmacleod@hawaii.edu) or Dr. Davidson (edavidso@hawaii.edu).

As a person who has participated in innovation projects at Independent School, you are invited to participate in this case study about technology innovation in organizations. The purpose of this study is to explore the different perspectives that individuals have about technology innovation.

Participation is voluntary.

Each interview consists of four to six open-ended questions. While the interviews will be recorded, participant identity and all interview data will be coded to ensure that the informant's identity remain anonymous. Any data produced through the study will be cleansed first to ensure that identities of the informant or the case site are protected. No recorded data will be shared or published in a manner that reveals the case site or the informant.

Thank you for taking the time to review this invitation and for considering participating in this qualitative research study. Ms. MacLeod will be in touch with you shortly to arrange an interview day/time/location.

Maureen A. MacLeod
Ph.D. Student
University of Hawaii, Manoa

Appendix B

Interview protocol

Introduction

Thank you for agreeing to meet with me today. As I indicated earlier, this interview is being conducted as part of my dissertation research. All information provided in this interview will be edited to remove any personal information or specific details that might identify you. The transcripts are coded, as well, to protect your identity.

This research project is exploring technology and organizations.

I will ask you a series of open-ended questions and will record your answers. As I indicated, if any data from this interview is reproduced, it will be done so in a manner that protects your anonymity. No record of your name or position is being kept. All data is coded to ensure anonymity.

Participation is voluntary.

Prior to beginning the interview, I must ask you to review an informed consent form. Although you are not required to sign the form, it is important that you review and understand it. You may keep the form, if you'd like.

Thank you.

Questions

Question one: "Could you tell me about an incident that you've experienced are aware of that illustrates what Independent School is trying to do with technology?"

Question two: "Do you think it's always been this way? How did this change start?"

Questions three: "If you were to participate in a technology project now, what do you think it would take for project to be successful at Independent School?"

Question four: "What characteristics of Independent School that might be unique or not do you think helped or hindered the introduction of new technology?"

Thanks so much for participating in this interview. I very much appreciate the time you took to chat with me

Appendix C

A detailed example of narrative analysis

The pilot study results were first presented in a paper presented at the 2007 AMCIS conference (MacLeod and Davidson 2007b).

Researchers typically conduct field studies in which they interview project participants to collect data for analysis (Davidson 2006). This data may be supplemented by document analysis and observations, but interview data is the mainstay of such work. Narrative studies similarly rely to a great extent on interviews, either to construct composite narratives of a project or to identify salient stories. Of course, much storytelling happens in organization members' day-to-day interactions and experiences, and such story performances are themselves of interest (Boje 1991). This study considers the stories and narratives that arise in the course of interviewing project participants, both because such data is readily available and because the storytelling context that an interview provides is conducive for producing meaningful narratives.

Narrative data from interviews, from the pilot study, are shown here to illustrate the methodological approach used. The narrative analysis below is derived from Mishler's work in "Research interviewing: Context and narrative" (1986), which recognizes the interviewer as a participant in the co-production of the narrative and of meaning. His insightful work made explicit the interviewer's role and enabled a richer reading of interview narratives through Mishler's framework:

- *Structure* (Labov and Waletzky 1972): examines narrative elements – abstract, orientation, complicating action, evaluation, resolution and coda.
- *Meaning* (Labov and Waletzky 1972): examines the coherence of a narrative in terms of reference ("And then what happened?") and evaluation ("So what?").
- *Interaction* (Mishler 1986), examines the role of researcher and informant in the creation of meaning.

Davidson (1997) provides an example of such work in the context of technology innovation projects. She looked at the competing perspectives of organizational members participating in an innovation project by conducting interviews about the origin of an innovation. Following Mishler (1986), she completed a structural, meaning and contextual analysis of three narratives to uncover perspectives about the origin of and rationale for supporting an innovation project. She found interesting inconsistencies. The project manager's narrative attributed the project to customer service issues. In contrast, the project sponsor saw it as an initiative to implement a management information system (MIS), while the senior executive expressed the project in terms of competitive advantage. Differing perspectives about a project's origins are not necessarily troublesome. However, when participants operate with mismatched knowledge, expectations and assumptions about a technology they may have difficulty finding the common ground necessary to make the project work.

Section A. An illustration of the analytical approach

An interview narrative from the pilot study is used to demonstrate how narrative analysis works to reconnect the individual's role in technology innovation. In this interview, a K-12 teacher who is a former employee of Independent School, was asked to share her experiences with technology innovation in the classroom. Data have been analyzed in various forms: verbatim transcript, informant perspective, interviewer perspective, possible story theme (broad), and story purpose (specific). Initial analysis of interview data looked for ways the stories uncovered perspectives related to technology frames of reference. Additional analysis sought events and circumstances that might have shaped perspective.

Illustration C-1 (on the following page) summarizes the six stories themes present during the interview. Each individual story has been analyzed and compared with stories told in the other interviews. As well, the stories were also analyzed individually (see the analysis of stories three and six in this appendix). By looking at story patterns and analyzing individual stories told

during the interviews, two sets of data is derived, each of which can be compared with colleagues who share a discipline (e.g., teachers to other teachers) and contrasted with participants from other disciplines (e.g., teachers to technology specialists).

Figure C-1: Stories Told During a Narrative Interview

Story	Theme	Summary
1	Context; History <i>Later: Just Ask!</i>	Places herself within the context of innovation. She expresses understanding of the innovation process through her own experiences, not by articulating organizational stories.
2	Perseverance; Vision <i>Later: Show Off</i>	Is very aware of her experiences with innovation. She expresses her role in early phases as one of leadership, champion, collaborator, and rebel.
3	Transition; Tension <i>Later: Just Ask!</i>	Recognizes a significant shift in support following an IT leadership change. She articulates a kinship with the new leadership and acknowledges tension between new ways and established methods.
4	Leadership; Vision <i>Later: Just Ask!</i>	Recognizes a significant shift in perceived teaching practices following a senior leadership change. She expresses appreciation for administrative support of her work and her profile as an innovative educator.
5	Process; Tension <i>Later: Show Off</i>	Attempts to express her thoughts about the institution's perspective on innovation. She concludes this passage by articulating her attempts to influence the innovation process.
6	Identity <i>Later: Show Off</i>	Attributes success to her own ability to secure support and resources. She acknowledges receiving IT and administrative support but emphasizes her own role in creating change.

Although I was not a close associate of this teacher, I was employed by the school and thus acquainted with her as a colleague from another department. The teacher and I shared, as Mishler (1986) suggested, cultural understandings. In particular, we shared an understanding of the school's values: excellence, calculated risk-taking, teacher-leadership, collaborative learning, and innovation in the learning environment. Using Mishler's framework, meaning and context were analyzed. Because a story is told "whole" rather than deconstructed, a structural analysis of the story was unnecessary.

Following Mishler's argument that "meaning is expressed in and through discourse" (p 66), the story, which emerged through my questions and her responses, was examined. How the story attempted to express answers to, "And then what happened?" and "So what?" was considered as

part of the analysis (Alvarez and Urla p 41). Knowing that meaning is altered if the story is told differently or the context changes (Boje 1991a; Boudens 2005; Mishler 1986; Wagner 2002), her narrative provide a personal account that reflected not only my questions but also the educator's interpretation of experience (Mishler 1986; Riessman 1993).

The interview questions were intended to seek her perception and understandings of technology innovation efforts at the school – what these efforts were intended to achieve, were they successful and what hurdles were encountered. She told several relevant stories during the interview, two of which are examined here to illustrate the methodology by considering the teacher's perspective. As shown below in figure 3-2, regardless of the question asked, the teacher quickly turned her answer about process or technology or innovation into a conversation about her role in the innovation project (from Story 3):

Figure C-2: A sample story

Story #3: “Cool toys”

- 1 But when [the new IT director] arrived ... he had all these cool toys, all the NEW hardware – not just Mac's, he actually branched out to all the different other things.
- 2 At that time, I was taking some classes at the University, and I was just doing this for professional development – you know not to get another degree or anything.
- 3 But I was learning so much that I'd bring to him and he'd go 'oh my gosh' and I'd show him what I had learned and then it was just like here's another program and will enhance PowerPoint and here's what you can do, you can make these animation characters talk to the kids ...
- 4 And you know then [the former IT director] would say 'but how is this? ... Again, you are just delivering the information ... but I'd say, 'yeah – but the kids love it!' (laugh) ...
- 5 And then I remember [a supervisor] coming in and saying 'I would rather see a human face talking to me rather than this animated character' and I would 'yeah, but that's because you are old – you are not a 12 year old.'

Section A.1 Analysis

The teacher makes a clear, strong connection between technology innovation at the school and her own professional identity. She seemed to also see a connection between innovative technology use and student-centered teaching practices. For her, good teaching connects directly to active technology use. This pattern of response suggests a connection between technology

innovation and identity professional identity. In figures C-3 and C-4, story 6 (a and b) illustrates, through the teacher's comments, an awareness of an ongoing tension between older teaching practices and newer ones and a belief that to truly engage students she must use technology. She seems to feel that she possesses a particular insight into this mode of teaching, although she does not articulate why. While she references helpful exposure to new technology practices, she views her own insight as unique. Her narratives illustrate consistently how she connects her view of teaching and her identity as an innovative teacher to technology innovation at the school.

Figure C-3: "I'm in your face"

Story #6(a): "I'm in your face!"

- 1 *Question: Did the leadership or support change from the time when it was you and the IT director until this last year?*
- 2 I think for me, I'm just *in your face*, I was supported all along ...
- 3 Even with [our current IT director], she was fabulous, I'm mean she's the one who let me to have more computers in my classroom than were being allotted to people ...
- 4 If you came into my classroom, those computers were always being used, you'd think we have enough computers when they gave us those laptops ...
- 5 But (and I don't know about the other teams in 8th grade) but our classrooms, they were ALWAYS being used ... and the kids would come in from other classrooms to use them.
- 6 They say: "Can I take this to study hall?" "Can I do this?" and I be like: "Yeah, this is how is should be ... that's the shift, it's a tool and that's how everything's going to be ..."
- 7 I'm just so sad that they did away with the tablets (but, again that's where I bought my own) ... and, for the kids to be able to just write, or for a math teacher or an English teacher to be able to just write ..."

In story 6(b), she expresses frustration at her colleagues and her principal, even though she clearly sees herself as a leader who is prepared to travel first. Looking at the professional identity she expresses in both 6(a) and 6(b), we see this teacher believes technology is being introduced to augment learning. She considers it a support tool to improve the classroom and teaching opportunities. Viewing the same text as an expression of professional identity enables us to see the almost intimate connection between the teacher's self-view and her ideas about technology.

Figure C-4: “I’m in this alone”

Story #6(b): “I’m in this alone”

- 1 *Question: The final thing is – where do you think the school leadership is in all this? Were the teachers involved?*
- 2 I just know that from a support perspective, all I know is that [my principal] supported me ...
- 3 you know, a few years ago I went into him and said “you know here you’ve asked me to do this, this and this and I’ve done it, I’ve done everything you’ve asked me to do ...
- 4 but my colleagues, they don’t give a rip! ... That’s just the bottom line ... here I am, and we were meeting and I had shown them this is what the technology can do but they’re not going to do it ...
- 5 they’re up to here being the parent of three kids and The teacher of 100 ... I said, they have no room in their lives for that, they have too much on their plate.”
- 6 So, I said, “look I appreciate everything you’ve given me, but I’m alone in this” ...
- 7 and although he understood, he said “Don’t give up, keep talking to them, keep showing them ...”
- 8 The shift is going to come as we get the new teachers, the ones who had their laptops in college.”

The teacher does not separate her personal views of technology and her role as an educator. In contrast, she states connects everything to her professional and technology, which colors such things as her view of her colleagues. She feels because her co-workers are overwhelmed with life they cannot find the time to incorporate technology into teaching practices. She demonstrates professional identity by investing in a sabbatical, taking courses and then sharing her learning with the technology team, school leadership and her colleagues (Alvarez and Urla 2002; Labov and Waletzky 1967). All her interactions with the innovation team are guided by the view that her identity is linked to using the technology to be a better, more innovative teacher.

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