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Tools and Community : How Women Become Researchers in Communication Sciences and Disorders

Karen L. McComas
mccomas@marshall.edu

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**TOOLS AND COMMUNITY:
HOW WOMEN BECOME RESEARCHERS IN
COMMUNICATION SCIENCES AND DISORDERS**

Karen L. McComas, Ed.D.
Marshall University
Graduate School of Education
and Professional Development

Dissertation submitted to the Faculty of the
Graduate College of Marshall University
in partial fulfillment of the
requirements for the degree of

Doctor of Education
in
Curriculum and Instruction

Committee Chair, Linda Spatig, Ed.D.
Ronald Childress, Ed.D.
Eric Lassiter, Ph.D.
Mary Beth Reynolds, Ph.D.

Huntington, West Virginia, 2010

Key Words: identity, research, curriculum, women in higher education

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ABSTRACT

Tools and Community: How Women Become Researchers in Communication Sciences and Disorders

Karen L. McComas

Communication Sciences and Disorders (CSD) is a female-dominated discipline in danger of losing its professional autonomy. In 2002, the American Speech-Language-Hearing Association (ASHA) reported that 6-7% of all faculty positions in CSD were vacant, predicted a substantial increase in vacancies through 2012, and declared the issue of faculty preparation as the “most significant threat to our [CSD] future” (p. 5). In 2008, ASHA reported that, although more people were receiving Ph.D. degrees, only half accepted positions in higher education. The purpose of this study was to extend understanding of the problem of too few researchers in CSD by increasing understanding of the experiences of women in CSD who did become researchers. Informed by the ideas of Dewey (1916) that describe learning as a process of exploring the meaning of experiences through stories, examples, and conversations, this narrative study is based on the narratives of four women researchers in CSD. All of these women provided their oral histories, or narratives, in a series of three interviews. I analyzed their narratives to discover what motivated them to become researchers, what enabled and constrained them in the process, and what role schooling had in that process. Data analysis included the identification of individual stories embedded within these narratives, the coding of the narratives based on the research questions, and the identification of narrative themes. Using the cultural-historical activity theory (CHAT), I interpreted their experiences within the context of practice, which can be understood as the interaction of subjects (participants), objects (participant goals), and four other variables: tools or resources, community support, roles played by participants, and the rules of scholarly communities. Motivating factors included the participants’ desires to learn, fulfill responsibilities to clients and students, and to improve their credentials. Up to their doctoral education, tools and positive community support were the primary factors enabling their emerging research identities. Sustaining identity development in their careers presented greater challenges, or constraints, such as insufficient resources and limited community support. Schooling was both a positive and negative influence on the development of their research identities. Implications of the findings are that manipulation of practice variables may increase motivation, enabling factors may have a greater influence than constraining factors on emergent identities, and constraining factors seem to have a greater influence than enabling factors on sustaining identity development throughout the career. Additionally, pedagogical and curricular modifications may strengthen emerging research identities during doctoral education. Two narrative themes emerged relating to disciplinary leadership, suggesting two areas deserving of further study.

ACKNOWLEDGMENTS

Peter Taubman (1990) practiced being a teacher in front of a mirror at his mother's house. As he practiced, he saw his own reflection and the reflection of his mother – herself a teacher – as she sat in the living room watching and listening. Taubman was developing his identity as a teacher quite literally in the “gaze of the Other” (p. 122). In this section, I want to acknowledge the people I have seen in the mirror, gazing at me, as I developed my own identity as a researcher.

First, I want to thank the chair of my dissertation committee, Dr. Linda Spatig. I first learned about qualitative research from Linda in 1993 when I took her course titled “Special Topics: Qualitative Research Methods.” Over a decade later, when I began my doctoral program, I knew very little about what lay ahead of me—but I knew I wanted Linda to be the person to guide me through it. She agreed to chair my committee before she even had room for another student, invited me to join one of her research teams, and has gently—but firmly—pushed me to challenge my own values, beliefs, and practices. For my own research, she graciously allowed me to find my own way into a topic and she has been tireless in her reading and responding to my work. I so deeply appreciate the commitment she made to my success.

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called a “scholarly study of story,” which grew into this narrative study; and, Mary Beth Reynolds, who helped me build the bridge between my disciplinary identity and my scholarly identity.

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CHAPTER ONE: INTRODUCTION

In 2005, the Communication Sciences and Disorders (CSD) department at my institution hosted site visitors from the Council on Academic Accreditation (CAA) of the American Speech-Language-Hearing Association (ASHA). With two successful site visits behind us, in 1993 and 1998, we were going to be assessed on a new set of standards and knew we were especially vulnerable on one of those.

Our fears turned to reality as the site visitors found us to be out of compliance with Standard 2.2, which stated that “the number of full-time doctoral-level faculty ... is sufficient to meet the teaching, research, and service needs of the program and the expectations of the institution” (American Speech-Language-Hearing Association [ASHA], 2008b). At the time of the site visit, we had one faculty member with a research-based doctoral degree. Over the previous decade, one by one, three had retired or relocated to care for aging parents. During that time we had been unsuccessful recruiting faculty with the necessary qualifications. To be honest, we were not successful recruiting anybody. For two years in a row we had not received a single applicant with the required credentials.

The CSD department could point to the geographic location of the institution, the depressed economy in the community, the limited number of cultural experiences available to the community, and the inadequate compensation packages offered when compared to other institutions or health care settings, to explain the difficulty we have had filling faculty positions. And we might be partially right. Unfortunately, the problem is far more serious and wide ranging. CSD is a discipline in crisis.

Crisis in Communication Sciences and Disorders

Communication Sciences and Disorders (CSD) is an autonomous discipline with the right and obligation to scientifically create knowledge to advance the discipline. Even so, CSD is in danger of losing its professional autonomy. Oversight of the discipline falls to ASHA, the “professional, scientific, and credentialing association for 135,000 members who are speech-language pathologists, audiologists, and speech, language, hearing scientists in the United States and internationally” (ASHA, n.d.). Entry into the profession requires, at a minimum, a master’s degree. Graduate programs in CSD prepare individuals to be speech-language pathologists (SLPs), specialists who are experts in the prevention, diagnosis, and treatment of a variety of communication and swallowing disorders. In these programs, students complete academic courses and clinical experiences, accumulating a minimum of 400 clinical clock hours. ASHA’s accreditation standards require a significant investment of faculty time for the supervision of graduate clinicians. The level of involvement required of faculty members demands an adequate supply of doctoral-level faculty members.

In 2002, ASHA published a report on the crisis in CSD. Based on the results of a 2001 survey, 6-7% of all faculty positions in CSD were vacant. Additionally, ASHA warned that the number of vacancies would “climb significantly in the next ten years” (p. 2). Then, ASHA referred to the issue of faculty preparation as the “most significant threat to our future” (p. 5). These shortages are jeopardizing the existence of some CSD programs; extinct programs further reduce the number of potential doctoral faculty.

Along with the threat to individual programs comes a threat to the autonomy of the discipline. Autonomous disciplines have an obligation to create and disseminate knowledge—activities that require an adequate number of capable and ethical researchers

along with sufficient support for their research programs. Without the advancement of knowledge, the autonomy of the discipline is in jeopardy; without sufficient numbers of doctoral faculty, the field cannot advance. With declining numbers of qualified faculty and a declining pool of potential CSD doctoral faculty members, the future of CSD as an autonomous discipline is grim. To that point, ASHA reported:

As our Ph.D. numbers decrease ... our ability to educate adequate numbers of graduate students, and ultimately the quality of patient care is threatened. If we do not act, and act now, the field may be lost. (ASHA, 20002, p. 2)

In an effort to alleviate the shortages reported among CSD programs, ASHA adopted an initiative in 2004 to increase the “number of potential doctoral-level faculty/researchers in personnel preparation programs to fill short- and long-term faculty vacancies in CSD” (ASHA, 2008a, p. 4). Even though the results from a survey evaluating that initiative reflected an increase in the number of people receiving Ph.D. degrees in CSD, the committee took little comfort in those findings. Even though ASHA’s focus on increasing the number of individuals entering doctoral programs is logical, the net effects of those efforts are smaller than might initially be expected. Only about 50% of those receiving doctoral degrees enter into faculty positions, with the majority of the other 50% working as clinical practitioners (ASHA). Along with the increasing number of current faculty members reaching retirement age, the number of new doctoral faculty remains insufficient (ASHA). There are two likely and related deterrents, one financial and one scholarly in nature, to ASHA’s strategy.

From a financial perspective, salary differentials may partially explain why so few individuals pursue doctoral degrees in CSD in the first place and why so many who do choose to work as service providers instead of taking academic positions. My own situation is an excellent example of this phenomenon. I am certified as both an SLP and an Audiologist and have thirty-one years of experience, twenty-three of those in higher education. In 2005, my daughter earned a master's degree in CSD and took a job as an SLP at a well-known, not-for-profit rehabilitation hospital not far from home. In just three years, her salary exceeds mine. The roles and responsibilities of clinical practitioners and academicians, however, are different. As service providers, SLPs primarily engage in clinical work; research opportunities are rare. On the other hand, an active life as a researcher is a requirement of most higher education faculty positions that also have compensation packages that are frequently less than those offered to service providers. Something more than financial considerations, then, must be deterring SLPs from pursuing a life as a researcher. Indeed, something more basic may be at stake.

Fundamentally, the decision SLPs make about pursuing careers in higher education, or clinical practice for that matter, are decisions about their professional identity. Beginning a career in higher education entails choosing to be a researcher who participates in a research culture. But, to talk of becoming a researcher as a simple matter of choice obscures the process of *becoming*, a process that may be more complex for those in the CSD culture than for other professional cultures. According to a report from ASHA (n.d.), 95.8% of SLPs are female. Studies of identity development in women have demonstrated that women follow unique and idiosyncratic paths to developing particular identities, such as research identities (Connerton, 1989; Priola, 2007). Numerous studies

of academia, however, have established that masculine discourses and practices in higher education are dominant (Priola; Saunderson, 2002; Shaw & Cassell, 2007). If current CSD programs are failing to produce a sufficient number of individuals who choose to become researchers, then perhaps we need to examine the influence of curriculum, particularly the research curriculum, as it relates to a primarily female student body. As anthropologists Quinn and Strauss (2006) have noted, much is known about how cultural forms are taught, but very little is known about how people actually learn them. Instead of focusing solely on how we teach research, perhaps we should learn more about how women learn cultural forms and become researchers.

The purpose of this study was to increase understanding of how women in CSD become researchers. In other words, how do women learn the skills and knowledge, or the cultural forms, required to participate in a research culture? Specifically, I developed an understanding of my participants' experiences of becoming researchers by inquiring about:

1. What motivated the participants in the study to become researchers?
2. What factors facilitated the development of their research identities?
3. What factors constituted barriers and obstacles to the development of their research identities?
4. What role did schooling, especially research-related curriculum and instruction, play in the development of their research identities?

Conceptual Framework

Maxwell (2005) described a conceptual framework as “the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs” (p. 33) a

research study. In other words, a conceptual framework provides a foundation for understanding the problem, designing the study, analyzing the data, and interpreting the findings. To that end, I built a conceptual framework for this study that provides a contextual and theoretical foundation. Contextually, I explored the nature of institutions of higher education and the status of women in those institutions. I also developed a theoretical base for the study by drawing together and describing relevant theories.

Contextual Foundation

In addition to the disciplinary context presented earlier in this chapter, the culture of higher education is another relevant context that informs the study. The literature documents the changing nature of higher education, changes brought about primarily due to demands for universal access to higher education, privatization of educational entities, and forces of globalization (Knight, 2004). Because research cultures are embedded within institutions of higher education, these institutional influences have a corresponding impact on the research cultures of higher education. More to the point, the effects of these influences have altered how research is conceptualized, funded, and disseminated (Knight).

The status of women in higher education is another relevant context informing this study. Despite encouraging news regarding the increase of women with doctoral degrees and in higher education overall, the experiences of these women dampen any expectations that the status of women in higher education has substantially improved (West & Curtis, 2006). West and Curtis described the status of women as “uneven progress” (p. 4) and as a “series of accumulated disadvantages” (p. 6). Their conclusions

regarding the status of women in higher education were supported by studies of authorship in scholarly publications (Hart, 2006; Townsend, 1993).

Theoretical Foundation

The theoretical foundation for this study is three-fold. First, I explored literature relating to identity and identity development. Second, I explored literature relating to the various ways that identity can be understood: as practice (O'Connor, 2007), as learning (Deem & Brehony, 2000; Eisenhart & DeHaan, 2005; Knights & Kerfoot, 2004; Leonard, 2000; Priola, 2007; Saunderson, 2002), as cogenerative relationships (Harris, Freeman, & Aerni, 2009; Lee, 2008; Northedge, 2003a, 2003b; Samara, 2006; Yandell & Turvey, 2007), and as cultural participation (Ahearn, 2003; Cox, 2005; Enders, 2005; Fuller, H. Hodkinson, P. Hodkinson, & Unwin, 2005; Guldberg & Mackness, 2009; Gunder, 2003; Hoffman, 1998; Lave & Wenger, 1991; Northedge, 2003a, 2003b; O'Donnell & Tobbell, 2007; Reybold & Alamia, 2008; Samara, 2006; Yandell & Turvey, 2007). Given that identity is not a static construct, I also examined two typologies that describe identity development over time (Åkerlind, 2008b; Reybold & Alamia, 2008).

The second aspect of the theoretical foundation focuses on the ways in which academics understand and experience research. In her review of the literature on those topics, Åkerlind (2008a, 2008b) developed two typologies that represent the various ways research is understood and experienced by academics. The implications of Åkerlind's work contribute to understanding, to some extent, the research experiences and achievements of the participants in this study.

The third, and final, aspect of the theoretical foundation for this study introduced the cultural-historical activity theory (CHAT). Built on the work of Vygotsky, CHAT conceptualizes identity development, or learning, as the interaction of multiple variables that represent the contextual elements of activity or practice (Crossouard, 2009; Engeström, 2000, 2001; Gredler, 2009; Gutiérrez & Rogoff, 2003). Application of CHAT inhibits the tendency to essentialize individuals and experiences and promotes the belief that even though commonalities exist (e.g., all activity is accomplished with certain tools), the particulars of experiences are individualized (Gutiérrez & Rogoff). This more complex understanding of practice leads to a more thorough and sophisticated understanding of how research identities develop. A complete description of these variables and explanation of these interactions can be found in chapter 2.

Methods

This study extends the narrative inquiry by McComas and Spatig (2010) that examined the stories of becoming researchers as told by three women from different disciplines. Of interest in that study was one particular narrative thread—stories of resistance that appeared in all three of the oral histories studied. Given the unique paths these women followed, a study of a narrative thread provided one approach to analyzing stories from multiple participants.

Narrative Inquiry

Clandinin and Connelly (2000) argue that understanding experiences, such as experiences of becoming researchers, can be achieved through narrative inquiry. Researchers using narrative inquiry assume that knowledge of experience is constructed

through narrative and story (Clandinin & Connelly). When we story (i.e., tell stories), we simultaneously construct and convey our understanding of our experiences.

Consequently, in telling their stories to me, my informants constructed and conveyed their understanding of their experience of becoming researchers.

Participants

I identified the participants in this study using purposeful sampling combined with convenience and snowball sampling strategies. Chase (2005) reported that narrative researchers “often present the narratives of a very small number of individuals—or even of just one individual—in their published works” (p. 652). This study is based on the narratives of four women researchers—Anna, Corinne, Claire, and Sharon—who are described more fully in chapter 3.

Data Collection and Analysis

To study the participants’ experiences of becoming researchers, as lived and told, my primary sources of data were the oral histories I collected through a series of three interviews with each participant. I used Seidman’s (2006) model of the three-part interview in order to obtain in-depth information from my participants. This model uses the first interview to gather basic history, or a description of what led up to the experience that we are trying to understand; the second interview to examine the experience of interest, in this case the experience of becoming a researcher; and the third interview to encourage participants to reflect on how they understand their prior experiences now.

To analyze the data, I first identified the individual stories embedded within whole narratives. The narratives were also analyzed using codes suggested by the four

research questions: motivating factors, enabling factors, constraining factors, and the role of schooling. Additionally, I searched for themes, or narrative threads, across the narratives (Clandinin & Connelly, 2000). The results of the within-case analyses for each participant are presented in chapters 4-7. The results of the across-case analyses are presented in chapter 8. Chapter 9 includes within-case and across-case analyses focused on identity development in the participants' careers.

Significance of Study

The over-arching significance of this study will be determined by how this research contributes to our understanding of not only curriculum and instruction in research, but also of curriculum and instruction within a discipline. The landscapes that will be informed by this study are local, as in the case of CSD programs, and global, as in the case of institutional structures or other feminized professions. Those who may find this study instructional include students, individual faculty members, curriculum committees, state licensing boards, policy-makers of state and national professional organizations, and state and federal lawmakers. I anticipate that all of these groups will be able to find applications of this research, including applications to instructional methods, curricular requirements, continuing education requirements, funding patterns, focused initiatives, and public policy.

Strengths and Limitations

Inherent in narrative studies are particular strengths and limitations. With regard to strengths, narrative studies – especially those based on oral histories – offer an in-depth view of how individuals understand experiences over the course of a life. The

breadth and depth of these narratives offer ample opportunities to document consistency within cases and identify narrative threads across cases.

Potential limitations of narrative studies—especially those based on oral histories—are two-fold. First is the concern that the small number of participants (small even by qualitative standards) may provide a narrow perspective on the issue at hand (Yow, 2005). Yow reminds us that personal experiences do not exist in a vacuum. Instead, experiences emerge out of specific cultural, sociological, and historical contexts. This situated characteristic of experience provides alternate perspectives through which to consider oral histories and reduces the likelihood that any one oral history will convey a single, or overly narrow, perspective.

Second is the concern that oral histories rely upon memory (Yow, 2005). Two considerations moderate this concern. First, Yow compared the use of oral histories with the more common practices of using other artifacts, such as diaries and official documents. Those artifacts, like oral histories, are also created from memory with particular intentions and biases that might slant or influence the way an experience is documented and ultimately remembered (Yow). Nevertheless, Yow found that, over time, people are more likely to tell stories openly and frankly. Second, Yow directly addressed concerns relating to the accuracy of memory by maintaining that even personal stories must demonstrate consistency within themselves and within the broader contexts in which the experiences occurred. Additional concerns related to the limitations of narrative studies, and strategies used to counteract these limitations (and others), are discussed more fully in chapter 3.

CHAPTER TWO: CONCEPTUAL FRAMEWORK

In the previous chapter, I presented a case for studying how women become researchers, particularly women in Communication Sciences and Disorders (CSD) programs in higher education. This study responds to a critical shortage of doctoral-level faculty in CSD, a circumstance that not only threatens the existence of academic programs but also serves as a real and significant threat to the autonomy of the discipline. In response to this, the American Speech-Language-Hearing Association (ASHA) has initiated a multi-faceted approach to alleviate these shortages. Of their many efforts, none has examined the processes of becoming researchers. Instead, these initiatives have focused on why women *do not* become researchers. If we do not, however, explore why women *do* become researchers, our understanding of the problem may be incomplete at best. This study, then, focused on women researchers in CSD and sought to understand:

1. What motivated the participants in the study to become researchers?
2. What factors facilitated the development of their research identities?
3. What factors constituted barriers and obstacles to the development of their research identities?
4. What role did schooling, especially research-related curriculum and instruction, play in the development of their research identities?

The primary purpose of this chapter is to construct a conceptual framework, or “the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs” (Maxwell, 2005, p. 33) my research. I adopt Maxwell’s advice to consider the literature that has a direct bearing on various aspects of the study, including the problem, design, findings, and interpretation. I presented the literature relevant to the

problem in chapter 1 and the literature informing method is embedded in chapter 3.

Because the problem and method are inter-related, this chapter will add to understanding the problem and the design of the study. What remains then is the literature that informed my understanding and interpretation of the data.

Therefore, in this chapter I construct two frameworks, one relating to the context of the study and the other relating to existing theory. From a contextual perspective, I describe the nature of institutions of higher education, including the research cultures within higher education, the status of women in higher education, and the experiences of women in higher education. From a theoretical perspective, I review the recent literature on how academics understand and experience research and how academics understand identity and identity development. I close the chapter with an explanation of the cultural-historical activity theory (CHAT), which I use in the analysis and interpretation of the data. Existing theory, according to Maxwell (2005), can be useful in qualitative research in at least two ways. First, theory can bring order to data by revealing relationships between seemingly unrelated pieces of data. Second, theory can highlight that which might remain hidden in the data. CHAT does both, as I will show in later chapters.

The Nature of Higher Education

In this study, the participants told numerous stories about their experiences throughout their lives. As I will show, their research identities began to emerge once they were participating in the cultures of higher education, first as doctoral students and then as post-doctoral career academics. Understanding the context of their experiences is essential because context frames how experiences are understood. This section explores

literature relating to institutions of higher education and the research cultures within those institutions. Although my primary interest lies in the nature of the research cultures that shaped the participants' research identities, those cultures do not exist in a vacuum. Instead, they are heavily influenced by the broader culture of the institution. This means that, to varying degrees, the same forces acting upon institutions are also acting upon the research cultures of institutions of higher education.

In the 21st century, there are three key forces acting upon institutions of higher education: (a) demand, or a move toward universal access to higher education; (b) privatization, or shifting the management and ownership of a variety of educational institutions from public to private; and (c) globalization, or world-wide changes occurring because national borders are more permeable (Knight, 2004). These influences shape institutional priorities (Teichler, 2004) and directly affect research and the research cultures within institutions. More specifically, the effects of these influences on higher education have some bearing on how research is conceptualized, funded, and disseminated (Knight).

The ways in which institutions of higher education conceive of research are closely related to institutional missions; therefore, changes in institutional missions bring about changes in how research is understood (Bell & Stevenson, 2006; Knight, 2004). The forces acting on institutions of higher education (demand, privatization, and globalization) are bringing about changes to institutional missions in ways that require increased economic resources (Bell & Stevenson; Knight). At the same time institutions are in need of increased financial resources, financial support from government sources is decreasing (McLendon, Deaton, & Hearn, 2007). The combination of increased financial

needs and decreased financial support has caused institutions to reduce funding for all activities, including research (McLendon et al.). These economic circumstances are a catalyst for shifting institutional missions from their previous emphasis on social issues to a new emphasis on economic issues (Bell & Stevenson).

The observations of Adams and Carfagna (2006) provide further evidence of this increasing emphasis on economic issues. They noted that the flows of capital and commodities in higher education were far more developed than were the flows of people or ideologies. One effect of emphasizing economic issues, rather than social issues, is that researchers no longer have the luxury of studying topics that are of personal interest (Ordonez, 2005). Instead, they will be more successful in gaining financial support for their research if they engage in work that is likely to develop products that may be taken to market, thus increasing revenue to the institution (Mohrman, Ma, & Baker, 2008). In this way, research cultures function as revenue-generating mechanisms for institutions of higher education rather than scholarly mechanisms. Therefore, economic development, rather than the development of disciplinary knowledge, is becoming the primary purpose of research in institutions of higher education (Adams & Carfagna).

In addition to changes in institutional missions, which have brought about changes in how institutions understand research, institutional funding practices are also changing. Two factors contribute significantly to these changes in funding patterns. First, and as previously mentioned, institutions of higher education are receiving less support from government agencies (McLendon et al., 2007). The overall levels of governmental support to institutions of higher education is further reduced because more and more private educational entities are also receiving support from government

sources, reducing the amount of support available for public institutions (McLendon et al.). Consequently, both public and private entities have a greater dependency on external sources of funding (Henig, 2008). In many cases, however, private entities are not subject to the same scrutiny, policies, and procedures that are imposed upon public institutions and consequently may have fewer barriers to completing and publishing their research (Henig). As a result, private entities may have a competitive advantage over public institutions in securing external funding. Thus, researchers in public institutions may experience growing difficulties in securing external funds (Henig).

An additional strain on institutional resources is connected to institutional enrollments. While accepting more students is a response to calls for universal access to higher education and one way to generate additional revenue for the institution, an increase in students brings increasing demands for accountability with regard to student learning (Aronowitz, 2005; Malandra, 2008; McLendon et al., 2007). To comply with these demands, institutions are shifting resources to the classroom and away from other institutional activities, like research (McLendon et al.).

Along with changes in how institutions understand and fund research, the influences of privatization, demands for universal access, and globalization have also impacted how research findings are disseminated in two particular ways. First, researchers in private entities generally move research from conception to dissemination more quickly than researchers in public institutions (Henig, 2008). Second, because researchers in private institutions are not required to utilize the peer-review process, there are more publication venues available to them (Goldhaber & Brewer, 2008; Henig). The net result is that researchers in private institutions generally have more publications and

more research experiences than do researchers in public institutions. To be competitive, researchers in public institutions may feel compelled to design studies that can be finished quickly or that are sufficiently resourced by external agencies so that they may have reductions in their teaching or service loads.

The importance of understanding the relationship between institutional cultures, including the research cultures within institutions, and identity was illustrated by a Moss and Kubacki (2007) study of fifteen academics working in an institution of higher education in the United Kingdom. Their study revealed that the research culture of an institution has a significant impact on researcher identity and productivity. Specifically, the academics in their study who worked alone conveyed feelings of isolation and negative feelings about their self-worth. On the other hand, the academics who worked with others felt supported in their work and exhibited greater research productivity. Because institutions of higher education must increase their reliance on funded research for financial stability, creating an institutional culture that promotes collaboration may yield greater research productivity (Moss & Kubacki).

The previous discussions about how research is conceptualized, funded, and disseminated illustrated some of the specific ways that institutional cultures, and changes to those cultures, affect the research cultures of higher education. The Moss and Kubacki (2007) study suggested that research cultures in institutions of higher education have a direct influence on the identity of researchers. In later chapters I will introduce the participants in this study. Many of their stories also illustrate what Moss and Kubacki found relating to research cultures and research identity.

Women in Higher Education

Because the overwhelming majority (95.8%) of Speech-Language Pathologists (SLPs) are women (ASHA, n.d.), I am most interested in how women experience higher education. Even without the dominance of women in CSD, a study of women's experiences in higher education would be valuable. Such studies "challenge social science knowledge about society, culture, and history" (Chase, 2005, p. 654).

The research relating to women in, and the influence of feminism on, higher education is voluminous and wide-ranging. Therefore, I limit my review in two ways. First, I examine the status of women in higher education by considering the characteristics of the higher education cultures and reviewing demographic data concerning women in higher education. To understand the significance of these data in the context of higher education's research culture, I summarize data from Hart's (2006) study of the higher education literature and provide information from my own review of the premier research journal in CSD. Second, I close this section about personal and social interactions with a discussion about how academics, women in particular, experience the research cultures in higher education.

Status in Higher Education

As a descriptive term, *status* refers to how people are situated within groups. In this case, I am concerned with how women are situated among other faculty members in institutions of higher education. Women in higher education work in cultures that have been repeatedly and recently described as masculine in nature (Priola, 2007; Shaw & Cassell, 2007). In such cultures, women are challenged by a number of factors, including pay inequalities and cultural expectations of behavior that are more masculine

(Samble, 2008). Additionally, women are far more likely to (a) experience social isolation; (b) have their research discriminated against or discredited; and (c) engage in work typically referred to as service, such as committee work, than are men (Samble). West and Curtis (2006) reported that the status of women faculty across institutions varies greatly. They summarized that status, which reflects what they describe as “uneven progress” (p. 4), in this way:

Women ... are obtaining doctoral degrees at record rates, but their representation in the ranks of tenured faculty remains below expectations, particularly at research universities. Women face more obstacles as faculty in higher education than they do as managers and directors in corporate America. (p. 4)

In spite of those bleak descriptions, recent statistics about women’s participation in higher education show that women are gaining ground in some areas. In 2004, for example, women received 48% of all doctoral degrees awarded (West & Curtis, 2006). Other data are less encouraging. Indicators from 2005-2006 provided insight into the overall status of women in higher education. Specifically, women held 39% of full-time faculty positions (ranging from 34% in doctoral-granting institutions to 42% in other degree-granting institutions); held 45% of tenure-track positions; held 31% of tenured positions (indicating that a significant number of women do not receive tenure); represented 24% of faculty holding rank as full professor; and, earned salaries that were 19% less than the salaries of men in similar positions (West & Curtis). Based on these statistics, West and Curtis characterized the status of women in higher education as a “series of accumulated disadvantages” (p. 6).

More recently, Sabharwal and Corley (2009) reported on a national study of faculty concerning job satisfaction and job security across gender and disciplinary lines. Some of their findings were consistent with those of West and Curtis (2006). Specifically, they noted that across all disciplines, male faculty members were more likely to have more years of experience, be tenured, be employed in research-intensive institutions, be employed by public institutions, and have research and development as their primary work assignment (Sabharwal & Corley).

Given the increase in the number of women receiving doctoral degrees over the past 30 years, several researchers turned to the literature for tangible evidence of active participation by women in the research cultures of higher education (Hart, 2006; Saunderson, 2002; Townsend, 1993). Saunderson, for instance, noted an increase in research about women in higher education during the late 1990s and early 2000s that corresponded with the increase in the number of women earning doctoral degrees. Studies of the number of female faculty, the number of female faculty in tenure-track positions, and the career paths of women were becoming increasingly more common (Saunderson). Townsend, and later Hart, suggested that the influence of women and feminism on higher education could be made visible by examining the representation of women in the higher education literature.

In 2006, Hart speculated that, given the increasing numbers of women receiving doctoral degrees and holding faculty appointments, there should be a corresponding increase in published articles by, and about, women. She reviewed three journals (*The Journal of Higher Education*, *The Review of Higher Education*, and

Research in Higher Education) in order to determine how many articles from 1990-2002 were about women or written from a feminist perspective. Overall, she found:

1. There were fewer articles with female authors (47%) as compared to articles with male authors (71%).
2. There were more articles single-authored by males (32%) as compared to articles single-authored by females (15%).
3. Women's work was cited less than men's work (Worell, 1994, as cited in Hart, 2006).
4. Women were less likely to be listed as first author than men (Worell, 1994, as cited in Hart, 2006).
5. Women tended to co-author with men more often than they did with women (all female co-authors on 9.8% of the articles, female and male co-authors on 23.9% of the articles, and all male co-authors on 10.2% of the articles).

Hart (2006) then compared her findings to those of Townsend (1993), who examined the same three journals in the late 1960s, 1970s, and 1980s. Examining the titles of articles in the journals, Hart found an increase from 3.9% to 9.8% in the number of published articles framed by feminism. When she expanded her search to include titles and abstracts, however, she found that only 1% of the published articles used the language of feminism.

The studies of West and Curtis (2006) and Hart (2006) examined the relationship between women and the culture of higher education, particularly the research culture. Their studies documented that women were making gains in terms of acquiring

the academic credentials associated with higher education. The representation of these women in the higher education journals, however, was disappointing at best.

Because this study is discipline specific, I examined what is known about women in CSD programs. Data points, similar to those reported by West and Curtis (2006), are not available for CSD programs. And, given that the overwhelming majority (95.8%) of CSD professionals are women (ASHA, n.d.), such data points would be unlikely to provide meaningful information. Consequently, unlike the status of women in institutions of higher education, the critical story for CSD focuses on the disparities between the number of CSD professionals who pursue careers in higher education and those who pursue careers in clinical practice.

From data collected in 2008, out of the 118,270 individuals who hold a Certificate of Clinical Competence in Speech-Language Pathology, only 3.6% reported college/university as their primary place of employment (ASHA, n.d.). Furthermore, of those working primarily in a college or university, 2.2% identified as professors, .4% identified as researchers, and .2% identified as doctoral candidates (ASHA). What is not known is how many of those who identified as professors, researchers, and doctoral students, are women. Given the overwhelming majority of women in the discipline, however, we can assume that many are women.

Following the leads of Hart (2006) and Townsend (1993), I reviewed the premier research journal in CSD, *The Journal of Speech, Language, and Hearing Research*, for the years 2006-2008. My review yielded disappointing results, especially because CSD is predominately female. In the areas of speech and language, women were listed as first authors on only 65% of the articles published. Males were first author on

29% of the articles and the gender of 6% of the first authors was unknown. While the discrepancy between the number of women in the field and their representation as lead authors in the literature is not nearly as great in CSD as it is in higher education, the relative representation of women authors, when compared to the number of women in the discipline, is troubling.

Experiencing Higher Education

Several recent studies have documented that women and men experience higher education differently. For instance, Shaw and Cassell (2007) found that female and male academics experienced their academic roles differently. Women in their study tended to take on more nurturing and caring roles that many times precluded their engagement in research (Shaw & Cassell). Likewise, in a national study about job satisfaction and security that focused on disciplinary and gender lines, Sabharwal and Corley (2009) asked the academics in their study to rate job satisfaction in nine different areas, including (a) opportunity for advancement, (b) benefits, (c) intellectual challenge, (d) degree of independence, (e) location, (f) level of responsibility, (g) salary, (8) job security, and (9) contribution to society. Overall, men believed they had greater job security and job satisfaction in higher education than did women (Sabharwal & Corley). One noteworthy exception, however, was the findings relating to health fields, a category that includes CSD. Sabharwal and Corley found that women in higher education who worked in health fields reported greater overall job satisfaction. A notable finding was that the women who identified teaching as their primary work responsibility reported less satisfaction with their jobs than did women in those same fields who reported research and development as their primary work responsibility (Sabharwal & Corley). These data suggested that women who teach and research in CSD programs might experience a

higher level of job satisfaction than do those women who only teach or are from non-health fields.

In addition to studies relating to the status of women in higher education and their participation in the research cultures of higher education, other studies have documented the discriminatory and oppressive nature of educational institutions and the resultant effect on women (Association for the Study of Higher Education [ASHE], 2009; Eisenhart, 2006; Saunderson, 2002). Specifically, women are excluded from decision-making processes that affect academics because “the shifting culture of education towards a more entrepreneurial, managerialist culture may reduce the equal opportunities discourse to marketing rhetoric and strengthen the gendered culture in favour of those men prepared to adopt more aggressive approaches to management” (Priola, 2007, p. 23). These exclusions not only affect the development of their identities, they also silence the voices of women academics and the voices of those people in their studies (ASHE; Priola, 2004; Samble, 2008).

Conceptualizing Identity

Even though stories of how the identities of women academics develop are rare, they are necessary (Saunderson, 2002). The literature offers insight into the process of developing a research identity. For example, there are theoretical and empirical articles that focus on the constructs of identity development, social and sociocultural theories of learning, mentoring and collaborative relationships, and doctoral studies. While these articles generally focus on a central topic (e.g., doctoral studies), there is considerable overlap across topics. For instance, articles exploring sociocultural theories of learning invariably speak to mentoring and collaborative relationships as well as

doctoral studies. My organizational strategy for the remainder of this chapter is to explore the various ways identity has been conceptualized in the literature. Specifically, I explore identity as practice, as learning, as cogenerative relationships, and as cultural participation. Finally, I discuss identity development over time.

Identity as Practice

O'Connor (2007) conceptualized identity as a process of understanding practice; new understandings of practice lead to new identities. She described this process as “the means by which professionals interpret, mediate and construct knowledge in terms of its relevance to their practice” (p. 258). Specifically, that process can be understood as being (a) temporal, or situated within a specific time and place; (b) dialogic, or a product of interactions leading up to and occurring within that time and place; (c) subjective, or a product of individuals’ ways of interacting; and, (d) reflexive, or a result of reflecting on experiences in order to discover the social meanings of those experiences (O’Connor). More simply, O’Connor understood identity to emerge as individuals consider the meaning of their experiences (reflexive) in the context of time and place (temporal) that evolves as a function of prior experiences (dialogic and subjective). In turn, those identities shape future practice.

Identity as Learning

Another way to conceptualize identity is in the context of learning. From this perspective, doctoral training programs play a prominent role in identity development. The research about doctoral training programs has addressed a variety of issues, including access to research cultures, gender-related deterrents to accessing these cultures, and coursework.

Deem and Brehony (2000) studied student access to research student cultures, research training cultures, and academic research cultures. They found uneven access, noting consistency in the challenges experienced by particular kinds of students in accessing particular kinds of cultures. For example, part-time students had more difficulty gaining access to peer-student cultures and academic cultures than did full-time students. Although Deem and Brehony found that some women students had greater difficulty accessing these cultures than men, they reported having “too few examples ... to claim it as a consistent finding” (p. 162).

Leonard (2000), on the other hand, suggested that gender was a factor in how women access academic and research cultures in doctoral training programs. Additionally, Leonard warned that the changing nature of higher education, specifically the shifts occurring as a result of increased demand for access to education, privatization, and globalization (as discussed in the section on “Settings”), appears to be creating complex institutional transformations that further disenfranchise women as institutions grow increasingly more business-like (Knights & Kerfoot, 2004; Priola, 2007). Saunderson (2002) captured this complexity in a study of the identities of academic women in universities that have adopted operating models that reflect business models. She noted that “women’s identities are compromised, challenged and made ‘vulnerable’, through varying feelings of being undervalued, overlooked, overburdened, and often the subjects of unequal treatment” (p. 400).

Finally, the issue of coursework was the focus of an article by Eisenhart and DeHaan (2005). They recommended that the research components of doctoral education be strengthened, particularly in light of recent legislation that requires the use of

educational research for data driven decision-making about schooling. Specifically, they recommended that doctoral students gain exposure to a variety of epistemological perspectives and methodologies, including the principles of scientific inquiry.

Additionally, doctoral students should have an understanding of the various contexts of education and the value of interdisciplinary research (Eisenhart & DeHaan).

Identity as Cogenerative Relationships

A third way to conceptualize identity is in the context of cogenerative relationships. In their study of cogenerative relationships between research supervisors and their students, Harris, Freeman, and Aerni (2009) proposed a model for facilitating the entrance of students into a research culture. Their findings differentiated between cogenerative *mentoring* and cogenerative *work*. Cogenerative mentoring was described as guided learning and cogenerative work was described as collaborative learning (Harris, et al.). Both kinds of relationships require cooperation between the supervisors and students and a focus on learning (Harris, et al.). The authors concluded that cogenerative mentoring was a more successful support strategy in the early stages of doctoral work whereas cogenerative work may be more appropriate for later stages of doctoral work (Harris, et al.).

Lee (2008) studied how research supervisors conceived of their roles. She identified five conceptions of supervision, including functional, enculturation, critical thinking, emancipation, and relationship development. These conceptions represented different theories of learning and described the various ways in which individuals develop research identities. Lee concluded that a complementary match between how supervisors and supervisees conceived of research was more likely to facilitate

supervisees' paths toward becoming researchers. A mismatch, on the other hand, might arrest or terminate the process for some supervisees (Lee).

Other studies about the relationships and roles of research supervisors and supervisees in research training have focused on supervisors' roles as experts and supervisees' roles as novices (Northedge, 2003a, 2003b; Samara, 2006). Northedge (2003a, 2003b), for example, understood the teaching and learning aspects of the supervisor-supervisee relationship to be a form of enculturation. Establishing the supervisory process as a "social and sociocultural phenomenon" (Samara, p. 117), Samara suggested that a profitable supervisor-supervisee relationship would successfully integrate the supervisee into a discourse community in which the supervisor is an expert. This integration is central to the process of research identity development.

Identity as Cultural Participation

Finally, identity as participation was a central theme in numerous studies (including some already discussed) about mentoring relationships or aspects of doctoral training (Ahearn, 2003; Enders, 2005; Fuller, H. Hodkinson, P. Hodkinson, & Unwin, 2005; Guldberg & Mackness, 2009; Gunder, 2003; Hoffman, 1998; Lave & Wenger, 1991; Northedge, 2003a, 2003b; O'Donnell & Tobbell, 2007; Reybold & Alamia, 2008; Samara, 2006; Yandell & Turvey, 2007). Grounded in the 1991 work of Lave and Wenger, this perspective conceives of identity as socio-cultural learning that moves individuals from peripheral participation in a community of practice to full participation (Ahearn; Cox, 2005; Enders; Hoffman, 1998; Northedge, 2003a, 2003b; Reybold & Alamia; Samara; Yandell & Turvey). That is, new identities are developed as individuals

learn the cultural forms (skills, values, and beliefs) of a particular culture as they are embedded in the discourse of that culture (Gunder, 2003).

Yandell and Turvey (2007) also considered the relationship between participation and identity development. They conceived of a socialization continuum, organized around levels of participation or engagement with a culture. In their study, new members of a community tended to engage at a peripheral level, or primarily as observers of the community, while more experienced members of the community were typically full participants involved in every aspect of the community's work (Yandell & Turvey). Shifts in levels of participation represented identity shifts (Yandell & Turvey).

O'Donnell and Tobbell (2007) also considered participation as it relates to identity development. They studied a community of practice of adult learners as first-time students in higher education and noted how shifts in participation levels were indicative of shifting identities. Peripheral participants increase their level of participation as they learn from the community, although others have found that full participants can also learn from peripheral participants (Fuller, et al., 2005).

Guldberg and Mackness (2009), in another study related to participation, reported on a community of practice organized around online learning and technology. They identified five enabling or constraining factors that impacted the levels of participant engagement in the community. Whereas these five factors (emotion, technology, connectivity, understanding norms, and learning tensions) related to a specific community, the critical finding was that each factor proved to be enabling for some and constraining for others (Guldberg & Mackness). In other words, the enabling and constraining factors were highly individualized. Regardless, Guldberg and Mackness

acknowledged that participation in specific cultures or communities “have a profound effect on individual learners’ identities” (p. 536). The results of their study suggest two things relating to identity, which is the focus of this study. First, it is important to identify enabling and constraining factors as they relate to community participation (Guldberg & Mackness). Second, the identification of these factors may be a complicated process because enabling and constraining factors are highly individualized (Guldberg & Mackness). Indeed, the participants in this study also showed that the same factor might be enabling at one point in time and constraining at another. Since I, too, am exploring enabling and constraining factors, this study re-emphasizes the importance of trying to identify such factors.

Identity: Changes Over Time

In the previous sections, I described multiple ways to understand identity and identity development. For instance, identity develops as we learn new practices, as we learn new ideas, as we develop relationships with models, and as we participate in specific communities. The studies I summarized focused on how identity develops. What they did not do, however, was describe how identity changes over time. Two studies in particular offer insight into the development of a research identity over a career.

Åkerlind (2008b) found that academics understood identity development in four ways. First, she found that new academics tended to view identity development as a process of developing “confidence and competence” (p. 245). Relatively new researchers, or researchers who are beginning new lines of research, often view identity development in this way (Åkerlind). Second, some academics understood their identities

to have developed as they gained recognition as a researcher from colleagues and the discipline (Åkerlind). Recognition signaled acceptance by a particular culture (Åkerlind). Third, when academics reach a point of being more productive as a researcher they understand their identities to have evolved further. Productivity can be measured in number of articles published, number of students supervised, number of grants awarded, and so forth (Åkerlind). Finally, another kind of identity emerges when researchers develop in terms of increased quality of research (Åkerlind). Åkerlind considered the last category as representative of the most complex of the four types. As for the relationships among these four categories, researchers move back and forth between these stages throughout their careers, however, it would be rare to see a new researcher conduct research at the same level as more experienced researchers (Åkerlind).

Reybold and Alamia (2008) also studied identity development over time. Their study was part of a larger, longitudinal study with 55 participants that began in 1999 with an interest in documenting how the professional identities of women faculty members in education change over time. For their study on academic transitions, Reybold and Alamia interviewed 23 women in faculty positions from the participants of the longitudinal study. Their interviews focused on asking questions about “the nature and experience of academic transitions, their impact on career development and professional decision-making, and responses to transition situations” (p. 112). They analyzed the data using pre-determined codes relating to the topic, derived codes from the data, and identified emerging categories.

The results of their analysis yielded three specific revelations concerning the development of faculty identity. First, Reybold and Alamia (2008) documented that

doctoral students and faculty members in the early stages of their careers typically have a “provisional faculty identity” (p. 114) characterized as tentative and marked by experiences of trying on various identities. As faculty members gained experience, they demonstrated a “resilient faculty identity” (Reybold & Alamia, p. 117) characterized by professional coherence and confidence. Second, the researchers noted that faculty members employed similar strategies in managing academic transitions. That is, faculty members with provisional faculty identities tended to seek a balance among the responsibilities of teaching, research, and service (Reybold & Alamia). As they began to develop a more mature identity, the faculty members tended to stay focused on reaching the next achievement, such as tenure or promotion. Faculty members with resilient identities tended to demonstrate professional “steadiness and maturity” (Reybold & Alamia, p. 119). That is, they no longer identified themselves by their duties and responsibilities and they were undeterred by unsettling institutional climates.

Academics and Research

Conceptualizing and Experiencing Research

Scholars are just beginning to study how academics understand and experience research in higher education. On that issue, Åkerlind (2005, 2008a, 2008b) made two pertinent observations. First, the coursework and training in doctoral programs are the focus of most studies relating to researcher development; thus, the literature is relatively silent on the issue of identity development once academic careers begin (Åkerlind, 2005, 2008b). Second, Åkerlind (2008a, 2008b) observed that, although gender was not a central focus of most of the studies of academics and research, the issue was not entirely absent from those, and other, studies. For example, Hazel, Conrad, and Martin (1997) acknowledged: “...from the 1970s...women’s voices were not heard in much social

science and education research...” (p. 215). They recommended, based on their exploration of women’s voices in research, that future research use gender-purposive sampling or analyze same-gender subsets of a larger, mixed-gender sample. Brew (2001) also questioned whether women might experience research differently from men, speculating that gender differences might be significant enough to warrant a study that compares the differences in identity development processes of men and women. My study focused solely on women researchers in higher education, thus complying with the recommendation of Hazel et al. for gender-purposive sampling. Additionally, per Brew’s speculations, this study contributes to a small but growing body of knowledge about the experiences of women that might later be compared with stories from men.

Additionally, Åkerlind (2008a) reviewed literature pertaining to how academics, both men and women, understand and experience research. She found ten relevant studies and from those she derived categories to describe how academics understand and experience research.

Åkerlind (2008a) noted that academics tended to conceptualize research in one of four ways. That is, they understood research as (a) intentions, or whom the research might impact; (b) outcomes, or the impact and implications of the research; (c) questions, or the topic and focus of the research; and (d) process, or the ways researchers understand how research is to be done. These categories were not mutually exclusive and the differences in how academics understood research appeared regardless of the research status of the institution (Åkerlind, 2008a; Brew, 2001; Bruce, Pham, & Stoodley, 2004); the amount of research experience (Åkerlind, 2008a; Brew; Ingerman & Booth, 2003); and, the discipline (Åkerlind, 2008a; Brew; Bruce, et al.; Ingerman & Booth; Prosser,

Martin, Trigwell, Ramsden, & Middleton, 2008). Even though the disciplines of the academics studied was not a factor in how they understood research, Pham, Bruce, and Stoodley (2005) noted that collecting stories from individuals within the same discipline affords researchers the possibility of collecting details that are discipline-specific.

Implications

These distinctions among the various ways research is conceived and experienced are important on many levels, especially in an environment that drives institutions of higher education to rely more and more on financial support from external sources. Given that researchers vary in their understandings of the nature of research, we can assume that peer reviewers of grants and manuscripts also will vary in their understandings of the nature of research. Likewise, we should expect similar variations among the ways that individuals experience research.

These variations in understanding and experiencing may partially explain the sometimes opposing responses of peer reviewers of grant proposals or article manuscripts (Brew, 2001). Researchers may be more successful if they strive to achieve a more balanced understanding and presentation of their research. In other words, researchers can explicitly address the intentions, outcomes, questions, and processes to reach a wider audience. Additionally, researchers can ensure that grant proposals and manuscripts demonstrate the breadth and depth of the more complex kind of research experience, that of experiencing research to improve social conditions. Furthermore, these distinctions are especially important to women, who are already marginalized in masculine institutions (Priola, 2007) and may be further marginalized with a narrowing of the research landscape.

Cultural-Historical Activity Theory

I close this chapter with a description of the cultural-historical activity theory (CHAT), a theory of cognitive development grounded in the work of Vygotsky and later refined by his students and others (Black et al., 2010; Crossouard, 2009; Engeström, 2000, 2001; Holzman, 2006; Roth & Lee, 2007). Vygotsky's theory has often been described as sociocultural in nature, a theory that describes "learning as a process of becoming, where the learner identifies with a particular community and learns to participate more fully in its practices so that learning entails processes of identity construction" (Crossouard, p. 78).

Two aspects of Vygotsky's work are particularly significant to this study. First, Vygotsky claimed that learning is a process that involves an individual, or subject; object, or goal; and means, or tools (Engeström, 2000, 2001; Roth, 2004). Furthermore, Vygotsky (as cited in Gredler, 2009) noted that in "the mastery of scientific ideas one must rise above their factual nature and test their fundamental nature" (p. 4). The fundamental natures of ideas can be found in the connections and relationships among the subject, object, and means, yet these often remain hidden (Gredler). The second aspect of Vygotsky's work that informs this study is the concept that cognitive development is historical in nature. Specifically, cognitive development corresponds with historical development (Gutiérrez & Rogoff, 2003). The converse is also true. In other words, individuals build knowledge onto previous knowledge; they do not start over with each new learning opportunity. What we can learn, or do learn, is partially dependent upon what we already know.

Engeström (2000, 2001), and later Cole and Engeström (as cited in Roth & Lee, 2007), expanded Vygotsky's model, wrapping context around the human elements (subject, object, and means). The reasoning behind this expansion was important—the interactions among the subject, object and means are shaped by the context and consequently, the context is shaped by those interactions (Engeström, 2000, 2001; Roth, 2004). CHAT proposes that “the structure and development of human psychological processes [identities] emerge through participation in culturally mediated, historically developing, practical activity involving cultural practices and tools” (Gutiérrez & Rogoff, 2003, p. 21). More to the point, identity develops from participating in particular activities in particular ways. Cole and Engeström (as cited in Roth & Lee, 2007) referred to these activities as activity systems, or practices, and proposes the notion that practices have the following elements, or variables:

1. Subject: Refers to the person engaged in the activity and who is the focus of examination. In this case, the participants are the subjects in their own practices.
2. Object: Refers to the goals of the subjects.
3. Tools: Refers to the resources used within practice to achieve the objective.
4. Community: Refers to those people who are involved, directly and indirectly, in a similar practice and the subject's relationships with those people.
5. Division of labor: Refers to the relationships among the various roles people play within a community, the power differentials within those

relationships, how tasks are assigned, and what tasks are assumed by the subject.

6. Rules: Refers to the rules regulating practice.

Finally, CHAT inhibits a tendency to essentialize individuals and experiences and promotes the belief that, even though commonalities exist among individuals, the particulars of experiences are individualized (Gutiérrez & Rogoff, 2003). From this perspective, it made sense to explore experiential commonalities among the participants in this study (e.g., early childhood, high school, college) to discover the individual and unique meanings they ascribed to their experiences. I share the results of these explorations in chapters 4-7.

CHAPTER THREE: METHODS

A number of years ago, I read an article by Marsick (1990) in which she said people use stories to make meaning of their lives. That idea resonated with me, yet the application to teaching eluded me. For years after, that phrase echoed in my head at various times, taunting me to figure it out. I realized that when my students do not understand something, they often ask, “Can you give me an example? Eventually, I learned that what they were really asking me was, “Can you tell us a story to help us understand?”

So, when I began to wonder about how women become researchers in Communication Sciences and Disorders (CSD), I decided to ask some of them to tell me their stories to help me understand:

1. What motivated women in CSD to become researchers?
2. What factors facilitated the development of their research identities?
3. What factors constrained the development of their research identities?
4. What roles did schooling, especially research-related curriculum and instruction, play in the development of their research identities?

This is a narrative study into the experiences of becoming researchers as lived and told by four women who are faculty members in CSD programs at different institutions. I asked them to tell me about their experiences becoming researchers – to help me understand their experiences. In other words, I asked them to tell me stories.

This chapter is also a story of the methods—one that describes the design of the study; the participants in the study; and the collection, analysis, and interpretation of

the data. I begin with a review of the learnings from a pilot study that informed the methods for this study. Then I describe the study design, including discussions about narrative studies and narrative inquiry. Next I describe the process of selecting participants and provide a general description of the participants. I then describe the data collection process and discuss the analytical and interpretive processes for the study. I conclude with a discussion concerning rigor of the study.

Pilot Study

Prior to the current study, I collected data in the form of oral histories for a class project that became a scholarly study of story. My collaborator and I examined the stories told, through oral histories, about becoming researchers by three women who self-identified as researchers and intentionally researched in, or about, Appalachia. These oral histories, or narratives, were rich and unique, yet all three women told stories about opportunity, change, fitting in (or not fitting in), and resistance (McComas & Spatig, 2010). These different kinds of stories represented narrative threads (Clandinin & Connelly, 2000) and the focus of our unpublished manuscript was one of the several narrative threads within these oral histories – the stories of resistance.

These stories of resistance were particularly instructive, given that most institutional structures – including those in which these women were trained and work – operate with masculine discourses (Priola, 2007; Shaw & Cassell, 2007). Through resistance, these women developed and refined their value and belief systems, processes critical to shaping their own identities as researchers. We concluded that curriculum has an impact on how students experience research, especially if that curriculum is experienced as a kind of cultural critique of the disciplinary or research culture. In

particular, students might benefit from learning about different forms of research, different frames through which research might be viewed, different connections between research and their own culture and circumstances, and practical applications for their research. Our study suggested that there was much to be learned from the stories told by women.

Design: Narrative Study

This is a narrative study. Even though the study of narrative as a research process is in its infancy (Stanley, 2008), narrative studies are becoming more commonplace in a variety of disciplines, including anthropology, sociology, psychology, linguistics, and education (Chase, 2005; Yow, 2005). Stanley described a broad range of ideas about, and practices within, the category of narrative studies. One of the approaches to narrative studies Stanley described was narrative inquiry. Like the broader category of narrative studies, narrative inquiry is also in its infancy.

The rationale for using narrative inquiry is grounded in the ideas of John Dewey (1916) who suggested that learners should utilize multiple sources, such as stories, examples, and conversations, to explore the meaning of their experiences. Additionally, he believed that, through these sources, individuals construct meaning from their experiences (Dewey). In other words, by constructing oral histories, people simultaneously construct representations of their experiences.

Chase (2005) described five approaches to narrative inquiry: psychological, anthropological, autoethnographic, sociological with an emphasis on narratives created in specific contexts (e.g., prisons), and a second type of sociological with an emphasis on narratives that focus on particular “aspects of people’s lives” (p. 659). This study falls

into the latter category with the focus on becoming researchers. The sociological forms of narrative inquiry are based on “intensive interviews” (Chase, p. 659), and this study is no exception. This sociological approach to narrative inquiry asks what narratives are about, or the *content* of the narratives, and how they are constructed, or the *process* of constructing the narratives (Chase).

Narrative researchers are interested in “how they [participants in the study] make sense of personal experience in relation to culturally and historically specific discourses” (Chase, 2005, p. 659). Clandinin and Connelly (2000) also described narrative inquiry “as a way of understanding experience ... [as] a collaboration between researcher and participants, over time, in a place or series of places, and in social interaction with” (p. 20).

Narrative inquiry is a method particularly well suited for understanding experiences, such as experiences of becoming researchers (Clandinin & Connelly, 2000). Narrative inquirers assume that what is known about experience is constructed through narrative and story (Clandinin & Connelly). That is, the narratives we acquire are not the lives, or the experiences, of our participants (Adams, 2008). Instead, these narratives must be understood as decontextualized accounts of lives and experiences (Adams). When people story (i.e., tell stories), they simultaneously construct and convey their understanding of their experiences (Black et al., 2010). Consequently, in telling their stories to me, my participants constructed and conveyed their understandings of their experiences of becoming researchers.

Narrative inquiry is a qualitative research design. Inherent in narrative inquiry are the characteristics of most qualitative research. The design of this study was fluid and

emergent. I began with limited theoretical framing, as is often recommended (Chase, 2005; Clandinin & Connelly, 2000; Maxwell, 2005). I correctly anticipated the need for a conceptual framework that included literature on the structures of higher education, the roles and representations of women in higher education and research, identity, and identity development. Subsequently, the data caused me to seek a theoretical perspective that could describe *identity in practice*; the cultural-historical activity theory (CHAT) provided a framework that effectively described identity in practice and was useful in understanding the participants' experiences.

Sampling

The reports from my professional organization have convinced me that a study about how women in my discipline become researchers is not only viable; it is critical. Data collected by the American Speech-Language-Hearing Association (ASHA) provide a demographic view of the discipline, including evidence of the feminized nature of the discipline, and are depicted in Table 1.

Table 1: Demographic Information for Speech-Language Pathologists by Gender, Employment Facility, and Employment Function (ASHA, n.d.)

Category	Choices	Number	%
# SLPs certified (2008)		118,270	
Gender (n=110,951)	Female	106,291	95.8%
Primary Employment Facility: (n=88,228)	College/University	3,176	3.6%
Primary Employment Function: (n=89,150)	College/University Professor	1961	2.2%
	Researcher	357	0.4%
	Doctoral Candidate	178	0.2%

Worth noting for this study is that only 2.8% of SLPs identified an employment function relating to higher education (professor, researcher, doctoral candidate) as compared to 80.6% of SLPs who identified primarily as clinical service providers. What is not available is the number of SLPs who identified “researcher” as a secondary employment function. In addition, I cannot assume that all of those who identified as a researcher are in higher education or vice versa. What I do know, however, is that the numbers are indicative of a population that primarily works outside of higher education and does not self-identify as teachers or researchers. Therefore, the population from which I selected my participants was relatively small. Even so, I had no difficulty finding a sufficient number of participants. Like the whole discipline, members of the population have much at stake and are motivated to contribute to the resolution of the crisis in CSD.

Sampling Strategies

As is customary in qualitative studies, I used purposeful sampling to select the participants in this study (Bogdan & Biklen, 2007; Creswell, 2007; Maxwell, 2005). My goal was to identify women researchers in CSD who:

1. hold a Certificate of Clinical Competence as an SLP;
2. hold research-based doctoral degrees;
3. hold faculty positions in CSD programs that offer master’s degrees, at a minimum, and are accredited by the Council on Academic Accreditation of ASHA;
4. have research responsibilities as a function of their faculty positions; and

5. self-identify as researchers; and
6. are named as researchers by others, such as colleagues, administrators, or peers, as evidenced by previous publications in scholarly, peer-reviewed journals.

Three additional strategies guided participant selection. First, I used convenience sampling to limit the potential participants to those who work within West Virginia or the border states of Kentucky, Ohio, Pennsylvania, or Virginia (Creswell, 2007; Glesne, 2006; Maxwell, 2005). In spite of the low credibility of convenience sampling, I identified four nearby participants who met all of the criteria, which was the goal of sampling (Creswell, 2007; Glesne, 2006; Maxwell, 2005). Because I needed to interview each participant three times, with at least one-week intervals between the three interviews, geographical considerations were necessary.

Once I identified the geographical boundaries, I used the online resources of ASHA to identify CSD programs offering graduate degrees within those five states. From the websites of those programs I compiled a list of candidates who met the criteria listed above. To confirm their recognition as researchers by others, I searched the ASHA journals for evidence of recent publications (2000-2010). From the remaining names, I used maximum variation sampling to compile a list of potential participants (Åkerlind, 2008b; Creswell, 2007; Glesne, 2006; Maxwell, 2005). The specific variations of interest to me included area of expertise, years between completion of master's degree and doctoral education, amount of clinical experience, and type of institution where they worked. Finally, I used the snowball strategy and asked two colleagues (who are

researchers) to recommend four names (Bogdan & Biklen, 2007; Creswell, 2007; Glesne, 2006).

Participants

Chapters 4-7 provide in-depth introductions to the four participants, so I only offer a brief introduction here. The participants—Anna, Corinne, Claire, and Sharon¹—are all white women who are native English speakers. Anna, Corinne, and Claire have no children; Sharon has two young children. All were educated in the United States.

Sharon's selection for, and inclusion in, the study requires some explanation. In terms of inclusion criteria for the study, Sharon meets the following criteria: she holds a Certificate of Clinical Competence as a Speech-Language Pathologist (SLP), has a research-based doctoral degree, has research responsibilities in her faculty position, self-identifies as a researcher, and is recognized as a researcher by others as evidenced by colleague recommendations and a substantial publication record. The one criterion Sharon does not meet is in regard to her faculty appointment. Sharon holds a faculty appointment in a College of Education, with an emphasis on teaching and learning, and an adjunct appointment in a CSD program. Her previous (and first) appointment was in a CSD program.

Sharon made it on the list of possible participants because she was listed on the faculty webpage of the CSD program at her institution. Two different individuals, both doctoral-level faculty members in CSD, strongly suggested I speak with Sharon, who was the only participant who was recommended by both of my colleagues. They described

¹ These names, and indeed any other proper names that appear in the text of the dissertation, are pseudonyms.

her as a young and prolific researcher and their confident recommendations suggested that they identified her as a member of the CSD culture.

This deviation from the inclusion criteria opens the door for Sharon's unique perspective on the problem; she has been both insider and outsider. How Sharon identifies herself may be more important than in what department she has a faculty appointment. Sharon is an SLP and applied researcher who has received grants and awards from numerous agencies (e.g., National Institute of Health), including the American Speech-Language-Hearing Association. During our interviews, she said, "When I got my Ph.D. in speech and hearing science that was really my home, and it's my first identity."

Data Collection

The primary sources of data in this study are the participants' narratives, which Chase (2005) described as the oral accounts generated through interviews, about "a significant aspect of one's life such as schooling [or] work." (p. 652). These narratives are variously referred to as life histories, life stories, personal narratives, and oral histories (Chase). These terms are often used interchangeably, and, although my tendency has been to use the term oral history, where I have used any of these terms in my own words, I have used them synonymously.

Oral Histories and Identity

Researchers of oral histories and identity construction "are as interested in the *how*s of storytelling as they are in the *what*s of storytelling" (Chase, p. 658) and there is substantial evidence supporting the use of oral histories to inquire into the process of becoming researchers. Clandinin and Connelly (2000) reported that the most common interview format in narrative inquiry is the oral history. Chase (2005) and others (Bruce,

2008; Nelson, 2008) have considered narratives, such as oral histories, to be central to the process of identity development.

Connerton (1989) and others (Priola, 2007; Samble, 2008) have noted that the histories of members of subordinate groups, like women, tend to take different paths to identity development than do the histories of members of dominant groups. Connerton explained:

Oral histories seek to give voice to what would otherwise remain voiceless even if not traceless, by reconstituting the life histories of individuals ... But what is lacking in the life histories of those who belong to subordinate groups is precisely those terms of reference that conduce to and reinforce this sense of a linear trajectory, a sequential narrative shape. ... The oral history of subordinate groups will produce another type of history: one in which not only will most of the details be different, but in which the very construction of meaningful shapes will obey a different principle...For it is essential in perceiving the existence of a culture of subordinate groups to see that this is a culture in which the life histories of its members have a different rhythm and that this rhythm is not patterned by the individual's intervention in the working of the dominant institutions. (p. 19)

Therefore, oral histories give voice to women and reveal the unique rhythms, or paths, that resonate within, but do not replicate, the dominant masculine rhythms of institutions of higher education (Priola, 2007). More so than other interview formats, oral histories enable us to hear these feminine rhythms and trace these feminine paths.

Eliciting Oral Histories

Chase (2005) claimed that how researchers think of the participants in a study would impact the data collection process. One perspective is that participants are information providers; they answer questions asked by researchers (Chase). Another perspective is that participants are narrators “with stories to tell and voices of their own” (Chase, p. 660). When researchers conceive of participants as information sources, they collect the stories the participants “*happen to tell*” (Chase, p. 661) in the course of an interview. Viewing participants as narrators, on the other hand, compels researchers “to work at *inviting stories*” (Chase, p. 661).

I used Seidman’s (2006) model of the three-part interview to elicit oral histories from the participants. In general, I asked them to tell me stories about experiences that contributed to the process of developing research identities. In addition, I specifically inquired about the motivating, enabling, and constraining influences on that process. Furthermore, I asked about the contributions of schooling to developing a research identity. The interviews with Anna, Corinne, and Claire were completed in person – I met with each of them in their departmental spaces (e.g., faculty office, departmental conference room). The interviews with Sharon were conducted over the phone, at her request. Even after I insisted that I was well prepared to travel to her and, in fact, would enjoy doing so, she insisted that we interview by phone.

Seidman (2006) refers to the first interview as the focused life history. The aim of this first interview was to gain insight into which life experiences the participants connected to their becoming researchers. These first interviews typically included stories from early childhood through doctoral education. The second interview focused on being a researcher. O'Connor (2007) claimed that researchers' identities are evidenced in how they experience research, so I attempted to elicit stories and explanations about specific research experiences. For example, I asked the participants about their relationships with colleagues and collaborators. The third interview built on the first two as I asked participants to reflect on the meaning of their experiences (Seidman). In addition, I asked each participant to respond to the four research questions. In the pilot study previously discussed, I found that the act of participating in these interviews caused participants to later recall additional stories. Consequently, at the beginning of the second and third interviews, I also asked participants if they had recalled anything they wanted to add to the previous interview.

The interviews ranged from 45 minutes to 1 hour and 32 minutes. Anna's interviews totaled 4 hours and 7 minutes; Corinne's interviews totaled 3 hours and 13 minutes; Claire's interviews totaled 4 hours and 34 minutes; and, Sharon's interviews totaled 2 hours and 45 minutes. All of the interviews together totaled 14 hours and 39 minutes. All of the interviews (in-person and by phone) were recorded on an Olympus LS11 digital recorder and transcribed verbatim. Copies of transcripts were sent to the participants after each interview and before the next interview. When I asked participants if they had reviewed the previous transcript, the replies were always negative.

Data Analysis and Interpretation

My discussion of data analysis and interpretation in this chapter will falsely imply a linear, unidirectional process. Instead, the relationship between data analysis and interpretation is recursive, each informing the other. I used an inductive process to analyze my data, which included the following: participant narratives, in the form of audio recordings and interview transcripts; informal conversations with participants via email and phone (e.g., communications to schedule or re-schedule interviews); research memos; and, participant publication records, from their CVs and article databases. Throughout the data collection period (November 2009 through March 2010), I read each transcript, made notes of broad observations and follow-up questions, and periodically wrote research memos.

Chase (2005) claimed, “The stories people tell *constitute* the empirical material that interviewers need if they are to understand how people create meaning out of the events of their lives” (p. 660). Consequently, story is both the method and the object of narrative inquiry (Clandinin & Connelly, 2000). Inherent in narrative inquiry is the notion that studying experience(s) is a phenomenological process and hermeneutic process whereby experiences are described as they are re-storied by the researcher and are interpreted through relevant theoretical and conceptual frameworks (Merriam, 2009).

The goal of data analysis in narrative inquiry is to ascribe meaning to the experiences storied by participants. My analysis began with an identification of stories within the narratives, a beginning recommended by Chase (2005) and Clandinin and Connelly (2000). Then I followed Clandinin and Connelly’s suggestion to re-write the narratives in chronological order. This I did by selecting representative stories, from

various periods of the participants' lives, with the potential to contribute to my attempts to create descriptions of how they became researchers, how they understand research and being researchers, and how they understand identity and identity development. This produced the within-case analysis for each participant. These can be found in chapters 4-7.

I then completed additional coding by identifying motivating, enabling, and constraining influences, and the role of schooling, on the development of the participants' research identities. These codes informed the across-case analyses. Finally, I searched for narrative threads, or themes, across cases.

In addition to these analytic strategies common to qualitative studies, I also analyzed the data utilizing numerical, not statistical, representations of the evidence. Such a strategy is not completely foreign to qualitative research. Indeed, such words as *more*, *less*, and *many* suggest a numerical perspective. Still, I pursued and included this line of analysis with hesitation, bearing in mind the potential dangers, as identified by Maxwell (2010), of using a numerical representation of these data. Specifically, Maxwell identified four potential dangers: (a) the potential for numbers to imply a generalizability of the data that does not exist, (b) an invitation to impose "variance ways of thinking" (p. 480) on the analysis, (c) an unwarranted emphasis on the amount of data, and (d) a use of numbers to increase the appearance of rigor.

With these dangers in mind, I considered the potential benefits to the study. First, the use of numbers can strengthen the internal validity of the study (Maxwell, 2010). For example, reporting something that was said by "three women" means something different than reporting what "one woman" said. Second, the use of numbers

can help identify differences or diversity in the data (Maxwell). I demonstrate this advantage in chapters 8 and 9 when I identify the various kinds of influences the participants experienced (e.g., four kinds of influence as opposed to one kind of influence). Third, using numbers can facilitate the researcher in the identification of particular patterns embedded within the data that may not be evident by examining the raw data alone (Maxwell). Indeed, my examination of the enabling and constraining influences on the development of the participants' research identities revealed distinct differences with regard to the emerging identities in doctoral education and their post-doctoral career identities – a revelation that might have remained hidden had I not examined the data numerically. Finally, numerical analysis provides a way to support interpretations and claims (Maxwell). My analysis of the effect of constraining influences on the participants' evolving identities benefitted from the use of a numerical representation of the narrative data. Specifically, I observed that three women reported more constraining than enabling factors in their careers and one participant reported more enabling influences in her career. Specifying the number of women, instead of using a descriptor like *some*, is more precise and provides stronger support for my interpretations and recommendations.

Validity and Reliability

Internal Validity

The concept of internal validity relates to the credibility of the findings of a study (Merriam, 2009). Greater internal validity implies greater credibility. Maxwell (2005) offered the perspective that validity is a goal of all research, not an outcome. In other words, validity is a means to an end – the end being a credible research report. In this study, I employed several strategies to increase the internal validity of the study.

First, I employed the strategy of triangulating the data. I used two forms of triangulation: multiple methods and multiple sources of data (Creswell, 2007; Merriam, 2009). Merriam described the strategy of multiple methods as one in which data collected from interviews are checked against another source of information. For example, in the interviews I collected, the participants all spoke about their publication records, which I confirmed by searching article databases. In the case of Sharon, who claimed to have published a book during her doctoral program, I only had to look at my own bookshelves (I had previously used her book as a text for a class I periodically teach) to confirm her claim.

The practice of using multiple sources of data was also a useful strategy to increase the internal validity of this study (Creswell, 2007; Merriam, 2009). The use of Seidman's (2006) three-interview protocol ensured at least three sources from each participant. The interviews with each participant were scheduled at least one week apart, with some up to four weeks apart. Numerous times, for all four participants, they provided – or at least referenced – the same information in more than one interview. For instance, Claire described a scholarly activity from her time in high school in at least two interviews.

Second, I used member checks to verify the internal validity of the study (Creswell, 2007; Glesne, 2006; Merriam, 2009). I sent Anna and Claire the chapters that introduced them (chapters 4 and 7 respectively) and asked for their feedback. Anna responded two days after receiving her chapter: “I think you’ve accurately represented my story and have told it in a clear, effective, yet beautiful, way.” Claire has not yet responded, although in fairness to her I should note that I contacted her in the middle of

summer break. Anna had a second opportunity to provide a member check when a peer reviewer of this developing document offered a differing interpretation about Anna's experience during her qualifying examination (see chapter 4, *Dig Your Heels in and Fight*). My interpretation was that Anna's committee member behaved as he did to teach her about intellectual humility. My peer reviewer thought the real story was about gendered power relationships. In a conversation with Anna, I explained to her the two different views on her experience. Anna indicated that she had not used the words "intellectual humility" but thought the phrase accurately captured her understanding of the experience. In addition, she emphatically denied the gender and power theory, indicating that of the males on her committee, this particular person was the least likely to exert power.

Third, and as noted above in the description of member checks, I also employed the strategy of peer review (Glesne, 2006; Merriam, 2009). In addition to periodic reviews of the interview transcripts and the developing document by my dissertation advisor, I also took advantage of benevolent colleagues² who were willing to listen to me discuss the developing study and who read various parts of the document along the way. The feedback from these reviews helped challenge my assumptions, thinking, and interpretations.

Fourth, I employed the strategy of reflexivity, or what is sometimes referred to as researcher's position (Merriam, 2009) to increase the internal validity of the study (Bogdan & Biklen, 2007; Creswell, 2007, Glesne, 2006). Reflexivity is the process by which researchers identify their "biases, dispositions, and assumptions" (Merriam, p.

² Among those colleagues was my daughter, a Speech-Language Pathologist who – by the time this dissertation is published – will have left clinical practice and begun a Ph.D. program.

219) regarding the study and the outcomes of my reflexive processes are visible in two ways. First, in the research text I have, at times, included statements concerning my assumptions. One instance of this is in chapter 9 (“Career Influences on Identity Development”) where I describe what I had expected to find (and did not) concerning the enabling and constraining factors. Additionally, I wrote about my expectations regarding gender-related findings in chapter 10. Second, I employed the use of research memos as a way to reflect back on my thinking concerning the study (Bogdan & Biklen, 2007; Creswell, 2007; Glesne, 2006). On June 11, 2010, I questioned the influence of my own experiences on my understanding of Sharon’s experiences:

So, what do the stories from Sharon suggest? First, is the relative lack of stories – “very few memories” – “not any positive memories.” What does it mean that she doesn’t have many memories? I am like that as well and think there is something either about me (non-observant?) that brings that about or something about my life (trauma?) that has brought that about.

The previous passage alerted me to my preoccupation with the psychological elements of the stories people tell and reminded me that my purpose was to explore the social and cultural aspects of the participants’ experiences. On June 15, 2010, I explored using the concept of self, as opposed to identity, to understand the processes of identity development:

Looking at self lets me highlight adaptation (learning) by looking at the enduring self and situated selves. We can

view the strategies they use – Anna a strategy of accumulation [of selves]; Corinne a strategy of aggregation [of selves]; Claire creates opportunities to – hmmm – not sure I know what to do with that.

Ultimately, I abandoned the idea of using the concept of self and returned to focusing on the concept of identity. Finally, I wrote about my expectations on June 21, 2010:

What themes am I expecting? First, I am expecting to be surprised. But I suspect I may end up dealing with gender, research-practice gap, institutional/disciplinary constraints. Those themes all seem related to constraining factors. Are there themes relating to enabling (empowering?) factors? Imagination and creativity, self-motivated, persistence, mentors?

Reliability

Technically, the concept of reliability refers to the extent to which a study might yield the same results if it were replicated (Merriam, 2009). Studies like this one, that is, studies that are qualitative in nature and based on narratives, are not meant to be replicable. Some qualitative researchers have focused not on the replicability of results but rather on the consistency of results (Merriam). Qualitative researchers often use strategies, such as triangulation, peer examination, researcher reflexivity, and audit trail, to ensure consistency in a study. The first three of these were discussed in the previous section about internal validity. The audit trail, a record of how a researcher arrived at the conclusions in a study, can take on many forms. Two forms that detail the path I have taken include the detailed description of the methods included at the beginning of this

chapter and my research memos, which represent my “interaction with the data” (Merriam, p. 223).

External Validity

A final concept relating to the quality or rigor of a qualitative study is external validity. Merriam (2009) makes the point that many understandings of external validity in the context of qualitative research are found in the literature. The important distinction to remember is that how external validity is understood is dependent upon the context – in this case, that context is a qualitative study.

Lawrence-Lightfoot (2005), in writing about the value of portraiture as a research method, claimed that in the particular lies the general. This perspective is supportive of claims that external validity in qualitative research is better understood as how much and how well the findings from a small number of participants in one study transfer to other people and situations (Merriam, 2009). As with internal validity and reliability, there are strategies that will help increase the transferability – or external validity – of qualitative studies. One of those strategies is the use of descriptive and detailed representations of the participants (in an interview study) with liberal use of quotations so that readers can determine to what extent the findings are transferable to their contexts (Merriam). The inclusion of individual chapters that explore their experiences up through doctoral education for each of the participants and a separate chapter focusing on their experiences in their post-doctoral careers, although increasing the length of this research text, allows for extensive description, detail, and quotes.

A second strategy for increasing the external validity, or transferability, of qualitative studies is the use of maximum variation sampling (Åkerlind, 2008b; Creswell,

2007; Glesne, 2006; Maxwell, 2005). I discussed the sampling strategies in detail earlier in this chapter.

CHAPTER FOUR: ANNA

In this and the next three chapters I introduce the four participants in this study, Anna, Corinne, Claire, and Sharon, and offer a within-case analysis for each. I have two aims in these participant introductions. First, I trace the participants' paths to becoming researchers in a chronological manner, beginning with early childhood and ending with doctoral education. I stop short of describing and analyzing their experiences in post-doctoral positions in academia, which are the focus of chapter 9. Second, I describe the participants' expressed and implied understandings of identity and research.

The focus of this chapter is on Anna's experiences becoming a researcher. Of the four participants, she is the newest Ph.D. When I interviewed her, Anna was in the second year of her post-doctoral academic career.

Anna has a unique history in her department. She received both her undergraduate and graduate degrees from the program, supervised graduate students completing clinical rotations at the hospital where she was employed as a Speech-Language Pathologist (SLP), taught part-time while still employed at the hospital, and then, after 10 years of clinical practice, accepted a full-time, tenure-track position as Assistant Professor at her alma mater. A few years later she took a leave of absence to complete a doctoral program; when she returned to her former position, she did so at the rank of Associate Professor.

Anna: Now

Anna, a tenured Associate Professor, is a full-time faculty member in a CSD department at a large four-year institution that offers a number of graduate programs, with an enrollment of nearly 14,000 students (Carnegie Foundation, 2010). The CSD program offers both undergraduate, or pre-professional, and graduate, or professional,

degrees. The graduate degree is required as a minimum level of education for national certification.

Early Childhood: Surgeon

Anna was born in a clinic in a small community in rural Appalachia during the late 1960s. She was the second of two daughters born to an administrator in the local school district and a stay-at-home mother. Anna's elder sister and only sibling, Dona, was four years old when Anna was born. During her early childhood and years in elementary school, the primary influences on Anna's developing identity were her parents and her older sister, Dona.

During her preschool years, Anna was at home with her mother while her father worked and her older sister attended school. Anna described their mother-daughter relationship as "perfect." Anna liked to dress like her mother and they frequently stood at the front window together, watching the road for signs of her father and Dona at the end of the day. Anna strongly identified with her mother with regard to certain aspects of her life. "I think the things I enjoy doing in my spare time come from my mom. I love baking and taking care of people and entertaining, things like that." On the other hand, Anna also confided that she "was drawn to be like my dad ... whenever I'm in work mode or when I'm anywhere interacting with people ... I think my dad comes through pretty strongly."

At a very young age, Anna was aware of three factors that contributed to the development of her early identity: family history and reputation, respect for her father and his position in the community, and a rivalry with her older sister. Anna explained:

Way back in preschool or early elementary, ...because my
dad was an educator in the school system, most people ...

knew me as his daughter. ...My sister was also very, very bright. So I remember, even from the day I first stepped in school, expectations. Not that my dad put them on me ... but there was a reputation that my family had, and so I think that ... I had high expectations for myself because I didn't want to disappoint my dad in front of his colleagues. And I wanted to live up to my sister. So, I can remember having that in the back of my mind, even at a very early age, knowing that everyone around there knew who I was and having that history, that [family] history, behind me.

Anna's awareness of these factors, which were powerful influences on her developing identity, persisted throughout her life.

“I Was Doing Brain Surgery”

When asked about elementary school, Anna recalled an impoverished school district with limited flows of new ideas or people into the school district. She described her elementary science education as “reading the textbook and answering questions about it. I remember at that time, though, I did a lot of operating.” Anna's “operating” involved performing surgeries on dolls, a story that has remained a family joke. Anna elaborated:

I operated on all of the baby dolls, mine and my sister's. So any baby doll you find in the attic today, you'll find has had brain surgery or [an] amputation of some sort. So I think my biology and anatomy interests go way back. ...I

would take a knife and truly cut their heads open and pretend I was doing brain surgery or whatever.

Secondary Education: “Goody Two-Shoes”

Many of the decisions Anna made about her life while she was in middle school and high school were influenced by her desire to uphold the family reputation, make her father proud of her, and live up to her sister’s reputation. These influences were especially strong during Anna’s secondary education:

I think knowing that my dad was a man of integrity, and everyone looked up to him and my mom the same; I just didn’t want to hurt them and I didn’t want to leave that question mark on our family name...I think probably in my teenage years [that knowledge] helped me to keep away from a lot of things that friends were getting into.

Anna said that in high school she was defined by her classmates as a “goody two-shoes,” a role that she believes she performed. A member of her family, she told me, was “the quiet serious type...that really took things to heart and ... worked her hardest at everything.”

Taking things to heart and working hard were two habits that helped Anna as she tried to live up to her sister’s successes and achievements. Even though Anna described herself as “cautious” and someone who liked “safety and security,” she actively tried to live up to the standards of performance set by her sister. The annual Science Fair competitions held across the state offered one venue for Anna to compete with her sister, Dona, who was highly successful at these events. According to Anna, her sister won multiple awards, competed in the international science fair, and won a number of trips.

I Am Not My Sister

Anna's sister, Dona, had a telescope with a camera on it, so naturally her science fair projects involved her work with the telescope. Anna wanted to carve out her own niche in the field of science. When she was in middle school, she asked for, and her parents bought, a Johnson Empire microscope. She attached a camera to the microscope and took pictures of slides she had made with ordinary household substances on them. "I always wanted to be the opposite of her [Dona]," Anna commented. "[Because] she took big pictures of things from a telescope ... I ... asked for a microscope."

Anna's first science fair project with her microscope was titled *Photomicrography: Taking Pictures through a Microscope*. Anna took pictures of things she made and displayed those pictures with descriptions. This project received low scores from the judges, however, because she had no hypothesis or scientific investigation.

Following that experience, Anna improved her project the next year by using her microscope and camera to test the abrasiveness of various household substances. What was most revealing about her science fair project, however, was her realization that those middle school experiments were almost identical to the experiments she conducted 28 years later for her dissertation:

I went last summer to my parents' house and was cleaning out the closet in my bedroom, and I found my [old science fair] project ... and I found a book by Croy called *Photomicrography*. I flipped it [the book] open and some of the pictures looked like my dissertation. I started running

through the house and said, “I did this in seventh and eighth grade!”

I never thought in seventh and eighth grade that my dissertation would be done exactly like that was, [It involved] hooking that camera to the microscope. ...A lot of the microscopes have got the camera built into them, ...but when it came to studying the mouse laryngeal anatomy, we ... had to bring in a regular camera, and rig it up [and] had to rig up lighting. ...I can remember running through the house saying, “Look at this! This is what I did my dissertation on! You all really did a good job by investing in my eighth grade science fair project!”

“We’ve Got a Little Thing Around Here Called PRIDE”

In addition to her science fair work, Anna spoke at length about Mr. Hugar, her high school band director, whose positive influence on her was broad and deep:

He was so hard on us, and yet we loved him more than anyone else. We would go in [to band] on certain days and he would be so mad at us. He’d be tapping his little stand with his [baton] and would go, “We’ve got this something around here called pride, and it’s spelled P-R-I-D-E, Pride.” And ... whenever we messed up he’d say, “You have destroyed your school’s pride.”

Or we’d go in other days and he’d say, “We’ve got something around here called Respect,” and he’d spell it

out for us and then we'd get the respect lecture. Some days we wouldn't pick up our instruments. He'd say, "Just leave them there," and we'd sit the whole time and just talk about life, and pride, and respect.

Anna explained that the love the students had for Mr. Hugar came from his history as a musician; he didn't just teach music, he was a musician:

He had played with Count Basie, Fats Domino, and all of that crew. He was always the man to get called up. So whenever Count Basie had somebody out, he'd call Hugar because he could play anything. He could play trombone, trumpet ... he was just skilled in any of it.

One more thing stood out with regard to Mr. Hugar's influence. He helped students like Anna develop their identities by *naming* them. In Anna's case, Mr. Hugar labeled her as an oboe player (her first instrument was clarinet), prompting her to go home and teach herself how to play that instrument.

Unfortunately, not all of Anna's teachers had the same positive impact on her as did Mr. Hugar. Anna noted that her small high school had limited equipment for use in any science courses and that Chemistry lectures were mostly about football. Anna had a similarly unsatisfying experience with Physics:

And then I wanted to take Physics, because I knew it would look good on my college application, but nobody else wanted to take it because it was from the same guy [who taught chemistry], so I took it by myself. I was the only one

in the class. And so, when it's that kind of situation, he talked about football all the more. And it just wasn't a real rigorous ... science background that I had. I was interested in science. I loved it, but I didn't really have a school that supported it.

Undergraduate and Graduate Education: Bookworm

Anna was keenly aware that the transition from high school to college meant that a big fish in a little pond was going to become a small fish in a big pond, and she worried about how she might measure up against others. Uncertain about what major to choose, Anna knew she wanted to “work with people who are sick” and briefly considered majoring in occupational or physical therapy. Because she believed she had a poor science background, she ultimately rejected these possibilities.

Once Anna had settled on which institution to attend, one she chose because she felt comfortable there when she visited during her senior year in high school, Anna studied the course catalog. There she found speech pathology and made arrangements to meet with a faculty member to discuss the major. Serendipitously, Anna met with the one faculty member who had an extensive background in anatomy and physiology. Indeed, he taught the anatomy course within the program and he remained her advisor and mentor until she completed her master's degree. I asked Anna if she had considered completing the thesis option during graduate school. She laughed and said, “I remember thinking, ‘I'm not going to do that!’” Nevertheless, Anna's classmates, in both the undergraduate and graduate programs, considered her to be a “bookworm” and rarely included her in their social activities.

“I Remember ... Hating That Course”

With regard to research, Anna remarked that the research course in her graduate program was one of the “lighter” courses in a mostly demanding and rigorous program. Her most significant experience with research came from a course about fluency disorders taught by her advisor and mentor:

It [fluency disorders course] was taught as a true seminar. He did not do lecture; it was totally student led. There were only four of us in the class, and he made up his mind at the beginning of the semester that we were going to read all of the literature from ... four journals, ...every article since 1970. ...At the time, it was about 20-some years worth of reading. ...All we did was read and discuss, read and discuss. I remember really hating that course, but ... I retained more information from that course than any other course I took.

At that time, Anna entertained thoughts about a future that included an academic position in higher education. She had noticed and admired the stacks of journals on the shelves in faculty offices and understood at some level that there was a relationship between her future desires and those journals:

I think I looked at it [reading journals] as something that scholarly people did. You know that’s why I wanted to read them because I thought that—you know deep in my mind I kind of always knew I wanted to end up on a college campus, and I thought that reading those journals was one

part of that persona that I wanted to have that would make me look more scholarly or think that way.

Interim: SLP and Teacher

Anna recalled her clinical practice in a local hospital as the place and time when she began to ask questions about clinical practice. “I would love to study that,” she often said to her colleague:

I ... remember a lady coming in [and] her only deficit after focal stroke was a mild dysfluency and then her stroke extended slightly. When it extended, she had full-blown verbal apraxia. And so, in my mind, I was thinking, “There has got to be some connection between stuttering ... and apraxia.” To me, that was neurological evidence ... so I can remember watching for that pattern whenever working with dysfluent patients.

While Anna was employed at the hospital, she also taught classes part-time at her alma mater. Concerns about her own skills in, and credentials for, teaching emerged then and continued even after she later accepted a full-time faculty position. While employed at the hospital, Anna and a colleague, Joe, from Physical Therapy presented a workshop together, an experience that made her question her own credentials even more. As she recounted the experience to me, she reminded me that even though Physical Therapists are typically paid more than any other kind of rehabilitation therapist, at that time they were only required to have a bachelor’s degree to practice.

“If I Teach Again, I Want to Teach Differently”

Anna and Joe traveled together to present a workshop at a nearby institution with an Occupational and Physical Therapy program. After Anna presented her part of the workshop, she sat down—satisfied with her performance:

I remember taking my seat back in the audience and hearing Joe, with his bachelor’s [degree] speak. [He was] reeling off research and talking like a person would at ASHA [American Speech-Language-Hearing Association]; like people that I would look up to at ASHA. That a guy that I worked [with] - with his bachelor’s degree - was so fluent in research ... I remember thinking, “I’m not there. I have none of that. I can’t do that.” I long to be able to do that sort of thing. To be able to base what I do on the research and just realizing that most of what I did [clinical interventions] was passed down to me clinically and not from any other means. I remember thinking, “I want to be conversant like Joe. If I teach again, I want to teach differently. I want to teach like Joe is teaching them; grounded in research.”

Doctoral Education: Fighter

Following 10 years of clinical practice, that included part-time teaching, and three years in a faculty position, Anna enrolled in a doctoral program. She completed her doctoral education more recently than any of the other participants. Overall, she described the individual projects with mentors as valuable and the coursework as “least

beneficial” for developing her research identity, with one exception. Anna found her statistics courses to be extremely valuable because they taught “discipline of thought and ... a whole new way of thinking.” Anna credited her statistics courses for helping her “think of myself as a researcher.”

“Dig Your Heels In and Fight”

Anna described her doctoral experience at length, paying particular attention to what she experienced, and learned from, her qualifying examination. That is, she not only learned how to *do* research but she also learned how to *be* a researcher.

[One committee member] came in with everything I had written and post-it notes everywhere, ...said “I had just a few questions” and slammed it on the desk and ... sat right next to me. I remember everyone else was relatively quiet. But there was a period of about 20-30 minutes where [he] just kept grilling, grilling, and grilling about mitochondria. I still remember what it [the question] was, and finally I said “I don’t know. I don’t know.” He said, “I’m done.”

[L]ater they told me [that] he said “I was going to stay in that room as long as it took you [Anna] to say ‘I don’t know’ ... because ... a sign of a true researcher is when they will say they don’t know ... as soon as you said it you were done, but I had to see you dig your heels in and fight. I had to see you fight at my level, and then I had to see you say when you couldn’t fight anymore. Because,” he said, “that’s a person who’s a true academician.”

“Just ... Get the Degree”

Anna talked with me about how she understood research and herself as a researcher. “When I started [my doctoral program],” she told me, “I was not a fan of research. It was going to be something I did just to get the degree.” Throughout her doctoral education, however, her understanding of research changed:

I was going to go through the research just to get the degree. ...I didn't really intend to pursue research when I finished. ...I didn't see it really as a transformational type of thing, but it really is. ...When I was initially doing research during my doctoral work, research meant lab and writing ... a real intensity and a precision and study and analysis. Now, I think of research ... more as a way of teaching, and that lab ... may come into it, but I think of it now more as a mechanism for teaching or as a way of creatively teaching.

Understanding Identity: “You Dance?”

In chapter 2, I discussed various ways that identity has been conceptualized, studied, and portrayed in the literature: as practice, as learning, as cogenerative mentoring, and as cultural participation. These various conceptions are not mutually exclusive. For example, all of them presume that identity development entails learning. The variety of conceptualizations does suggest, however, that there are different perspectives from which to understand identity and identity development, and by extension, to understand learning.

Anna's narrative suggested that she conceives of identity and identity development primarily as a function of cultural participation. In her narrative, Anna demonstrated an awareness of cultural forms throughout her life. For instance, as a young child she sometimes dressed like her mother and even now associates the practices of her mother – baking, taking care of people, and entertaining – with a culture of women in the home.

In college, Anna was aware of a student culture that she did not participate in. Her classmates, Anna reported, saw her as a bookworm and did not get to know her:

And I can remember wanting to rebel against that [bookworm label]. I wanted them [her classmates] to know that I wasn't just about all of that [studying]; that I did have other interests and I had fun and I would do things that they didn't anticipate me doing. ... And I remember when people would really get to know me in college they would be surprised, and they would be like "You're not shy. You're not serious all the time. Or, you've got a sense of humor. ... You dance and you love to?" And I remember wanting so badly to have people to know that about me; that I was a fun person, and I wasn't serious all of the time.

Anna's awareness of the journals stacked in her professors' offices was another indication of her awareness of cultural forms—that journals were an artifact associated with a particular culture. Finally, Anna's experiences in her doctoral program provided

the strongest support for the idea that she primarily conceives of identity as a function of cultural participation.

Guldberg and Mackness (2009), as I previously discussed in chapter 2, claimed that cultural participation has “a profound effect on individual learners’ identities” (p. 536). The progression of Anna’s participation in the research culture of her doctoral program illustrates their assertion. Anna remarked that in terms of developing a research identity her part-time enrollment constrained her participation in the research culture of her program. Her change to full-time enrollment allowed her to be immersed in that research culture. From full-time student, she went on to participate in a research laboratory group and began to mentor other students. As her level of participation increased, so did her research identity.

Understanding Research: Down the Rabbit Hole

Åkerlind (2008a), in her review of literature about how academics understand research, found that the key dimensions of research were the intentions of the researcher, the questions or topic under investigation, the processes of research, and the outcomes of the research. Åkerlind contended that individual researchers hold different views on these four dimensions. By characterizing these views, she created a typology that suggests the various ways researchers understand research.

I propose that another view of these dimensions of research might also be useful. Specifically, I maintain that individuals primarily understand research through one of those four dimensions. In other words, individuals might primarily understand research as intentions, questions, processes, or outcomes.

Anna, therefore, could be described as primarily understanding research from a process perspective. Her experiences with the processes of research began early. In her

science fair work she learned that part of the research process involved developing a hypothesis. She also understood that scientific processes were important to learning, as evidenced by her concerns about her own science background and lack of laboratory experiences to support her interest in science. As she pursued her doctoral degree, Anna described research by referring to particular steps in the process (e.g., laboratory work, writing) and said that research was “following this teeny tiny little rabbit that may lead us nowhere.” In her own words, Anna described research as a “way of asking questions, a new way of thinking about things. Maybe never getting to a solution, but just thinking and discussing.” More recently, Anna has begun to think of research as a “creative process,” a revelation that reinforces her focus on research as process.

In this chapter, I introduced Anna and from her narrative I teased out her expressed and implied understandings of identity and research. Anna understands identity and identity development to occur through participation in various cultural communities. She understands research primarily in the context of process. I will return to Anna in chapter 8 when I explore what factors motivated her to pursue a research identity, what factors facilitated that pursuit, and what factors constrained that pursuit. Then, in chapter 9, I examine Anna’s experiences in her post-doctoral academic career and identify the enabling and constraining factors associated with the ongoing development of her research identity in her career.

CHAPTER FIVE: CORINNE

In the previous chapter, I introduced Anna by describing her experiences, understanding of identity, and understanding of research. In this chapter, I introduce the second of the four participants – Corinne. I explore Corinne’s stories from her early childhood, adolescence, undergraduate education, and graduate education. That part of the process of becoming a researcher was similar to Anna’s. Like Anna, Corinne went to work after receiving her master’s degree, first employed as a Speech-Language Pathologist (SLP) and then as the owner of a private clinical practice. During that time she also taught as an adjunct for two different universities. After over 20 years in private practice, Corinne enrolled in a doctoral program to complete a degree in a related field. Of the four participants, Corinne is the second newest Ph.D. (second to Anna). When I interviewed her, she was in the ninth year of her post-doctoral academic career.

Corinne: Now

Corinne, a tenured Associate Professor, is a full-time faculty member in a CSD department at an institution with the following Carnegie descriptors: large (26,000 students), four-year, public institution with a high graduate coexistence, comprehensive doctoral offerings, and very high research activity (Carnegie Foundation, 2010). The CSD program offers both undergraduate, or pre-professional, and graduate, or professional, degrees. While the CSD department does not offer a doctoral degree, it does participate in a related doctoral program that serves many disciplines (e.g., speech pathology, occupational therapy, athletic training, etc.).

Early Childhood: Civil Rights

Corinne was born in Montgomery, Alabama, and spent her early years there at the height of the Civil Rights movement. She is the third child of her father, who worked in

the family business, and mother, who Corinne described as a “traditional housewife.” Her parents both completed high school but neither attended college. Corinne has two older brothers, whom she described as her “protectors.”

Corinne described her early childhood as “family-oriented.” She lived with her family in a predominantly Jewish neighborhood where they left their doors open and kids stayed out at night “playing tag and hide-n-seek and having a great time.” As a child, Corinne loved to read—especially biographies—and she recalled “taking oral histories of ... my aunts ... [and] finding out about my great-grandparents.” Corinne was a Brownie Scout, took ballet lessons, and studied piano.

“I Was the Only Jewish Kid”

When she was in elementary school, Corinne recalled being aware of the Civil Rights movement, saying, “Being Jewish, I was also a minority. I ... was one of only two Jewish students in the whole school, so I had a lot of empathy, and I could relate to that [movement].” She also spoke of two teachers in elementary school who were influential in her development. She recalled one of those teachers, Ms. Wray, fondly:

Ms. Wray was my fourth grade teacher ... I had a rough time up to that point because I was the only Jewish kid [in my class]. My first grade teacher was very prejudiced and very mean to me [and] so [were] my second and third grade teachers. I was always getting hit or slapped around; you know, that kind of stuff. [Ms. Wray] was kind and supportive and encouraging.

After describing her early childhood, Corinne interrupted my line of questioning to establish a context she thought was crucial for understanding her history:

I think culturally it's important to ... stop [moving to the next question] and say that from a cultural standpoint, I was brought up to believe my role was going to be exactly like my mother's. I was supposed to get married and have children. Working and achieving what I've achieved was never my parents' wish, and I would have to say that they have always harbored some disappointment that I don't have what they consider to be typical. So that was something I had to [fight], and that I still fight. ... My father used to worry. He used to say if I was too smart I wouldn't be able to get a guy. ... It was all about dating and getting married.

Corinne's parents frequently expressed their expectations about her role in society. Corinne has heard these overt messages, and fought them, her entire life.

Secondary Education: "Goody Two-Shoes"

Corinne's move to middle school and high school heralded a change in her experience with schooling. She described this period as important and largely positive, although there were tumultuous times.

"Ninth Grade Was a Turning Point"

Overall, Corinne described ninth grade as a "turning point" in her life. In school and in temple, she distinguished herself and won multiple awards. Additionally, she had her first boyfriend and was voted homecoming queen by her classmates. Corinne also described ninth grade as important because:

I was discovering a lot about who I was and who I thought I wanted to be, so the popular kids interestingly enough got into a lot of trouble; skipped school. [They d]id all these things I never did because I was a goody two-shoes; I lived in constant fear and I decided that I was going to be brave and do some of these things. I got caught at every single thing I did, and finally was brought into the principal (who thought I walked on water) and he was like you're my model student; you're in with the wrong group. So actually [I] was forbidden to hang out with certain people.

Corinne's view of her friends was more positive than the views held by the principal and her parents:

I don't think there was anything wrong with them. They were normal, and I think I was the one that was abnormal. I think mischievousness is a part of that and can either be viewed as "my child's going to end up in the penal system" or "they're just feeling their oats." We just didn't have that kind of open-mindedness in my house.

Undergraduate and Graduate Education: Freedom

Corinne stated that she knew she wanted to be a speech pathologist since she was in second grade. With regard to college, Corinne explained that her parents generally saw college as a way for their children to "have more" than previous generations and, for Corinne, as a place to find a husband. Going to college offered Corinne her first real opportunity to get away from her parents. Her choice of universities was driven by two

factors. She followed her high school sweetheart and she wanted distance from her hometown and her parents. She wanted to be “sure I was far enough [away] that it required a plane ride.” This physical separation from her parents was essential to her identity development. Corinne confided that she “lived in fear for many, many years.” What she feared most, she said, was the “wrath” of her mother:

My entire life growing up in that house, she [Corinne’s mother] would get upset over so many things. She wanted to control me basically and my father wanted me to succumb to it because it made his life easier.

In spite of her fear and the messages she received from home, Corinne learned to see herself:

based on a consistent message that I got outside myself and outside of my family. [Outside,] I heard a whole set of different messages, but they were the same messages: “You’re a leader. You’re smart. You’ve got great potential. You can do anything you want.” That is the tape I played in my head ... to move me to where I am. There are multiple sources of messages ... that can tell you something about yourself and your home is only one of them.

“Maybe I’m Smart”

When I asked Corinne if she had any research courses in college, she first reported that she “didn’t have one.” A few moments later, she remembered taking a research course in which students had to write two papers but did no research. She also

told me that she remembered that some of her professors did research. Corinne’s most specific memory of her college course work surfaced when I asked her about epiphanies or turning points she experienced during her undergraduate and graduate education:

I can name it [the turning point]. I was in the undergraduate program in Speech Pathology at [a university in the western part of the country] ... and I had a phonetics class ... and we had a take home exam. I remember I can see myself working on this exam in my apartment. I remember when he [professor] gave it [back] I was totally freaked out; I ended up [making] an A++. I had made the highest grade in the class, and I was like, ‘oh God, maybe I’m smart.’ I just felt like I had found where – you know that match of this [CSD] is what I need to be doing.

Clinical Practice: Starting to Teach

After she completed her master’s degree, Corinne spent the next 20+ years in clinical practice, working primarily with children from birth up to five years of age. Corinne confided that she had known for a long time that she would pursue a doctoral degree. She saw these years of clinical practice as leading up to, and informing, her doctoral work and dissertation.

“A Relentless Feeling of Responsibility”

Corinne’s first clinical position as a Speech-Language Pathologist (SLP) was in a speech and hearing center in the southeast. When she began to question the service delivery model at that facility, and to propose alternative models, she was “shot down.”

Consequently, and before she had even completed two full years of employment with that facility, she started her own private practice:

I think my first clinical epiphany was in a faculty meeting at the Hearing and Speech Center [where I worked after graduation] where we saw everybody twice a week for thirty minutes every week, whether they needed it or not. I remember there were some people that I wanted [to see] for longer than a half hour. I remember thinking when [my idea] was shot down, “I have to do my own thing,” so I went to private practice. I had not been out [of school] a year and a half, and I went to private practice. Nobody did private practice then.

Corinne’s concerns about service delivery models are just one example of how she understood her role as a clinician. To be more precise, Corinne understood clinical practice to be a process of identifying problems (assessment), generating and implementing solutions to those problems, and assessing the effectiveness of those solutions:

I was the type of clinician who was always reading research because I was trying to find the answer to a problem or address a problem clinically and whatever was in my bag of tricks was not working.

[I have] a relentless feeling of responsibility. This family’s bringing this person to me who can’t talk, and if

I'm not seeing progress from the first visit, something's not right. And I have to figure out what it is – [if] this [strategy] isn't working, I've got to try this [another strategy]. So you are a mini-researcher, and I always kept data ... I have a folder on every kid and the thing is – nobody's watching. I [was] in private practice, I could [have been] doing nothing.

In addition to her clinical practice, Corinne also taught part-time at two universities, the latter recruiting her in the early 1990s to help develop a CSD graduate program. Teaching for Corinne was an especially meaningful experience. She remarked, “I was recruited by the university and I was completely submerged in a teaching program. I always loved to teach ... [and] do in-service.” Throughout her time as a clinical practitioner and teacher, Corinne carefully documented her work with clients, presented her results at national, disciplinary conferences, and taught. She commented that she was “sharing what I was doing in an informal way [but] I wasn't doing formal research.”

Doctoral Education: Take One

Three years into her full-time position in academia, Corinne enrolled in a doctoral program and began her first class in the fall of 1994. When collecting oral histories, I frequently ask interviewees how they might divide their life up into meaningful segments. Doing so increases their chances of recalling more experiences and stories; it is easier to recall a story from a period of eight years than it is to recall a story from a period of 20 years (Clandinin & Connelly, 2000). When I asked Corinne about the segments of her life, she explained:

I would have to say the way I have chunked my life in the last 15 years is a pre- and post-cancer. So all the other divisions I might have had prior to that changed, and so I kind of look at my life as before I had cancer [and] after I had cancer.

“Life ... Before Cancer ... After Cancer”

Corinne began her doctoral education one fall at a school in the southeast, a two-hour commute each way, from her home. She enrolled as a part-time student, taking two classes a semester and continued to teach full-time. Not long after beginning her first doctoral class, Corinne discovered that she had breast cancer. She remembered “standing at a phone booth telling my instructor that I would not be able to be in class, and I was just bawling.” One thing that Corinne learned from her experience with cancer was that “if you’re going to do things, then you better do them.” She completed her treatments by the following June and was back in school two months later to once again start her doctoral program.

Doctoral Education: Take Two

“A Research Project at the End”

With her cancer in remission and a renewed motivation to do the things that were important to her, Corinne began her doctoral program a second time, less than a year after learning she had breast cancer. Her doctoral program was in a related discipline, not CSD. The program served, and was served, by faculty and students from a variety of disciplines. She described her doctoral program in this way:

I think it was a program that had not had doctoral students in quite some time. ...[or] they had not had doc students

before, so I really don't think they were prepared from a time standpoint or a mental standpoint. ...the program itself, the curriculum and things, was about checking off courses. I mean I learned to abstract, I learned to critically read research, but I never did a research project, never worked on a research project that was somebody else's. I had some good stat courses but they are only as good as the experiences you're having ... to apply it. I had no design experience or actually running an experiment or at least designing one, so that link was totally absent. Mine [program] was like a master's program where you did a research project at the end.

In terms of the coursework involved, Corinne found that most of it – especially content courses related to her area of interest – “came easily” to her. Adapting to a variety of perspectives from the various disciplines represented in the program proved to be an “incredible challenge” for Corinne. As a result of meeting these challenges, she described herself as being “well-rounded” in the realm of knowledge when she completed her degree.

As Corinne neared the end of her doctoral program, a restructuring of the institution where she worked created changes in her faculty position. These changes prompted her to take a leave of absence, move closer to her doctoral institution, and finish her dissertation as a full-time student. Her dissertation was her very first piece of research.

Understanding Identity: “Months Went By”

In chapter 2, I discussed literature that conceptualized identity and identity development in a variety of ways: as practice, learning, cogenerative mentoring, and cultural participation. In the previous chapter I put forward the idea that Anna understands identity development as a function of cultural participation. Corinne’s experiences suggest that she has a different understanding.

Corinne’s narrative suggests that she conceives of identity and identity development as a function of cogenerative relationships. Harris et al. (2009) defined two kinds of cogenerative relationships. Cogenerative mentoring, more successful in the early stages of developing a research identity, refers to a relationship that involves a mentor who guides learning and helps to shape mentees in ways that will enable them to later enter a research culture. Cogenerative work, on the other hand, refers to a relationship based on collaborative learning and is typically more appropriate for later stages of doctoral work (Harris et al.). Corinne found both, cogenerative mentoring and cogenerative work, lacking in her doctoral program. She described faculty members who had little experience and too little time to mentor or work with doctoral students. Her disclosure that she was not prepared to be an independent researcher when she completed her doctoral program, and her assessment of her program as being weak in these two relationships implies her belief in the importance of cogenerative mentoring and work in the development of a research identity.

Lee’s (2008) work lends support to this implication. In her study of how research supervisors understood their roles, she concluded that a mismatch between how supervisors understood their roles and how supervisees understood the supervisor’s role might arrest or terminate the process of developing a research identity. Corinne

experienced such a mismatch, and although she did allow that the faculty may have been more removed from the process than she expected because she was an “adult student ... [who] took initiative,” she also noted that when she wrote her qualifying examinations, “months went by” before the examinations were returned to the students. The faculty, Corinne believed, “were so embarrassed by how long it took them to answer our written stuff that they didn’t make us do an oral portion.”

Understanding Research: “Using the Head”

As I did in the previous chapter about Anna, I again call upon Åkerlind’s (2008a) four dimensions of research (intentions, questions or topic under investigation, processes, and outcomes) and propose that Corinne primarily understands research from the perspective of the questions or topics:

[Research] ... means to me is that I’m a scientist in the sense that I’m looking at problems that need solutions. ... It’s a systematic way of thinking about an issue that’s of interest to me, and the issue could be one of prognosis, predictability, treatment, etiology, diagnosis.

Furthermore, Corinne described herself as “the type of clinician who was always reading research because I was trying to find the answer to a problem.” Indeed, her doctoral dissertation emerged in response to one of those issues. Corinne’s clinical expertise and interest was in the area of Augmentative and Assistive Communication (AAC) and her clinical work with patients using AAC led her to wonder about the rationale behind the design of such devices:

And so what I realized I was seeing in kids with CP [cerebral palsy] who were trying to use their arms to do

things is they were locking here [pointed to elbow] because they had no control at any of these joints, and so they would lock here [elbow] and this is how they would point.

So I was like, “Why aren’t we using the head?”

In this chapter, I featured stories Corinne told about becoming a researcher and described her understandings of identity and research. For her, identity development is a function of cogenerative relationships and she understands research primarily in the context of questions, or issues. In chapter 8 I explore what factors motivated her to pursue a research identity, what factors facilitated that pursuit, and what factors constrained that pursuit. Chapter 9 is where I describe Corinne’s experiences in her post-doctoral academic career and identify the enabling and constraining factors associated with the evolution of her research identity in her career.

CHAPTER SIX: CLAIRE

In the previous two chapters you met two of the participants in this study: Anna and Corinne. They are similar in that they both have undergraduate and master's degrees in Communication Disorders and they both had a substantial amount of clinical practice before entering doctoral education.

In this chapter, you will meet Claire, who is the first of two participants who have slightly different educational backgrounds from Anna and Corinne. Claire's first degree in CSD was at the graduate level; she has an undergraduate degree in linguistics.

Because her undergraduate degree was in a field related to CSD but distinctly separate, Claire began her graduate experience by completing some prescribed undergraduate courses that served as pre-requisites for graduate coursework. When she completed her master's degree, Claire entered clinical practice for a short period of time, waiting for acceptance into a doctoral program that included a financial award. Claire has been in the discipline as an academic for 24 years, longer than any of the other participants,

Claire: Now

Claire, a tenured full professor, is a full-time faculty member in a CSD department at a large, four-year institution that offers a number of graduate programs, including several doctoral programs. The institution is public, has an enrollment of approximately 25,000 students, and is rated as having "high research activity" (Carnegie Foundation, 2010). The CSD program offers both undergraduate, or pre-professional, and graduate, or professional, degrees. During the time period in which I was interviewing Claire, the department was developing – at the urging of a new dean – a proposal to offer a doctoral degree.

Early Childhood: Being the Eldest

Claire was born in southeastern Michigan in the mid-1950s. She was the eldest child born to her father, a first generation Ukrainian-American and musician, and mother, a homemaker. Neither of her parents attended college although both had high school educations. Claire has three younger siblings, one sister and two brothers who are twins. Claire reported that her family, particularly her father's family, valued education highly, and they have numerous academic credentials among them. A paternal uncle has a Ph.D., her sister has three graduate degrees and is a CPA for the federal government, one brother is also a CPA and has a business degree, and her other brother works in marketing and has an MBA. Claire, of course, has earned three degrees.

Dominant influences on Claire's developing identity during her early childhood included her family, the criticisms of her mother in particular, and a teacher, who inspired and nurtured her imagination.

"She Was Angry A Lot"

Claire described her relationship—one she believes had a significant influence on her research identity—with her mother:

My mother was a person who grew up very poor, and then she moved to Detroit and had a good job at Ford Motor Company. You know she wasn't living [high] off the hog, but she liked nice clothes and she could shop where she wanted to. Then she married my dad, who's not making a great amount of money as a musician, and ... she quit work to have kids. So she was angry a lot and she was critical, and I think I took a lot of the brunt of that because she's the

oldest too and I think she identified with me the most. So we would get in trouble for doing things that kids do because it [those things] made her life harder, like if someone spilled the milk.

Claire's relationship with her mother not only impacted her early childhood, it also impacted her professional life. Claire speculated that enduring her mother's criticisms might have toughened her enough to withstand the rejections she would later experience in academia.

"I Used To Pretend"

Claire spoke frequently throughout her interviews about imagination. In her early childhood, pretending helped her cope with the stresses in her life:

You know I had a stressful childhood. I used to pretend—there's this area between the front hallway and the bathroom—that there was a whole house in there [that area] that I could escape into and get away from [and] that would be kind of quiet and peaceful. We used to pretend to be the Beatles [and] pretend to be the Beatles' girlfriend[s]. I was talking to my students, and they used to pretend to be the Backstreet Boys. Really, it's interesting how girls pretend to be. Is it because we don't have role models? I doubt very many boys pretend to be girls.

Claire also spoke about several teachers who had impacted her development. One of those was an elementary teacher who gave Claire the opportunity to use her imagination:

Mrs. Kingery read us *Stuart Little*, and for those of us who got our work done a little bit more quickly she let us do our own thing. So I remember one time we were into Egyptian things, so we got to do—remember those long rolls of paper you used to have in the classroom you got to rip off—we got to ... [make] King Tut's sarcophagus and color it in. Another time four of us got to practice—we made up our own Wizard of Oz and got to put on our own Wizard of Oz for the class. I was Toto.

Claire's active imagination extended beyond her early childhood. She also recalled playing Nancy Drew with two friends during middle school, even though they had probably read the Nancy Drew books while still in elementary school.

Secondary Education: Intellectual

This period of Claire's life was characterized by an awakening of her intellectual self: "Even back then I was thinking of myself as being an intellectual." Two influences, in particular, during this period of Claire's life shed light on her developing identity: her peers, especially classmate Robbie, and her image as an intellectual.

"Doing Something Scholarly"

Throughout her interviews, Claire spoke about the positive influences of several teachers. In high school, Mrs. Pratt was one of those:

I remember Robbie and I both read Faulkner and we didn't really understand it, but we understood somehow that he was an important author and he was somewhat a difficult author and we were doing something scholarly by trying to

read him and understand. ...I think I even had some high school teachers who taught things that I thought were a little beyond the norm or who let us go beyond [what they were teaching].

In addition to having a scholarly relationship with Robbie, Claire's peers were influential in her thinking about college: "They were very into being intellectual ... there was this competition about how well you did on your SATs and whether you're a National Merit Finalist, so my peers were ... a definite influence."

Claire's peers, and their parents, influenced her life in much broader ways, awakening her to a particular worldview and her civic responsibility. While Claire's parents were politically conservative, the parents of her friends were not. Instead, they were "liberal and ... involved in anti-war protests." In high school, Claire belonged to the Ecology Club, participated in a protest march in front of a grocery store to get returnable bottles in her home state, and was on a committee to plan protests against the war in Vietnam. Claire also learned the importance of persistence from the father of one of her friends. He ran for public office numerous times, finally winning a mayoral election after several attempts. Later, he won other elections and finished his political career as a state senator.

"I Just Didn't ... Fit In"

Claire's peers also had great influence on her choice of which high school to attend. When she was a sophomore in high school, her school district opened a new high school. Even though Claire technically lived in the school district assigned to the old high school, her house was right on the border of the new school district, so she and her sister were given the opportunity to choose which school to attend. Although Claire

had positive experiences at the old high school, she also reported that she “had trouble fitting in my [old] high school because I was not a jock [or] cheerleader.” Even though going to the new high school meant that Claire would have to leave her good friend and fellow intellectual, Robbie, she and her sister chose to attend the new high school. Of her decision, Claire said:

The kinds of kids that went to the [new high school] [influenced me]. I was on the Student Council there and things like that, which I’m sure I wouldn’t have gotten elected at [the old high school] because it was a different culture.

Undergraduate and Graduate Education: Falling in Love

Claire recalled that her father was concerned about his ability to pay for college and that he said she would “have to go to community college,” a decision she resisted:

I said, “No way I’m going to community college. I am going to a four year college like my friends.” I started looking for scholarships and loans and things like that, and I put myself through school from the first day of my freshman year to the last day of my Ph.D. ...Like I said, I was not going to [community college]. I was going, like my friends and my boyfriend, to a four-year college.

Claire earned an undergraduate degree in linguistics at a large institution not far from her home. Near the end of her undergraduate program, she had an experience that led her to pursue a master’s degree in Communication Disorders.

“What if You Can’t Talk About It?”

In Claire’s junior year of college, she began having an “adult relationship” with her father after having battled with her parents – particularly about politics – for a number of years. Because she was in an apartment her junior year, she invited him to dinner:

Junior year we had an apartment, and I invited him to come and I made him dinner. My mom said it was easier to do it [make dinner] herself than try and teach kids and have them make a mess, so my roommate Nancy taught me to cook, and I made a meatloaf [and] some baked potatoes ... and he was ... impressed.

During the spring semester of Claire’s junior year, her father had heart bypass surgery. His health problems continued into the fall of her senior year when he was hospitalized again—in a small community hospital—for an angiogram. He subsequently developed sepsis in his arm and his family transferred him to a large medical center. After three weeks in the intensive care unit, Claire’s father died.

Claire was devastated by her father’s death, especially since they had recently re-established their relationship. She wondered how awful it might have been if they had not been able to talk about their feelings before his death. Realizing that there were people who could not talk for one reason or another compelled her to seek something she could do that would utilize her undergraduate degree in linguistics and let her help people. That led her to speech pathology.

Claire spent a year taking pre-requisite courses and was accepted into a graduate program in CSD. Of her graduate coursework, Claire reported that she liked some of the

classes, especially her speech science class because they did a replication study. Other classes were not so enjoyable. Her research class, for example, was not a favorite, but “I did OK in there.” Looking back, she wishes she had more calculus as she believes it would be helpful to her current research. Overall, her professional identity began to form during graduate school, something she attributes to her participation in specific programs within the CSD department.

“My First Taste of Aphasia”

One of the highlights of Claire’s experience in graduate school was participating in the programs at the residential aphasia unit at her institution:

That’s when I got my first taste of aphasia ...when I fell in love with it. We got to be friends with the people who came and lived there, and my friend ... we had clients that were – we had group sessions – so they had one individual session a day and two group sessions and we had a coffee hour everyday, and so our clients were friends and she and I got to be friends, and we’d go out to dinner with them. We had a softball team. They’d come and watch us play softball, and so that was just a really great experience.

“Park Avenue”

Claire described another graduate school experience that contributed to her developing identity. Each summer, the CSD program held a camp on a lake for children with communication disorders. Graduate students were required to work at the camp in the summer:

It was a really fun summer and we had the littlest cabin. It was called Park Avenue – the littlest kids. They would take a fluency program, and every year they were expected to do the same thing so I was collecting data. Th[e] year I was there they did Van Riper [therapy], ... and they would bring in speakers to talk to us and lecture us; ...well-known people in the field. ...I had this clinical supervisor there, Amanda, who I really liked and respected. She was a very well prepared person and helped me. I started getting more organized just from her model as a clinical supervisor.

Following graduate school, Claire worked with preschool children for a year and a half before beginning her doctoral program. She also got married during that time.

Doctoral Education: Bodies in the Labs

Claire and her husband both decided to return to school to obtain doctoral degrees so they searched for an institution that would accept them both (educational administration for him and CSD for her) and provide both with financial support. They began their doctoral work at the same time at a large, midwestern university. The marriage ended in divorce before Claire completed her degree.

“I Want Experience as a Researcher”

Claire explained that in her program, the doctoral students did “all the teaching of the undergraduate classes ... [and] clinical supervision.” She had concerns about teaching when “I had no idea what I was doing,” but her biggest concern was that she was not involved in any research activities:

I had to actually ask for research experience because they had me supervising the clinic or teaching. I said, “Look, I’m getting a Ph.D. because I want to learn to do research ... so could I do research?” They assigned me to ... a wonderful person ... [in] audiology. ... I went out with her collecting data. ...I was just happy to get some experience and ... some publications. I really developed, I think, some attitudes about mentoring, or lack thereof, as a result of the doctoral program ... a lot of people just want bodies in their labs.

“There’s a Divide”

Claire described her doctoral program as “historically ... rooted in speech science.” She attributed this to the numerous Department of Defense contracts the program had, some dating as far back as the 1940s. She found the speech science aspects (e.g., acoustic analysis) to be interesting, yet frustrating. Claire noted that many of the faculty brought into the program did not have clinical backgrounds, a practice she disagreed with:

I think ... faculty need to have some kind of understanding about clinical issues. ...One of the things that frustrated me about the program was what I perceived as [a] lack of value for the clinical side by the doctoral people.

Claire referred to this as a “divide” and noted that it has “even gotten worse.” She told about one person who recently left her faculty position in that program to work in the private sector, “She’s a great teacher and a great clinician, but she was marginalized

because she didn't have NIH [National Institutes of Health] grant money. There's definitely a divide between the clinical staff and the research staff."

Understanding Identity: Clinical Researcher

As I have done in the previous two chapters, I consider the various ways that identity and identity development can be understood – this time in the context of Claire's narrative. Where Anna understands identity development to be a function of cultural participation and Corinne understands it to be a function of cogenerative mentoring, Claire's narrative portrayed a third understanding.

Claire's narrative suggests that she conceived of identity and identity development as a function of her clinical practice. At one point, Claire described herself as a "clinical researcher." O'Connor (2007) understood the relationship between practice and identity to be one in which identity emerges as individuals consider the meaning of their experiences in the context of time and place. Furthermore, O'Connor believed that identity evolves as a function of prior experiences. A major theme emerging from Claire's narrative that addressed the relationship between identity and clinical practice was the theory-practice "divide."

The theory-practice divide, or the research-practice divide, emerged as a topic of discussion in several contexts: as a tension in her doctoral program, as a problem in her own doctoral program of study, and as a longstanding challenge for clinicians who are consumers of research. Recalling her own doctoral education, Claire described a culture of researchers who "lack[ed] ... value for the clinical." Claire believes that the master's level students deserve to be taught by individuals who "value clinic and understand clinic." Additionally, she believes that the research discipline in CSD could be more meaningful and useful if designed with a clinical context in mind.

As a Graduate Assistant in her doctoral program, Claire had primarily teaching assignments – so the doctoral faculty could focus on their research – and it was not until she specifically asked for a research assignment that she was given one. As a clinician and consumer of research, Claire finds much of the research being done in the field to be primarily for scientists and not practitioners. At a recent conference she attended a presentation about a study that examined the intelligibility of dysarthric speech (i.e., how understandable the speech is of people who have dysarthria, a kind of muscular weakness that affects the speaking mechanism). The study measured the audible aspects of dysarthric speech to determine the intelligibility of the speech. Unfortunately, audible measures fail to capture or account for all the variables that influence intelligibility, such as the specific words used by the speaker. Claire did not suggest that a clinical perspective should be privileged over a research perspective; instead, she advocated a need for both.

Understanding Research: “A Rat in This Cage”

As I did for Anna and Corinne, I tease out Claire’s understanding of research using the four dimensions of research identified by Åkerlind (2008a). Claire primarily understands research from the perspective of the questions or topics:

I think having a good question—I think that’s one of the things that people struggle with ... trying to develop ... questions. I guess one of the things for me that is difficult is the questions I have are really difficult to get at with research, so I think that’s one of the things that I struggle with personally. And I think I’m sort of interested in big

questions, which are again by definition harder to investigate.

Claire knows that people who study smaller things tend to be funded more often and are more successful in publishing. She also knows they have a good vision of how one small finding leads to another small finding that leads to yet another small finding. Taken together, these small findings accumulate into more significant findings. Even so, she is drawn to asking big questions, which she finds interesting.

Corinne also understands research from the perspective of questions or topics, but there is a difference between her and Claire. Åkerlind (2008a) distinguished between different facets of each dimension of research. For example, as an academic, Corinne is expected to establish a well-funded line of research in order to support her reduced workload. She also has the future possibility of earning a promotion to full professor. For Corinne, research questions have a personal nature. Claire, on the other hand, is already a full professor and her teaching load has recently been reduced, an action that was driven by department needs and not her research activity. While she is concerned with maintaining the gains she has made in her work in the medical school, overall her status at the university is not threatened if she does not succeed with her current project. Her research and research questions do not affect her personally. Instead, her research takes on an altruistic nature. She hopes to improve the circumstances for individuals with particular communication disorders as a result of her research and questions.

I feel like I'm going to cry. It's a privilege to work with these people [who have communication disorders], and I don't – well sometimes when I talk to these people

[researchers] at meetings it's not that much different from that sense of "Oh, I've got this rat in this cage."

This altruistic, external focus is illustrated by a question Claire has had since graduate school and had a clinical practicum assignment in the residential aphasia unit: Do people with aphasia think normally inside their head in words? Claire wonders about how to measure something like that: "Trying to find ways to design your research to answer questions that are interesting is a big challenge for me."

Claire's interest in the questions or topics of research was demonstrated in several of her stories. For example, she explored topics of interest outside of regular class assignments as she did in third grade when she and classmates made King Tut's sarcophagus and again in high school when she and her friend independently read and discussed Faulkner. In college, Claire responded positively to learning experiences that focused on discussing issues.

The stories in Claire's narrative provided insight into her understanding of becoming a researcher. That is, she understands identity development as a function of clinical practice. Claire conceives of research primarily in the context of the questions she asks or the topics she studies. I explore what factors motivated her to pursue a research identity, what factors facilitated that pursuit, and what factors constrained that pursuit in chapter 8. Her experiences in her post-doctoral academic career, including the enabling and constraining factors associated with the ongoing development of her research identity, are described in chapter 9.

CHAPTER SEVEN: SHARON

In the previous three chapters you met Anna, Corinne, and Claire. You may recall that Anna and Corinne have similar backgrounds in that they both have undergraduate and graduate degrees in CSD and they both had a substantial amount of clinical practice before entering doctoral education. Claire's story differs slightly in that she has an undergraduate degree in a different field and has had little clinical experience outside of academia, only about a year and half, between her master's degree and doctoral program.

In this chapter, you will meet Sharon, who offers her own interesting variations to the process of becoming a researcher. First, I explore the stories about her early childhood, adolescence, and undergraduate education. That part of Sharon's process of becoming a researcher was much like the other participants. Following her undergraduate education, however, Sharon went to Asia to teach English as a Second Language for a year. After she returned she entered a graduate program and then a doctoral program. Sharon's Ph.D. was her first degree in CSD.

Sharon: Now

Sharon, a tenured full professor, is a full-time faculty member in a College of Education at a large, four-year institution with a high graduate co-existence and comprehensive doctoral offerings. The institution is public, has an enrollment of approximately 51,000 students, and is rated as having "very high research activity" (Carnegie Foundation, 2010). Sharon directs a research lab focused on literacy and the United States Department of Education, National Institute of Health, and the American Speech-Language-Hearing Association have funded her experimental research projects.

Early Childhood: Friction

Sharon was born in the Midwest in the late 1960s. She was the middle child in her family and had an older brother and younger sister. Sharon's father, a pharmacist with a doctoral degree in pharmacy, was from Appalachia. Her mother, a "traditional" homemaker who had previously attended secretarial school, was from a more northern city not far from the Appalachian region. Sharon described their marriage as "a social class blending." Her mother had poor health; Sharon recalled that her mother was frequently out of sorts, her father was never home, and they never had enough money: "That was sort of a theme."

Sharon's older brother, who attended but did not complete college, works for a state government in economic development and her younger sister is a special education teacher. Sharon described her family's attitude toward higher education:

He [her father] was sort of a lifelong learner, and he was a poet. And this was all a big source of friction in my house because he would write poems and he would go to school and my mom would complain the whole time. So I didn't grow up in a house that had a strong appreciation for higher education. Except that what I would say is that it was always expected that children would go to college. ... It wasn't about sort of growing in college or something like that.

Sharon's recollections from her early childhood are few. She referred to the stories she shared as "prime" memories because she has so few childhood memories.

“We Poured Ketchup ... Over Everybody”

Sharon’s home was the one where the neighborhood kids gathered. She told a story about one afternoon when all the neighborhood kids were at her house:

I remember my brother was really into worldwide wrestling, so the [neighborhood] kids pulled the mattresses out in the backyard. We set up a huge wrestling [ring] ... [and] brought in people from all over the neighborhood as the audience. We poured ketchup all over everybody. It was a huge stage operation.

Sharon described her role as that of spectator but added: “I had to have been more involved in that in terms of how in the world are we going to pull this off without getting busted?”

“I Was In Heaven:

Sharon fondly recalled family camping vacations, which they took yearly along with several “little camping trips.”

The camping trip has a warm fuzzy feeling around it, and it was because I was in my heyday in my camping trips and my parents still talk about this—that I was the one who was always off walking in the creeks. I was really into fossils and archaeology, and I loved fishing. ... I have memories of us really sitting down around the campfire and him [Sharon’s father] telling stories, and I remember really trying to coax stories out of him. I was fascinated by these stories of him growing up in the Cumberland Gap and I

would have him tell me these, so I would actually say those were actually the fondest memories I have of childhood, and there was something about being camping that really worked for me. And my parents still bring it up that I was the one when we camped, I was in Heaven.

“I Was Miserable”

Sharon attended a parochial elementary school in her neighborhood. As a student, she scored “off the charts” on standardized tests and her teachers struggled to find something to “do with her.” Twice, they moved Sharon ahead a year, which became problematic when she was in fifth grade and could not move a grade ahead without changing schools. By then she was “miserable” in her parochial school and was determined she would not return; so, she argued with her parents until they agreed to send her to public school the next year:

I think a lot of it was peer group. I was playing soccer and I had friends who were in the public school and I don’t think I had friends in the private school. My family’s really closely involved in the [religious] community and this [parochial] school was walking distance from my house. I think I’ve always wanted to flee all boundaries ... it was just too close to home.

Thus, Sharon was the first of her family to enter public education. She confided that being in public school “probably wasn’t any better” for her.

Secondary Education: Rebel and Goth

Secondary education was the beginning of Sharon's overt rebellion. She described troubled times:

I got into alcohol and smoking pretty early. And I cut school a lot and so I missed a lot of my subjects. So it was a very troubled adolescence, and all the way through until – it pretty much continued until I started my doctorate, I would say.

As she pondered that period of her life, she divulged, “I don't think I have a single positive memory between 7th and 12th grade.” She did, however, have a negative memory she shared with me.

“Obnoxious or Curious”

Sharon recalled an experience in one of her mathematics classes when she was in 7th or 8th grade:

I have a vivid memory. I think it was in 7th or 8th grade, and I ... think it was Geometry. ...I think I kept raising my hand and asking questions and I have no idea at this point if I was being obnoxious or curious. I have no idea. But he called me up after class and said, “If I were you, I would go home and kill myself.”

Distraught, she sought help from the guidance counselor who then exempted Sharon from finishing the class: “That was the end of my math career. I had a lot of anger towards school and schooling. ...It was not a positive experience for me.”

Undergraduate Education: Home

Going away to college was a positive event for Sharon because she “got to move out of the house.” Although she and her father visited several universities during her senior year in high school, she settled on an institution because “my brother went there, and I knew I could party there and go to bars.” Additionally, the university was large but in a rural setting:

I felt extremely comfortable there. I could have lived there forever. I thought it was beautiful. I loved the ... organic feel of it, the pace, the people, and maybe it’s getting back to the Appalachian part of my childhood that resonated with me. I stayed there, and I got [three] degrees as part of my wanting to be part of that community, so pursuing a degree in higher ed[ucation] was never the goal.

In other words, Sharon’s goal was to prolong her experiences in a place where she felt comfortable. Even so, she had a dubious beginning.

“You’re Not In This Class”

Sharon described her extracurricular activities during her undergraduate program as “drinking ... primarily what I did was went to the bars.” At the conclusion of her first semester, she was on academic probation, not because she could not do the work, but because she would not go to class:

I have a memory of being in an English class – it must have been literature. I went the first day, got the syllabus, and I went the last day to take the exam. I walked in and went to get my exam and she [the instructor] said, “Why are you

here? Why are you taking my exam? You're not in this class." And, I said, "Oh, but I am." She gave me the exam and I sat down. But now I have this recurring nightmare of asking for an exam and the woman saying, "Why are you here? You weren't in my class."

"What Do You Do With This Degree?"

Initially, Sharon majored in Anthropology, something she had developed a deep interest in since childhood. After learning more about that field of study, Sharon changed her major to Psychology, because she "had no intention of ever going to graduate school." She chose her classes "based on what seemed interesting and what was not too early in the morning." Her path to a degree and the degree she earned were somewhat unrelated to her declared major:

I immediately started as an Anthropology major. ...It was in my first quarter and I remember thinking, "What do you do with this degree?" I must have talked to a professor and he said, "You have to go to graduate school." I changed my major promptly because I had no intention of ever going to graduate school, so I then switched to Psychology and I realized [later] I had not taken enough psych classes to graduate, but I ha[d] plenty in English—all these English language classes and Linguistics classes. So, I earned a degree in Language and Literature.

Overseas: “Game Changer”

After Sharon received her undergraduate degree she decided to fulfill her dream of living overseas. She told her then-boyfriend, “Let’s get married so you can come with me.” He agreed.

“This Is It”

Sharon applied to and was admitted into an exchange program at her university. The program trained her to teach English as a Second Language and sent her to Asia for a year:

The very first course was [about] first language acquisition and I sat in there and I thought, “This is it. This is what I want to do for the rest of my life.”

I was completely blown away, so all my interests in language, in literature, in reading—all of a sudden I was sitting in a classroom, and I was like, “This is it. This is the one thing that completely turns me on intellectually.” So it was just a class on language development, like you and I have had. It was a game changer. So I took that summer [program]; we went overseas, and I said, “I have to go back to school.”

Graduate and Doctoral Education: Home Again

When Sharon and her husband left Asia, they returned to the university where she had previously graduated. Their plan was for her husband to finish his undergraduate degree and for Sharon to get a job. She also wanted to get a master’s degree in a field where she could study language acquisition, the subject area that stimulated her

intellectually during her training for teaching ESL in Asia. Not knowing what programs would pursue that line of study, she thought a degree in special education, with an emphasis in learning disabilities, would be close enough. In her first semester, however, she thought, “Well this is the stupidest thing in the world. I’m not learning a darn thing.”

“Your Timing is Impeccable”

As Sharon searched the catalog for courses for her husband to take, she found courses in speech and hearing sciences. Unhappy with her own graduate program, she wanted to find out more:

I marched up to their (CSD) office and I remember I just walked in and I said, “This is what I want to do. I want to get my Ph.D. in this [CSD].” The [program director] looks at me and says, “You know what, your timing couldn’t be better because we have an enormous shortage of doctoral students in our profession.” I should not have been able to get into a doctoral program. I had no background. I had terrible grades...

So this is ... 1994, 1995. We [CSD] have ...a huge doctoral shortage which we’re still in. We [CSD] have vacant faculty positions that we can’t fill. And, we [CSD] have no doctoral students. ...He’s like start taking these classes, and you’re in. And the thing is I was taking these ed[ucation] classes, and I was getting straight A’s because they were a joke, so they were able to let me in based on that GPA.

In CSD, Sharon believed that, for the first time in her life, she shone academically. She was not altogether surprised at her success:

All the intellect I had was, “Here I am—emerging.” ... You know, all my life it had been a theme that I was smart, but I was always—I always acted out. Suddenly I was in a place where I could harness my energies and put it towards something.

“A Singular Experience”

Sharon described the culture of her doctoral program:

I was in a relatively small program that was largely concerned with undergraduate and master’s education. I was her [Sharon’s advisor] only doctoral student. ... I think I just took independent study, my stats, and then I had a cognate in psychology so I think I took three or four doctoral level courses in psychology. ... I never had a doctoral seminar ... I just took independent studies with my advisor and did research. ... So the experience that I had was very much a singular experience [for me].

She had a graduate assistantship that required her to teach an undergraduate course each semester, an experience she described as “terrific.” At that time she liked teaching and was good at it, but now she dislikes having to teach because “it’s so incredibly time-demanding.”

When Sharon was not teaching, she was researching. She considered herself a researcher from her first year in the doctoral program:

I think the very first week she [Sharon's advisor] said [and] I remember it very vividly, "We're going to start research right now and my plan is that when you do your dissertation that will be your third or fourth study." And I will always remember that she said, "This will become just another exercise that you're accustomed to."

Sharon was a productive researcher as a doctoral student, with several publications by the time she applied for her first academic position. For her qualifying examination, she proposed to her committee that she complete three projects: a grant application; a research study and article, which was published; and a book, which was published and is a popular textbook.

Sharon's philosophy of doctoral education was reinforced by her own experience: "I have such a firm belief that a Ph.D. is a research degree so of course you should be doing research and learning how to publish it."

Understanding Identity: "It's What I Do"

Of the ways identity development is portrayed in the literature (as practice, learning, cogenerative mentoring, or cultural participation) Anna, Corinne, and Claire have all demonstrated differing conceptions: cultural participation (Anna), cogenerative mentoring (Corinne), and practice (Claire). Sharon's understanding of identity development was similar to Claire's, although the context of that understanding was different.

Sharon's narrative suggests that she conceived of identity and identity development primarily as a function of practice, much like Claire. But, where Claire focused on understanding identity in the context of clinical practice, Sharon's focus was

in the context of research practice. As Sharon's research practice evolved, so did her identity (O'Connor, 2007). Sharon described her life in two chapters, one chapter and identity before she earned her Ph.D. and one after:

They [her identities before and after her Ph.D.] are fundamentally different. ...The only thing I can say is that anybody who sees me today say[s] it's very hard to reconcile with the person I was before I started my Ph.D. because this was never planned. I was never on a pathway towards this.

As Sharon described her understanding of research, she said that research was "synonymous" with her personality:

It's [research] what I do. ... I even think like a researcher. I talk like a researcher. When I sit and talk to my husband, I do [talk like a researcher]. I think it's a very close part of my identity.

Another example of Sharon's conception of identity as practice focused on her lifelong preoccupation with boundaries. Sharon uses research to resist boundaries:

I often feel like the work I do is on the fringes. ... It's not straight speech-language sciences work; it's not really early childhood work; it's not reading, so it's very sort of – it sits on the fringes between disciplines. So it's multidisciplinary.

Understanding Research: “I Like Completion”

As I have done with the other three participants, I consider how Sharon understands research in the context of Åkerlind’s (2008a) key dimensions of research: the intentions of the researcher, the questions or topic under investigation, the processes of research, and the outcomes of the research. While Åkerlind’s focus was on how researchers hold different views on each of these dimensions, I suggest that another view of these dimensions might also be useful in understanding how researchers conceive of research.

Sharon could be described as primarily understanding research from an outcomes perspective. She focuses on creating products and has an outstanding publication record that began with six publications and a book before she completed her doctoral work. She described herself as being productive, as getting “a lot of work done.” Sharon described how she works: “I’m very good at setting a goal and working towards it being done. I’m good at breaking things down into manageable pieces. I really like completion. I can’t stand uncompleted things.”

Sharon also described how she completes her work. She keeps a document on her computer desktop that is her writing schedule for the year. Additionally, she schedules time to write each week. She thinks having a writing process is an important aspect of research:

Whenever I’m around a colleague who [is] productive, I always ask them what their approach is—both for where they do their writing, when they do their writing—I always do because I think most people do struggle with it.

In this final participant introduction, you met Sharon and heard her stories about becoming a researcher. Sharon understands identity and identity development to occur through practice, in this case her research identity emerged as she engaged with research. She understands research primarily in the context of outcomes. In the next chapter, I explore what factors influenced her – and the other participants – to pursue a research identity, what factors facilitated that pursuit, and what factors constrained that pursuit.

CHAPTER EIGHT: INFLUENCES ON IDENTITY DEVELOPMENT

Thus far, I have introduced the participants by examining their experiences within a variety of common cultural communities. I also analyzed their narratives to construct their cultural models of research. In this chapter, I gaze at all of the participants and return to my overarching question: How do women in CSD become researchers? Specifically, I analyze the participants' narratives to generate responses to four research questions:

1. What motivated the participants in the study to become researchers?
2. What factors facilitated the development of their research identities?
3. What factors constrained the development of their research identities?
4. What role did schooling, especially research-related curriculum and instruction, play in the development of their research identities?

With regard to the first three questions, I return to the cultural-historical activity theory (CHAT) to understand the significance of identifying the motivating, enabling, and constraining factors in the process of developing a research identity (see chapter 2 for a discussion of CHAT). In particular, I return to the notion that, within any cultural community, there will be commonalities among participants (Gutiérrez & Rogoff, 2003). I contend that, among many other commonalities, the participants in this study were all motivated to pursue a research identity and were enabled and constrained by specific factors in those pursuits.

To better understand the specific nature of the motivating, enabling, and constraining factors that Anna, Corinne, Claire, and Sharon experienced, I drew upon Cole and Engeström's (as cited in Roth & Lee, 2007) understanding of practice, which

they referred to as *activity systems*. They described practice as the interaction of six variables: the subject, or participant in this case; an object, or participant's goals; tools, or the means to achieve those goals; community, or the people or groups of people associated with the practice; a role, or the particular function participants play in a community; and, the rules governing the community. Furthermore, they posited that tensions among any of these variables would motivate subjects to act in particular ways to mitigate or resolve those tensions. For example, if individuals do not have the knowledge required to achieve a particular goal, there would be tension between the object (the goal) and the tools (knowledge). In turn, this could motivate individuals to act in an attempt to reduce or eliminate the tension. Such actions might include attempts to acquire the knowledge by taking a class, reading a journal, or attending a workshop. Or, individuals might modify their goal to fit with the knowledge they already have.

In keeping with CHAT, my discussion of the motivating, enabling, and constraining factors Anna, Corinne, Claire, and Sharon experienced is grounded in their practice. I will first identify the tensions that motivated them to develop a research identity. Then I will discuss the enabling and constraining factors associated with the development of their research identities. Assuming that each participant represents the subject in her practice and that the object of her practice is to develop a research identity, I categorize the enabling and constraining factors using the other practice variables (i.e., tools, community, roles, and rules) to develop a more nuanced understanding of the complexities of becoming a researcher (Toth-Cohen, 2008).

The fourth question pertains to another commonality among Anna, Corinne, Claire and Sharon. All of them participated in similar levels of schooling, although, as

the previous four chapters revealed, their individual experiences varied. To better understand the role of schooling in the development of their research identities, I examined their experiences within the context of Eisner's (1988, 1992) five dimensions of schooling: intentional, structural, curricular, pedagogical, and evaluative.

Motivating Factors

Motivation to act in particular ways, according to Cole and Engeström (as cited in Roth & Lee, 2007), arises from tensions that exist among any of the six variables of practice. These actions are selected for the express purpose of reducing or eliminating tensions among the practice variables, an outcome that can restore “congruence and harmony” (Toth-Cohen, 2008, p. 83) to practice. The stories of Anna, Corinne, Claire, and Sharon effectively illustrated this process.

When Anna decided to pursue doctoral education, she was a junior faculty member in a CSD department who was expected to engage in the practices of teaching, advising, research, and service. Anna's goals were to continue reading and learning, activities she enjoyed; to gain credibility and confidence as a teacher, something she believed she lacked; and, to acquire the credentials necessary to deliver presentations at professional meetings (see Table 2). In her practice as a junior faculty member, Anna experienced tension between her goals, the tools at her disposal, and the community in which she practiced. Said another way, Anna did not have the tools, such as experience with research or familiarity with the research literature she needed to achieve her goals. Furthermore, Anna practiced in a community that was theoretically driven by teaching, advising, research, and service but practically dominated by teaching, advising, and service. Anna valued and prioritized research differently than some of the other participants in her cultural community. This tension among Anna's goals, the tools at her

disposal, and the values and priorities of her cultural community motivated her to act. Consequently, she enrolled in a doctoral program to acquire the tools she needed and to gain the support of a community with similar values and priorities, making it more likely that she could achieve her goal(s).

Table 2: Motivating Factors for Doctoral Education

Participants	Motivations
Anna	Continue reading and learning Gain credibility and confidence Acquire credentials
Corinne	Challenge self Achieve status through publication Gain legitimacy in teaching
Claire	Challenge self intellectually Gain prestige of doctoral degree Fulfill curiosity Fulfill sense of responsibility to patients
Sharon	Seek intellectual stimulation

Like Anna, Corinne was also in a faculty position engaged in the practices of teaching, advising, research, and service when she enrolled in doctoral education. Additionally, Corinne was an active presenter of workshops and considered what she did to be “informal” research. Nevertheless, Corinne wanted to challenge herself, achieve status through publication, and gain legitimacy in her teaching (see Table 2). In her practice, Corinne was concerned that she did not have the required credentials for the positions of college professor and expert presenter. She also was unsure of the processes, or rules, relating to publishing in academic journals. The tension between Corinne’s goals, roles, and rules motivated her to enroll in a doctoral program to acquire the

credentials associated with researchers and to learn how to navigate the academic publishing world.

While she was in graduate school, Claire decided to continue her education because she wanted to challenge herself intellectually and gain the prestige that came with having a doctoral degree. When she completed her master's degree, however, she entered clinical practice to sustain herself and her husband financially until they found a university that accepted both of them into doctoral programs and offered adequate financial support. As a service provider, Claire performed diagnostic and therapeutic services for young children with communication disorders. That experience reinforced her desire to enter a doctoral program because she wanted to satisfy her curiosity and fulfill her responsibilities to her patients (see Table 2). Claire experienced tension between her role as a service provider and her goal to advance her education. Additionally, the cultural community of service providers valued practice over research, thereby creating an additional source of tension for Claire. These tensions, according to Cole and Engeström (as cited in Roth & Lee, 2007), motivated Claire to follow through with her intent to enroll in a doctoral program.

Finally, Sharon claimed that she had not been motivated to become a researcher—she simply ended up in a doctoral program. The CHAT, however, suggests otherwise. Before Sharon's enrollment in a doctoral program, she had taken a course on language acquisition to prepare for a year of teaching ESL overseas. That course stimulated her intellectually and when she returned from overseas, she began a master's degree program in special education. Her goal was to achieve a similar level of intellectual stimulation by learning more about language acquisition (see Table 2). Sharon was bored in her special

education classes; they were not providing her with the tools she needed to achieve her goals of learning more about language acquisition. Additionally, her coursework placed her in the role of a passive learner, which conflicted with her understanding of herself as a learner. These tensions motivated Sharon to find another academic program and she enrolled in a doctoral program in CSD. When she found research in that program, she observed, “it felt good ... it fit.” Her action of enrolling in a doctoral program successfully mitigated the tensions in her practice.

Anna, Corinne, Claire, and Sharon identified a variety of goals they had difficulty achieving in their pre-doctoral education practice. Their motivations can be categorized as relating to learning, responsibility, and credentials. They loved learning and welcomed challenges; they had a desire to provide their students and clients with quality learning experiences; and, they had a desire to achieve the prestige and status afforded to individuals who are experts in their respective fields of study.

The motivation to pursue doctoral education was a result of the participants’ attempts to resolve tensions among the variables of practice and their personal goals (Toth-Cohen, 2008). Their tensions generally involved inadequate access to the tools required to achieve their goals, inadequate access to communities with shared values and beliefs, inadequate qualifications to fulfill the roles they wanted to assume, and inadequate knowledge of the rules of the research community.

Enabling Factors

In addition to learning about what motivated the participants to become researchers, I also wanted to know what enabling factors, if any, facilitated the development of their research identities. In my analysis, I categorized the enabling

factors according to the variables of practice: tools, community, roles, or rules (Cole & Engeström, as cited in Roth & Lee, 2007). In that process, two anomalies emerged.

First, in some cases specific enabling factors overlapped two or more categories. When that happened, I classified the factor based on my perception of its overall impact. For example, both Anna and Sharon published while in their doctoral programs. As an enabling factor, that achievement could be considered to be a role they acquired – that of author. Or that factor might be considered as evidence of having learned the rules of scholarly publishing. I interpreted Anna’s publication of one journal article to reflect the acquisition of a new role. I interpreted Sharon’s case, because she published numerous articles and a book, to reflect learning of the rules of publishing.

The second anomaly emerged as I classified the constraining factors but needs to be mentioned at this point in the discussion. Some of the factors that participants identified as enabling were also listed as constraining. Anna provided a clear example of this anomaly when she listed being a part-time student as both an enabling and constraining factor. She explained that early in her doctoral program her part-time status gave her the opportunity to develop confidence in her ability to be successful in her doctoral coursework. Later in her doctoral program she found that being a part-time student was constraining to her developing research identity.

Finally, in addition to identifying specific enabling and constraining influences, I considered the quantity and quality of those influences. In other words, I used numbers to represent the narrative data, a strategy previously discussed in chapter 3. Representing narrative data numerically entails certain perils, particularly the possibility that readers might attribute more significance to the numerical representation than to the narrative

representation. On the other hand, the benefits of representing the data numerically, especially the possibility of illuminating previously undetected patterns, perhaps outweighs those perils, especially when using numbers to represent narrative data is an analytical, not statistical, strategy.

Anna

Anna's narrative contained evidence of at least 13 different enabling factors, representing the following variables: tools, community, and roles (see Table 3). The tools, or means, that helped her achieve her goals were primarily financial and academic. Anna had a graduate assistantship that included tuition, health insurance and a stipend and received funding from her committee for her research. Academic tools included experience in reading research from a seminar in graduate school and the statistics courses she took in her doctoral program. Additionally, the technical assistance from one committee member in acquiring photographs of microstructures was another enabling tool.

Supportive communities also were enabling for Anna. She described a strong family support system and several teachers throughout her years in school who helped her see and achieve her potential. Additionally, in her doctoral program she participated in a laboratory research group and had a challenging, yet supportive, committee.

Anna had four roles that were particularly enabling to her. As a part-time student, she learned that she could be successful in doctoral work, a discovery that led her to full-time enrollment. As a graduate assistant in the research lab, she immersed herself in the research community and mentored other students in the program. Anna acquired the role of published author when one of her articles appeared in the premier research journal in CSD while she was still working on her dissertation.

Table 3: Enabling Factors in Doctoral Education

Participants	Variables of Practice			
	Tools	Community	Roles	Rules
Anna	funding for education funding for research academic preparation in reading research statistics courses technical assistance	family support teachers laboratory research group dissertation committee	part-time student graduate assistant published author mentor	
Corinne	funding for education clinical experience private practice	teachers	clinical expert part-time student full-time student	
Claire	funding for education research experience as a student clinical experiences in school	paternal family teachers high school (new) female role model clients second committee chair journal club small classes	researcher (student)	
Sharon	training for ESL program funding for doctoral education independent studies - research experiences statistics courses research grant during doctoral studies	"spectacular" mentor significant "face" time w/ mentor shortage in CSD small doctoral program	published author	published articles while doctoral student published book while doctoral student

Corinne

Corinne’s narrative documented seven enabling factors representing the variables of tools, community, and roles (see Table 3). The enabling tools were financial support for school, which she received from her doctoral program and the institution where she worked; her over 20 years of clinical experience; and, her business management

experience from her private practice. In terms of community, Corinne had several teachers who had supported, challenged, and encouraged her. Corinne had three roles that enabled her in developing a research identity. First, Corinne acquired the role of expert when one university recruited her to establish an academic program in CSD. Second, at the beginning of her doctoral program, the role of part-time student enabled her to continue working while pursuing her degree. Later, and like Anna, that role changed to full-time student—a change that enabled Corinne to work on her dissertation full-time.

Claire

Claire's narrative contained evidence of 12 different enabling factors representing the variables of tools, community and roles (see Table 3). Enabling tools included funding for her doctoral education, having research experience during her graduate program, and her clinical experience. The community aspects of her experiences were the most enabling for Claire. She had support from her paternal family that valued education, numerous teachers who encouraged and challenged her (she described more teachers than anyone else), the opportunity to attend a new high school and fit into a new culture, a female mentor in CSD, clients who supported their student clinicians, her second doctoral advisor, a journal club, and small classes for discussion. Finally, Claire played the role of researcher in graduate school by completing a replication study in one of her speech science courses.

Sharon

Sharon's narrative contained evidence of 12 different enabling factors representing the variables of tools, community, rules, and roles (see Table 3). Enabling tools included training for teaching in an English as a Second Language (ESL) program

where she first learned about language acquisition, funding for her doctoral education, research experiences throughout her doctoral program, statistics courses, and a research grant during her doctoral program.

With regard to the enabling aspects of her community, Sharon had a “spectacular” mentor, spent significant face-time with her mentor, was in a small doctoral program, and pursued a degree in a field with a shortage of doctoral level faculty. In terms of roles, Sharon was the only participant who had the role of published author as an enabling factor. Lastly, Sharon was the only participant who described enabling factors that involved the rules of research cultures. In her case she learned and used the rules of publishing, successfully publishing six journal articles and one book before completing her doctoral program.

This analysis showed that in the process of developing a research identity the most common types of enabling factors were tools and community support. Of the tools, financial support and preparatory experiences (e.g., statistics courses, prior research experiences) were the most commonly mentioned. As for the community supports, the most common were models, such as previous teachers, dissertation chairs, and dissertation committees. Worth noting is that Sharon was the only participant who had enabling factors relating to rules of research cultures.

Constraining Factors

In addition to influences that were enabling, I considered what factors constrained, or impeded, the development of the participants’ research identities. Overall, the participants reported fewer constraining factors than enabling factors. Using the same system as before, I categorized each constraint as related to tools, community, roles, or rule systems.

Anna

Anna's narrative contained evidence of five constraining factors representing the variables of tools, community, and roles (see Table 4). With regard to tools, Anna was constrained by a weak K-12 experience, especially in science; a weak background in research from her graduate education; and difficulty obtaining the chemicals she needed to complete her experiment. In terms of community supports, Anna's first advisor, whom she had selected because he did research in an area related to primary area of interest, did not provide Anna the guidance she expected and needed. When a new faculty member specializing in Anna's area of interest joined the faculty of her doctoral program, she released her first mentor, an action that reduced the number of factors impeding the development of her research identity. As for the roles she acquired, Anna found that what was initially enabling—being a part-time student—became a constraining factor. Experiencing her part-time status as a constraining factor was consistent with the findings of Deem and Brehony (2000) who also found that part-time students had difficulty accessing the research and academic cultures at their institutions. As she did in the case of her first advisor, Anna eliminated the constraining role of part-time student by transitioning to full-time status.

Table 4: Constraining Factors in Doctoral Education

Participants	Variables of Practice			
	Tools	Community	Roles	Rules
Anna	poor K-12 science background poor research background locating chemicals for experiment	first advisor out of area	part-time student	
Corinne	poor research coursework in graduate school	lack of family support inexperienced doctoral faculty limited contact with doctoral advisor new to motor skills community		
Claire	had to work through undergraduate and graduate education	immediate family suggested community college conflict with first doctoral advisor second dissertation advisor had limited time	teaching graduate assistant	
Sharon	poor background in K-12	did not “fit in” until doctoral education poor teachers in K-12		

Corinne

Corinne’s narrative provided evidence of four constraining factors representing the variables of tools and community (see Table 4). A constraining tool for Corinne was a poor research curriculum in her graduate program. More significant for Corinne were the constraining factors relating to community. One community constraint related to her personal community, as was the case with her family’s expectations that she would

marry, stay at home, and raise a family. As previously discussed (see chapter 5), however, Corinne learned to counteract negative messages from her family by listening to positive messages of others, enabling her to move past this constraint. The remaining community constraints related to professional communities. Specifically, the faculty members in her doctoral program were inexperienced with doctoral students, her first advisor was not available to Corinne, and the doctoral program was in a related area, a community and culture that were new to Corinne.

Claire

Claire's narrative had indications of five constraining factors representing the variables of tools, community, and roles (see Table 4). In terms of tools, Claire was constrained financially – she put herself through college (from her freshman year until she completed her doctoral program) by working part-time. Community constraints were more common for Claire and included her immediate family's desire for her to attend community college (which she eliminated by gaining admission to a university and working to pay for school), tensions with her first dissertation advisor, and a second advisor who had limited time to work with her because he was working toward his own tenure. Finally, as a graduate assistant, Claire's primary role was to teach, an assignment she believed was preventing her from developing her research identity. It was not until she specifically asked for a research assignment that she received one.

Sharon

Sharon's narrative contained evidence of three different constraining factors representing the variables of tools and community (see Table 4). With regard to tools, Sharon had a poor background in school, specifically K-12. Related to that were the community constraints Sharon experienced. Her K-12 teachers were not equipped to

work with exceptionally bright students (Sharon was the only participant who did not identify any K-12 teachers as enabling). Also constraining to Sharon was that she did not “fit” in any academic communities until she entered her doctoral program.

Constraints relating to community were closely related to the tool constraint. Sharon never “fit in” the K-12 community, and never felt comfortable in any academic community until her doctoral program. She lacked supportive and understanding teachers who were able to fulfill her needs as a student, presumably because she was more advanced than her classmates.

This review of constraining factors yielded several insights. First, constraints were experienced almost exclusively with regard to tools and community. Of those two kinds, community constraints, especially issues related to dissertation advisors, were the most common. Within the tools category, the most common constraint experienced by the participants was inadequate academic preparation in their K-12, undergraduate, and graduate educations. Noteworthy was two participants’ awareness that their master’s level research curriculum in CSD was inadequate preparation for becoming a researcher. Also noteworthy was that the participants actively worked to eliminate constraints. For example, two participants selected new dissertation advisors, Claire requested a research assignment in addition to her teaching assignments in her doctoral program, and Anna quit her job to transition from part-time student to full-time student.

Interaction of Enabling and Constraining Factors

I considered the influence of enabling factors on identity development in two ways. First, I organized the data in terms of quantity, or how many, and quality, or what kind (tools, community, roles, or rules), of influences contributed to the development of their research identities through the completion of their doctoral programs. Anna

identified thirteen enabling factors and three kinds of influences (13/3); Corinne identified seven enabling factors and three kinds of influences (7/3); Claire identified twelve enabling factors and three kinds of influences (12/3); and, Sharon identified twelve enabling factors and four kinds of influences (12/4). This information is summarized in Table 5.

Table 5: Quantity and Quality of Influences in Doctoral Education

Participants	Enabling	Constraining	Enabling		Constraining	
			Quantity	Quality	Quantity	Quality
Anna	Tools (5) Community (4) Roles (4)	Tools (3) Community (1) Roles (1)	13	3	5	3
Corinne	Tools (3) Community (1) Rules (3)	Tools (1) Community (3)	7	3	4	2
Claire	Tools (3) Community (8) Roles (1)	Tools (1) Community (3) Roles (1)	12	3	5	3
Sharon	Tools (5) Community (4) Roles (1) Rules (2)	Tools (1) Community (2)	12	4	3	2

Next I considered the influence of constraining factors on identity development in a similar manner. I examined the quantity and quality of the constraining factors that impeded the development of their research identities through the end of their doctoral programs. Anna identified five constraining factors and three kinds of influences (5/3); Corinne identified four constraining factors and two kinds of influences (4/2); Claire identified five constraining factors and three kinds of influences (5/3); and, Sharon identified three constraining factors and two kinds of influences (3/2). This information is summarized in Table 5.

In terms of the kinds of factors (e.g., tools, community, etc.), Corinne and Sharon experienced more kinds of enabling factors than kinds of constraining factors. Anna and Claire experienced three kinds of enabling factors and three kinds of constraining factors (see Table 5).

In all cases, the number of enabling factors was greater than the constraining factors. The data for Corinne and Sharon are particularly interesting. Corinne had the closest margin between number of enabling and constraining factors (7 enabling and 4 constraining). She was also the only participant who acknowledged she was not ready to be an independent researcher at the completion of her doctoral work. Sharon, on the other hand, had the largest margin between number of enabling and constraining factors (12 enabling and 3 constraining). She was the participant with the strongest research identity and publication record upon completion of her doctoral degree. The numbers for Anna and Claire were similar to Sharon's. These configurations suggest that in addition to overall numbers of enabling factors, the ratio between enabling factors and constraining factors may also be a factor in the process of developing a research identity.

Role of Schooling

Within common cultures, individuals participate variously and their identities emerge as they participate in the practical activities of a common culture (Gutiérrez & Rogoff, 2003). It stands to reason that changes in participation reflect changes in identity and that the variations among individuals reflect differences in their identities. Common to Anna, Corinne, Claire, and Sharon was their participation in the cultural communities of K-12, undergraduate, graduate, and doctoral education. Thus, my aim in this section is to shed light on the role of schooling in identity development by exploring the participants' individual experiences in the common cultures of schooling.

Hewitt (2006) defined schooling as “a sociocultural process in which a society or group seeks to transmit to the young (or to the newcomer) the knowledge, behaviors, and skills that it considers important to the welfare of society” (p. 13). Schooling can be informal, described by Hewitt as the transmission of knowledge, behaviors, and skills that occurs outside of the social institution of school. Schooling can also be formal, which Hewitt understood to be the transmission of knowledge, behaviors, and skills within the context of school as a social institution. I am primarily concerned with formal schooling, or the experiences that occurred as a function of participation in the social institution of schooling. These experiences may be structured, as is the case with individual classes, or unstructured, such as discussions that occur in research labs.

The concept of schooling, as defined by Hewitt (2006), is broad and general. Eisner (1988, 1992) described schooling in terms of five dimensions: intentional, structural, curricular, pedagogical, and evaluative. Each dimension represents a different aspect of the schooling experience. To achieve a more thorough and sophisticated understanding of schooling’s contributions to the development of research identities, I considered my participants’ experiences with schooling in the context of each of these five dimensions. The intentional, structural, curricular, and pedagogical dimensions of schooling provided the most influence on the development of the participants’ research identities.

Purpose

The intentional dimension of schooling refers to the purpose of schooling, which in turn establishes the values and priorities of schools (Eisner, 1988, 1992). Even though the participants all had experiences at several levels of schooling (e.g., K-12), their research identities began to emerge in higher education, particularly doctoral education.

Therefore, the primary focus of my discussion is on their schooling in higher education and the influence of the purpose of schooling on the development of a research identity.

If an intention of doctoral education is to facilitate the development of a research identity, then doctoral education was successful for Anna, Claire, and Sharon. In contrast, Corinne's doctoral education gave her the credentials she needed to be hired in an academic position with research requirements, but it did not prepare her to be an independent researcher. She did not establish her identity as a researcher until three years into her academic position.

Structure

The structural dimension of schooling refers to the way the curriculum is organized in terms of content and how that curriculum is sequenced (Eisner, 1988, 1992). Like the intentional dimension of schooling, the structural dimension has been widely studied. Space precludes even a summary of the literature on school structure, but Eisner (1988) warns that the importance of structure should not be underestimated: "When structure and intentions are in tension, structure, rather than intentions, is likely to dominate" (p. 26).

Two specific issues related to the structural aspects of schooling had an influence on the development of the participants' research identities. The first relates to an academic calendar that revolves around semesters (or quarters). Institutional structures based on semesters (or quarters), in which classes are completed in a single semester, have a negative impact on the development of a research identity because they have arbitrarily imposed time frames which limit opportunities for prolonged engagement (for additional discussion concerning the role of engagement, see the section concerning the pedagogical dimension of schooling). As Sharon's case demonstrated, prolonged

engagement in research activities likely has a strong positive influence on the development of a research identity.

The second structural issue that seemed to influence identity development related to how the curriculum was sequenced. Anna, Corinne, and Claire all described structures in which the early part of their doctoral programs consisted primarily of content, cognate, and research courses. Engagement with research came near the end, or after completion, of their coursework. Anna and Claire indicated that their research identities began to emerge, or become clearer in Claire's case, later in their doctoral programs. Corinne's research identity emerged after she had gone to work. Sharon, on the other hand, had limited coursework and began research immediately. She is also the most prolific researcher of the group.

Curriculum

The curricular dimension of schooling refers to the specific content taught, the specific activities used to teach the content, and the relationship between those (Eisner, 1988, 1992). I looked for the ways in which curriculum facilitated or constrained the development of the participants' research identities. Four themes emerged: delivery of content in single-subject classes, use of curricular activities to supplement content, the clinical focus of many graduate programs, and role of coursework and experience in doctoral programs.

First, the practice of organizing content into single-subject classes, which could arguably be a structural issue as well, was facilitating and constraining to the development of research identities. For Claire, this separation of content into courses was facilitative. Because her undergraduate degree was not in CSD, she began her graduate education by taking undergraduate courses that were pre-requisites for graduate

courses. Sharon had a similar situation; she took undergraduate courses and completed a project with each to justify getting graduate credit for the course. This practice of offering single-subject classes was a constraining factor with regard to developing a research identity as it discouraged students from making connections across subjects, a practice that is necessary to develop an appreciation for the complexities within a field of study and to uncover the complex problems that arise from situating an idea in multiple contexts. Additionally, and specific to CSD, offering courses on research, and separate from courses relating to disorders, suggests a divide between research and clinical practice. Such a practice may suggest that students should choose between an identity as a researcher and an identity as a clinical practitioner.

Curricular activities, a second theme related to curriculum, were also facilitating and constraining to identity development. In a facilitative manner, activities like the field trips Claire's high school English class took to see Shakespeare's plays or Anna's performances in band concerts gave students opportunities to experience an object of study in an authentic way. Claire and her classmates experienced Shakespeare by attending one of Shakespeare's plays. Anna experienced music by being a musician. As the participants rose to higher educational levels, the number of curricular activities, or opportunities for meaningful engagement with a particular content area, increased. For instance, as a graduate student Claire completed a replication study with her classmates in a speech science course and collected treatment data for someone else's ongoing research. At the doctoral level, the participants engaged in a varying number of research activities. Not all curricular activities were facilitative, however. While activities were

common at the graduate level, they generally focused on clinical practice. The focus on a clinical identity left little energy or time for students to develop research identities.

Third, the participants indicated that the research curriculum in graduate school was mostly constraining to the development of a research identity, especially in the cases of Anna, Corinne, and Claire. Anna's research course was one of her easiest courses in graduate school and she took it in her final semester. Corinne initially did not recall taking a research course. Although she later remembered taking such a course, her dislike of the teacher triggered that recollection, not the content.

There were, however, facilitating aspects to the graduate curricula experienced by the participants. In particular, Claire's experience was unique in that her research instruction was embedded in a speech science course and she and her classmates were required to complete a replication study. Anna described a facilitating experience in her graduate curriculum that contributed to her development of a research identity. The students in her class collectively completed a 30-year review of the literature. This experience had a significant impact on Anna's identity as a researcher.

The fourth theme to emerge related to curriculum at the doctoral level. The participants found their doctoral programs to again be a mix of facilitative and constraining factors with regard to developing their research identities. Sharon had the most unique experience. Sharon's experience was highly facilitative of her research identity. Sharon was the only participant who did not take content courses relating to the topic of her research. With the exception of nine hours in psychology (her cognate area) and a few statistics courses, the rest of her courses were Independent Studies. In these, Sharon conducted research under the guidance of her advisor and her dissertation

research was an outgrowth of a study completed earlier in her doctoral work. Sharon initially credited her doctoral coursework with a 0% contribution to her research identity. Later, she revised that to be a 10% contribution, acknowledging benefits from her statistics courses. Anna, Corinne, and Claire—like Sharon—also specifically mentioned the value of their coursework in statistics. They also took courses toward a cognate, usually in a related field. Unlike Sharon, they also took content courses related to their research topics. All three reported little benefit from their content courses, however, because Corinne and Anna were both in doctoral programs in areas related to CSD, they found that their content courses did provide them with additional perspectives for considering problems.

Pedagogy

The pedagogical dimension of schooling refers to the ways curriculum is taught (Eisner, 1988, 1992). Through pedagogy, the “content is fine-tuned to suit the particular needs and backgrounds of individual students and specific communities” (Eisner, 1988, p. 26). My primary aim was to identify those aspects of the pedagogical dimension that influenced, positively and negatively, the development of the participants’ research identities. From the narratives, two influences on the development of research identities emerged: teachers and teaching strategies.

The first pedagogical influences on identity development came from specific teachers and mentors. Teachers who were interesting, passionate about teaching and their subject, challenging to their students, and respectful of their students, were positive influences on the participants’ developing identities. For instance, in middle school, Anna shared a theory she had with her science teacher, who listened to her idea and “took it seriously.” These teachers may have been influential because their pedagogical beliefs

and practices resonated with their students. Again, I offer an example from Anna's narrative. Her band director engaged in character education, an important component of the education Anna had received from her family since she was young. The band director's emphasis was consistent with the lessons she was learning at home.

Unfortunately, some teachers were negative influences on their students. Sharon's experience in geometry class, with a teacher who suggested she should kill herself, was one of those teachers. Additionally, and in contrast to the experiences of Anna, Corinne, and Claire, Sharon's negative experiences with schooling, particularly in K-12, may have been primarily negative because pedagogical adaptations were not made to fit her particular needs.

Doctoral mentors (or advisors) were of particular importance to the participants' developing research identities. The participants recognized the importance of a productive working relationship, characterized primarily by compatibility with regard to personality and interests. In their advisors, they sought the same qualities they valued in those teachers who had previously inspired them. Specifically, they selected advisors who were interesting, passionate about mentoring and about their specialty areas, challenging, and respectful. Indeed, both Anna and Claire selected new advisors to achieve a productive relationship. In Anna's case, her first advisor had little time for her and researched in an area different from Anna's primary area of interest. In Claire's case, her first mentor disregarded her ideas and insisted she adopt his philosophies and beliefs.

Specific teaching strategies employed by their teachers were a second pedagogical influence on the participants' developing identities. Anna, Corinne, and Claire all benefitted from challenging opportunities. For example, Anna's band teacher told her to

go home and teach herself how to play the oboe – which she did. The participants were also positively influenced by authentic learning activities that required active engagement in practice.

In their graduate programs, Anna, Corinne, and Claire thrived on their clinical practicum assignments. Working with patients was challenging and required active engagement to make appropriate connections from prior coursework to develop appropriate treatment plans. Claire’s narrative provided an additional and important insight. Claire responded positively to professors who held class meetings away from the usual classroom meeting space. She articulated the pedagogical importance of these kinds of class meetings: “I thought, ‘That’s what scholars do. They meet informally and have discussions about issues related to their fields.’” Claire benefitted from opportunities to think and dialog with other scholars.

Sharon’s experience in her doctoral program also illustrated the importance of active engagement in practice. She began doing research immediately whereas the other participants began researching much later in their programs. Worth noting is that Anna and Claire engaged in research before they began their dissertations. Corinne, on the other hand, did not. Her first experience with research was her dissertation. Corinne, as I previously mentioned, did not identify herself as a researcher until after she completed her doctoral education and was in her post-doctoral academic position. This suggests that opportunities to engage in practice are essential for identity development.

The paths these four women took to becoming researchers, up through doctoral education, demonstrated commonalities among experiences, particularly with regard to their progression through educational institutions (Gutiérrez & Rogoff, 2003).

Additionally, the participants demonstrated individual variations (Gutiérrez & Rogoff) in how they participated in schools. Specifically, all of them identified motivating, enabling and constraining factors that influenced the development of their research identities. The role of schooling, a complex institution characterized by intentional, structural, curricular, pedagogical, and evaluative dimensions, in the development of research identities was broad and deep and played a significant role in identity development. Consequently, modifications in schooling practices, discussed in chapter 10, may lead to changes in identity.

CHAPTER NINE: RESEARCH IDENTITY AND CAREER

In chapters 4-7 I introduced the participants in this study: Anna, Corinne, Claire, and Sharon. For each, I described their paths to becoming researchers up through their doctoral education. Additionally, I analyzed their narratives and teased out their expressed and implied understandings of research and identity. In chapter 8 I explored motivating, enabling, and constraining influences, as well as the role of schooling, on the development of research identities. This chapter picks up where the others stopped. Specifically, in this chapter I examine the development of the participants' research identities after they began their post-doctoral academic careers.

My decision to examine identity development at the career level separately was influenced by two factors. First, as Åkerlind (2005, 2008b) noted, there is little research on identity development once researchers embark on their academic careers. To that end, isolating the career experiences of the participants may provide a window into that phenomenon, which could spark future studies. Second, and perhaps more relevant, the participants began their post-doctoral careers in institutions with cultures that varied from those of their respective doctoral programs. For instance, Anna left a doctoral program at an institution with high research activity to take a position at an institution with a reputation as a teaching institution and a CSD department that prides itself on the preparation of clinical practitioners. Corinne left a doctoral program where she had little research experience to take a position at an institution with high research activity. Claire left a doctoral program where she had significant teaching experience and a moderate amount of research experience, some of which was out of field, to take a position at an institution with moderate research expectations along with teaching and service demands. Finally, Sharon left a doctoral program where she had extensive research experience and

relative autonomy to take a position in a department where she had little influence over her workload and little interaction with other faculty members. Sharon eventually left that institution for another and was the only participant with post-doctoral experience in more than one institution.

My strategy in this chapter is to describe, using the words of the participants as much as possible, those experiences that provide insight into the development of research identities in the career. Anna, who has the shortest post-doctoral career, had far fewer experiences to describe than Claire, who has the longest post-doctoral career. Nevertheless, these variations may be revealing in themselves. Following these descriptions, I examine the enabling and constraining influences on the development of their research identities as career academics.

Anna

Anna began her post-doctoral academic career in the fall of 2008. Of the participants, her career is shortest. Her transition, from a doctoral program with high research activity to a teaching institution may be the most drastic change when compared with the other participants. As she began seeking a post-doctoral academic position, she considered two institutions, one with more research activity than the one she ultimately selected. Anna's research identity thus far has been influenced by three professional cultures: the CSD department, the university, and disciplinary specialty.

“People Living Out Their Desires”

Anna observed that before she left the CSD department where she taught before her full-time enrollment in a doctoral program at another university, she perceived the department to have a lot of “negativity.” “Rarely,” she commented, “was I engaged in a conversation about things that were good and going the right direction. But now it's the

opposite.” Anna described what she found upon her return to the department as a faculty member:

I saw a department just about to bust open ... ready to blossom and to change. I saw a lot of good things going on but yet no pressure to do it ... a grass roots kind of thing ... people living out their desires and just naturally it was beginning to catch on. I think I saw a positive side here that I had not seen before.

When I came back I think I saw ... a ... readiness to change. The curriculum was changing, and I thought the theory behind why it was changing was good. And I just thought there was a real readiness to kind of reconstruct and go in a different direction.

Before Anna took her leave of absence for full-time enrollment in a doctoral program, she observed negativity – an aspect of the departmental climate. When she returned from her leave of absence she noted a change in the departmental climate (from negative to positive). Additionally, she observed changes in departmental philosophy (theory of curriculum) and practices (pedagogical changes). In the first year of her post-doctoral employment, the graduate curriculum was revised, particularly with regard to the content of some courses and the sequence of courses. In the second year, a new curriculum for post-baccalaureate students with undergraduate degrees in other fields was adopted. Anna’s attention to the departmental climate, philosophy, and practices

suggests a growing awareness that academic cultures are more than the climate of the culture and that multiple facets of a department can experience and demonstrate change.

“Satisfaction With the Status Quo”

Anna also had observations about the university, derived largely from comparisons to the institution where she completed her doctoral education. She described her career institution as having a “slowness” that her doctoral institution did not have. This “slowness” created delays in completing necessary aspects of work, particularly research work.

Here [career institution] it was just a real sense of they’re not very progressive; not really willing to ... step out and take the risk; not fast paced. There’s ... a satisfaction with the status quo ... university-wide, even though on paper they don’t say that. But I think to see how everything plays out the status-quo wins every time, and when you see people out there that are really trying to make headway and change, those people don’t stay very long.

While the differences in the processes and procedures at the two institutions might partially reflect differences in how the institutions are controlled, particularly because they are not in the same state, Anna made it clear that she observed a different “mindset” as well as different processes and procedures.

“There Is an Old Boys’ Club”

Finally, Anna completed her research in the area of voice disorders – the aging voice in particular. Anna described the community of voice specialists in the discipline

as “an old boys’ club.” Anna also discussed the specialty area within CSD that she was joining as part of her career:

Most of the anchors in the field are men ... they’re speech scientists and anatomists and they all know each other and they all go way back. So it’s kind of a hard, intimidating field for a new female Ph.D. to be in. But fortunately, there’s a whole bunch of guys who finished their Ph.D. at the same time as a lot of the girls in basic science.

Anna’s own language, referring to females in the field as “girls” and males in the field as “men” or “guys” (instead of “boys”), along with her immediate recall and naming of young male researchers, may be indicative of how deeply ingrained notions of gender differences are within a particular discipline. Even though her observation was that they were all “breaking that mold” of the good old boys’ club, her narrative may contradict her observation.

When Anna returned to academia, she left a doctoral program with numerous mentors to return to an institution with a heavy emphasis on teaching, a department where she was the only member of the faculty with a research-based doctoral degree, and a desire to increase the importance of research—as evidenced in departmental practices and teaching—in the departmental identity.

As the participant with the least amount of experience in her post-doctoral academic position, Anna has had little time to focus on developing her research identity. Instead, she has focused on raising awareness within the department as to the importance of changing the departmental identity to one that places research at the center of what it

teaches, academically and clinically. She has made positive gains in that area, helping to establish a research interest group made up of interested faculty members and both graduate and undergraduate students.

After Anna agreed to take part in this study, but before the first interview, she resigned from her position for the next academic year saying that she wanted to focus on being a better wife. In informal conversations, Anna told me that since she became a researcher, she had lost interest in teaching the way it was typically done in the department. Instead, she was more energized and fulfilled by mentoring, individually or in small research teams, students focused on the practice of research.

Corinne

Corinne anticipated returning to the institution where she formerly worked when she completed her doctoral degree, but she was facing a significant reduction in pay due to reclassification of her position. Her doctoral advisor gave her what she referred to as “very good advice”:

So basically what he told me was, “You’ve got the [research] degree, go use it. You can always go to teaching if you want to, but you can never go the other way.” So I was scared to death, but I had the credentials [for a research position].

Consequently, Corinne began her post-doctoral academic career at a research-intensive institution, immediately after completing her doctoral degree, in 2002. Three experiences contributed to her identity development during her post-doctoral academic career: difficulty making the transition from doctoral student to researcher, a grant rejection, and successful research collaboration with a colleague.

“In ... Over Your Head”

Corinne acknowledged that the advice she received about finding a research position was good advice. Beyond that, she knew that her mentor had not spent the time with her that he should, partially because he was preparing for tenure and partly because she was “independent ... [and] self-motivated.” While she respected her mentor, she was not confident in her ability to be an independent researcher when she began her first post-doctoral faculty appointment:

I had not had good mentoring in my doctoral program. I did not know how to be an independent researcher. I was very fortunate in that there were people around me both in my division as well as other divisions in this department who were unrelentingly generous with their time and help. There were many, many times when I [thought to myself], “You’re in way, way over your head.”

Consequently, Corinne struggled to find a line of research to develop. Initially, she frantically tried to find anything that she could publish:

I was doing everything I could do to be successful. I wasn’t doing stuff related to my dissertation so I was doing stuff related to my class. I was trying to be as creative as possible, use every experience that I had to produce some kind of profit whether it was a paper on an approach in one of my classrooms or something, and that’s what I focused on.

Using her classroom environment to support a publication became the basis for a later research collaboration that was instrumental in her identity development.

Rejection

Beginning an academic position feeling unprepared is daunting enough, but that was not the only challenge Corinne faced as she settled into her first post-doctoral academic position. Unfortunately, she also faced rejection as she wrote her first grant to a national granting agency in her first semester on the job:

So, they [grant proposals] go to the funding source. ... And the AAC family and the assistive technology family is so small it is incestuous, so you've only got a handful of people [reviewing proposals] as opposed to say child language. They can sit on a review committee, and if they know that somebody else is trying to get something similar pushed through, and that's exactly what happened because what I was proposing was actually more advanced than what somebody else was proposing, but that person—they knew that person, and they didn't know me because you know I [had been] a non-traditional student ... nobody had ever heard of me.

Corinne's application was rejected, as were many other grant applications and manuscripts over the next few years. She credits most of the rejections she received with making her a better researcher: "I learn something from every one of those rejections." Corinne only received two rejections that she believed were unfair and yet, she also "learned a lot from those experiences."

Corinne shared three things she learned from those experiences. First, she learned that she needed to get “tough.” She needed to put the feedback away until she could get past her emotional response “to learn what they’re trying to teach me.” Second, Corinne learned: “I don’t always have to agree. If I have a position that’s strong enough, I can say, ‘I understand where they’re coming from’ ... and leave it alone.” Third, Corinne learned to rely upon her colleagues, one in particular, with more experience with acceptances and rejections. Her colleague reminded her that feedback was not personal and taught her how to parse out the feedback one piece at a time.

Learning from these rejections has prepared Corinne to design a unique and new line of research, which developed out of an idea she heard while attending a conference. Her project will involve seven other specialists in related areas (e.g., muscle physiologist, engineer, pediatric radiologist) and her upcoming sabbatical will give her time to develop and refine her protocol.

Harper

Corinne used her classroom to support a research project that grew into a National Institutes of Health (NIH) funded research project with a colleague on the faculty, Harper. Corinne realized that in that classroom she had “30 normals”:

Harper and I were so fortunate that we worked so beautifully together that we would trade stuff off based on our strengths and weaknesses and it would all come together.

I think ... we shared—I’m gonna put it in past tense—we shared an unbelievable, a magical kind of

collaborative relationship that unfortunately, once the NIH grant was in the mix, you lose that [relationship] I think.

The “magical” collaboration between Corinne and Harper was short-lived, a circumstance Corinne attributed to their success in securing NIH funding to support research into acquired disorders – Harper’s expertise. Corinne speculated that Harper’s mentors from her doctoral work, who had strong research histories and reputations, encouraged the split because Corinne had expertise in developmental disorders. Further, Corinne suspected that Harper’s mentors feared that a continuing collaboration with Corinne could limit Harper’s opportunities within the community of researchers with expertise in acquired disorders. Corinne’s observations and comments suggested that, in many cases, competition is valued over collaboration.

Corinne left a doctoral program where she had little research experience to take a position at an institution with high research activity. Initially, Corinne relied on her dissertation and published four or five articles in a variety of journals. At the same time, she struggled to develop a new line of research and submitted a grant proposal to a large granting agency. When that grant was rejected, Corinne turned to her classroom to generate another line of research. In this work, she collaborated with another researcher and they were successful in securing funding to support their work. Now, in the last year of that grant, Corinne is again trying to establish a new line of research. Although she has not yet secured funding, she has designed a new study and assembled a new research team.

Claire

Claire left a doctoral program where she had significant teaching experience and a moderate amount of research experience, some of which was out of field, to take a

position at an institution with moderate research expectations along with teaching and service demands. Claire began her post-doctoral academic career immediately upon completion of her doctoral degree in the late 1980s. She has been at the same institution since that time and has struggled to establish her identity as a researcher.

“Just ... Survival”

Like Anna, Claire struggled with her faculty workload, trying to find a balance between research and her other responsibilities of teaching (a 9 hour load each semester), advising, and service:

I had to do what I could to get the publications and to get tenured ... so I dabbled here and there. I really feel like it looks like I had a lack of focus. But it wasn't because that wasn't where my interest was; it was just sort of survival.

You know when you're teaching three classes and a section of clinic. ...Clinic supervision is a huge amount of time because they're [student clinicians] always in your office.

... I can't even imagine because we had 9 [clients to supervise] ... you were just trying to survive.

Claire's strategy early on was to be “opportunistic,” like Corinne, and collaborate with others when possible to achieve the necessary publications for tenure, and then later for promotion. Claire's research publications ranged from studies about methods for teaching correct production of sounds, acoustic analysis of various parameters of speech, and neurological aspects of aphasia.

“Up to Speed”

Through a series of interactions, Claire recently found a new line of research to pursue and a new collaboration. It began with an invitation to join a journal club with a neurologist, which led to training on imaging technologies, which then led to running images for another researcher:

So I started going to their journal clubs and started trying to get up to speed on imaging which took a huge amount of time. I was just talking to somebody ... about that.... I said “That’s why if you look at this dearth in my publications, it’s just because it took it so much time to get up to speed. That’s where having more of a background in math to help me understand the modeling, and maybe I don’t have to understand it at that level, but I’m that kind of person that wants to understand what I’m doing. I just don’t want someone to tell me.

Then, a newly hired neurologist with a background in rehabilitation (at the medical school) invited Claire to be the Speech-Language Pathologist on a rehabilitation team focusing on one particular neurological disorder:

She has a background as a physical therapist, so she believes in rehabilitation. She’s interested in memory rehabilitation after stroke, but she was one of the few neurologists [with that kind of interest], so it couldn’t be a more ideal neurologist for me to get involved with.

Someone who actually believes in rehab and does rehab herself. ...Then, radiology gave me an office over there.

Opportunities like this, however, carry their own stresses and Claire feels under pressure to obtain external funding soon, or risk losing a work space and faculty appointment at the medical school:

The minus side is that I'm under a huge amount of pressure to get funded—to get NIH funded, and it's changed my whole life. You know I never—I used to take some time in the summer because you know we have a nine month [contract]—we have a pretty big yard, and my husband's [on a] 12 months [contract] – [so] ... I'd spend Friday afternoon mowing, so he wouldn't have to do it on the weekend. But since I started that imaging thing, I'm in 9 to 6, 9 to 7 all summer, and I'm just tired when I get home. I used to do artsy things, paint pots and make things. But it's really—that's been the downside to everything.

Claire had more experience as a career academic than the other participants. Establishing a research identity was a challenge that was exacerbated by a lack of mentoring and a heavy workload. Even though her scholarly efforts were sufficient for tenure and promotion purposes, Claire noted that she worked at an institution where the “bar's not the highest.”

Claire continues to imagine herself as a researcher, in spite of challenges she has experienced:

The failures are especially hard on how you imagine yourself; where you see yourself being [a researcher]. I guess there's ... a positive side because I think it [failure] drives you. I think it's what motivates you.

You have to be driven to do research. You have to see yourself as a researcher because nobody's going to be knocking on your door to do that. ...I think seeing yourself as that kind of person [a researcher] and then also—maybe that's part of it—but really being motivated to do it, liking to do it and maybe like I said that's part of imagining yourself as a researcher.

Sharon

Sharon began her post-doctoral academic career immediately after completing her doctoral degree. She left a doctoral program where she had extensive research experience and relative autonomy to take a position in a department where she had little influence over her workload and little interaction among faculty members. She stayed in her first position for seven years, earning tenure and promotion to Associate Professor. Two and a half years ago, she accepted an appointment at another institution. She is the only participant whose career has involved two different institutions and the circumstances of both appointments are highly informative about her process of becoming a researcher.

“I Descended Into Utter Misery”

Sharon's first academic position involved teaching three courses—all in her specialty area—per year with minimal advising responsibilities:

[It was a] top research university, so it's like exactly what I had been trying to do, and ... [it was] about 3 months until I descended into utter misery. ... I hated that I had gone from a unit where everybody comes to work and we have open doors and people are very [unintelligible] to a place where nobody came to work, all the doors were closed, nobody talked to each other; there was no sense of community.

Sharon contacted employee assistance for help and began looking for other jobs. In the fall of her second year she received another offer and tendered her resignation. Her dean, who did not want her to leave, negotiated a new workload with Sharon so she would stay:

I had no idea what I was doing. I just wanted the hell out of this place. What was really interesting is he said "I need ... one week. We need to sort this out because I don't want to lose you."

He said "what do you need to stay?" and I said, "I don't want to be in my program anymore. I said it just doesn't make me happy." And he said "Well, how about moving into reading?" And I said it might work, but I don't know, and he said, "We'll give you a year off [for research]."

Sharon agreed to the new workload, even though she worried about how it might affect her relationships with the CSD department. Those worries were unfounded:

The things I hated about CSD totally worked in my favor because basically when I was in CSD, they just acted like I didn't exist. When I left, they just acted like I didn't exist. I thought, "People are going to be so mad at me." But, nobody [was]—it was like it didn't even happen.

"Back to Normal"

Not long after receiving her tenure, another, large, research-intensive institution in her home state recruited Sharon. Their pursuit of her signaled that she had achieved a level of success as a researcher:

[Large institutions] poach. They want people who have money; so once you have funded research they try to poach. They know that poaching time is before ... kids start school and [right] before ... kids graduate [from] school. They knew that I had funded research and that my daughter was about to start kindergarten.

Sharon accepted an appointment—as a full professor—in the College of Education with a joint appointment in CSD. She was guaranteed no teaching for the first year, one doctoral seminar her second year, and this past year she taught one doctoral seminar and one master's level class.

[The move] was a huge risk. It was very, very, very traumatic because I had a staff. I had a lab. I had to move millions of dollars worth of projects, but I just put one step

in front of the other and did it and I got here and it was amazing to me. I had felt unhappy for 7 years. The second I got here I felt happy, and I felt like I was back to normal.

“A Bit of Identity Confusion”

Of all the participants, Sharon is the only one who has not held full appointments in a CSD department, working primarily out of colleges and schools of education. Her research on literacy, which she described as “on the fringes,” cuts across numerous disciplines. Strangely enough, it was through CSD that she found herself as a researcher in her doctoral program. Since then, she has found she fits better – at least in an academic environment – outside of the CSD departments at the institutions where she has worked:

I feel like I’ve been able to be really successful on my own terms. I have a job that I really, really enjoy. I make a good salary. I have tremendous autonomy. And so for me, to me the only thing that I would say is a little bit difficult, but I wouldn’t say is particularly challenging, is probably the issue of identity. When I got my Ph.D. in speech and hearing science that was really my home, and it’s my first identity, but I’m not in a speech and hearing program. I don’t have speech and hearing students. I publish in a lot of other journals, and some of the time you get a bit of identity confusion. So, I would say sometimes if there’s one thing I grapple with, it would be every once in while feeling like “wouldn’t it be cool to be in a speech and

hearing program.” But that only lasts for about two seconds.

Sharon had little difficulty establishing her identity as a researcher when she began her post-doctoral career. Even though she was not comfortable in her first position she negotiated to create a work environment where she had a substantial amount of autonomy. In the process, she successfully received millions of dollars of grant monies and built a substantial lab. Sharon’s latest appointment promised autonomy from the beginning and she has been a prolific researcher in the two and-a-half years there. She has doubled the size of her lab since moving it with her and now supervises six doctoral students who work as researchers in her lab.

In some ways, Sharon’s identity as a researcher has not changed since beginning her career. She seems to have always understood at some level her need for autonomy and control. Her success as a researcher gave her the leverage to negotiate her workload, and she has not had to struggle balancing a workload of teaching and advising, research, and service like the other participants. In this regard, Sharon’s identity as a researcher has not been compromised with the intrusion of those competing identities associated with the responsibilities assigned to other academics. Moreover, Sharon has actively sought situations that fit her identity as a researcher. Her only hesitation concerning her career, strangely enough, relates to her disciplinary identity. She characterizes her research as being “on the fringes” of multiple disciplines, such as CSD, literacy studies, and education.

Career Influences on Identity Development

In the previous chapter, I examined motivating, enabling, and constraining factors that influenced the participants’ developing research identities through their experiences

in their respective doctoral programs. As I had anticipated, they had much to teach. What I had not anticipated, however, was that they would identify a number of enabling and constraining factors in their post-doctoral careers that have influenced the development of their research identities. Even more surprising was that the participants collectively experienced more constraining factors at the career level than during their doctoral programs. Because one aspect of the crisis in CSD pertains to attracting people who hold doctoral degrees to higher education, as well as retaining them in academic positions, an examination of these influences has the potential to contribute new understanding to the problem of too few doctoral level faculty members in CSD.

As I did in the previous chapter, I identify the specific enabling and constraining factors experienced by the participants in their post-doctoral academic careers. Additionally, I examine the quantity (how many) and quality (what kind) of factors using an analytical strategy of representing the narrative data numerically (see chapter 3).

Enabling Factors

Anna's narrative contained evidence of two enabling factors representing the tools and community variables (see Table 6). With regard to tools, Anna's reduced teaching load afforded her more time to engage in research. The creation of a faculty-student research community within her department, which Anna organized, has provided her with much needed, yet insufficient, support of her own research endeavors.

Table 6: Enabling Factors in Post-Doctoral Career

Participants	Variables of Practice			
	Tools	Community	Roles	Rules
Anna	reduced teaching load	departmental research community		
Corinne	reduced teaching load	departmental and college support		
Claire	clinical background learning how to do imaging studies	collaboration with colleagues for publications		
Sharon	previous research experience (in doctoral program) reduced teaching load (second academic position)	“female leadership styles”	published author	

Corinne’s narrative contained evidence of two enabling factors representing the variables of tools and community (see Table 6). First, Corinne had a reduced teaching load her first two years to support her as she sought to establish a line of research. This arrangement gave her a tool she needed to be successful – time. A second enabling factor came from the community element of her practice. Corinne’s department and college gave her “tremendous” support to establishing her own line of research.

Claire has the most experience at the post-doctoral career level when compared to the other three participants. Her narrative contained evidence of three enabling factors representing the variables of tools and community (see Table 6). Enabling tools included her clinical background, which she believes allowed her to understand the problems she

has studied as human problems. Another enabling tool for Claire was knowledge about how to do and interpret imaging studies, which led to a third tool. Claire has space for her research at the medical school of her university and access to the imaging equipment needed for her research. An enabling aspect of the community variable benefitted her early in her career. Claire had colleagues who invited her to collaborate with them, giving her a sufficient number of publications to earn tenure and promotion.

Sharon's narrative contained evidence of four enabling factors representing the variables of tools, community, and roles (see Table 6). The enabling tools included a reduced teaching load in her second academic position and her extensive research experience, including the knowledge and skills associated with that experience, acquired during her doctoral education. As previously mentioned, Sharon completed several studies, of which her dissertation was one, while still a doctoral student. With regard to the variable of community, Sharon found that working within a system directed by "female leadership styles," as is the case with her current position, was enabling for her research practice and identity. Finally, by the time Sharon began her post-doctoral career, she already had acquired the role of published author, a role she would continue to play throughout her post-doctoral career.

Constraining Factors

Anna experienced numerous constraining factors that posed barriers to her attempts to establish her research in her post-doctoral academic career (see Table 7). Her narrative contained evidence of six constraining factors representing the variables of tools, community, roles, and rules. First, Anna did not have access to all of the tools she needed, such as a fully equipped lab and the financial resources to run such a laboratory. With regard to community, Anna worked in a department that was primarily focused on

clinical endeavors and development and in an institution known more for teaching than research. Anna's teaching, advising, and service roles eclipsed her role as a researcher. This may be a circumstance that will continue to plague women, as more and more institutions adopt operating models that reflect business models (Saunderson, 2002). In those institutions, Saunderson noted, "women's identities are compromised, challenged and made 'vulnerable', through varying feelings of being undervalued, overlooked, overburdened, and often the subjects of unequal treatment" (p. 400). Furthermore, there were conflicts between the stated rules of the institution (e.g., faculty shall engage in research) and the enacted rules as evidenced in workload assignments that limited Anna's engagement in sustained research activity.

Unfortunately, Corinne identified many more constraining factors that negatively impacted her ability to develop her identity as a researcher than enabling factors (see Table 7). Her narrative contained evidence of seven constraining factors representing the variables of tools, community, and roles. With regard to tools, Corinne began her academic career unprepared to be an independent researcher. In other words, she lacked the knowledge and skills she needed. Additionally, Corinne had insufficient resources, particularly financial, to support her research efforts.

Table 7: Constraining Factors in Post-Doctoral Career

Participants	Variables of Practice			
	Tools	Community	Roles	Rules
Anna	lack of adequate laboratory facilities lack of adequate financial resources to support research	department values clinical over research institution values teaching over research	institution valued teaching, advising, and service over research	differences in stated and enacted rules regarding research
Corinne	lack of pre-requisite knowledge and skills for research lack of adequate financial resources to support research	institution with high service expectations discipline with limited support for current academics	gender bias and sexism in sub-discipline higher expectations for committee work for women institutionally unclear SLP identities	
Claire	lack of knowledge about requirements of academia nine-hour teaching load lack of support for research – including financial	early collaboration with colleagues and publications in a variety of areas	sees self as unsuccessful because she has not secured external funding excessive service responsibilities sexism from other women	changes in disciplinary practices and standards changes in scoring procedures at external granting agencies
Sharon	“heavy” teaching load (first academic position)	“male leadership styles” within CSD departments		

Corinne also experienced two constraints at the community level. First, at the institution she had an unusually high number of service assignments within her division (the university structure between her department and college) during her first two years. In many ways, the service demands of the division cancelled out the enabling aspects of the support she received from her department and college. While her institution is a

research-intensive institution, the service expectations are not unlike those that Anna experienced. Second, Corinne noted that although the discipline had high expectations for researchers there was insufficient support from the discipline for researchers, particularly those already in academia (as compared to those preparing to enter doctoral studies).

Finally, Corinne also experienced constraints because of the roles, three in particular, she has been expected to assume. First, as a researcher, Corinne identified gender bias and sexism within her sub-discipline, which is dominated by men who have the power to reject grant applications and articles through the peer review process. Second, at the university level Corinne has observed greater expectations for women, than for men, to serve on committees. Third, Corinne believes that Speech-Language Pathologists (SLPs) do not have clear identities; they work in areas that overlap with other professions. For instance, SLPs work with individuals with swallowing and feeding problems, overlapping with medical professionals and physical and occupational therapists.

Claire identified more constraining factors than did Anna or Corinne (see Table 7). Her narrative contained evidence of nine constraining factors representing the variables of tools, community, roles, and rules. With regard to tools, Claire identified three constraining factors. First, when Claire began her academic career, there were no mechanisms for mentoring new faculty. Consequently, she did not have knowledge about the academy and accepted too many time-intensive service assignments in her second year. Second, and until recently, Claire has carried a nine-hour teaching load, which has significantly reduced the amount of time she has for research. Recent changes

in the CSD curriculum at her institution, however, have created opportunities for the department to be more flexible in assigning course loads, a circumstance that has mitigated—to some degree—the constraining effects of her teaching load. Lastly, Claire—like Corinne and Anna—found the university’s practice of requiring research productivity without offering sufficient kinds and levels of support to be contradictory. Those researchers who demonstrate productivity receive more institutional support; those with limited productivity receive less institutional support even though they may have a greater need for it.

Even though Claire acknowledged that collaborating with colleagues early in her career was enabling, there were also constraining aspects to that strategy specifically in terms of the community element of her activity system. By publishing in several different areas, Claire has not yet established a strong research presence in any one area. Her “disjointed” publication history means she does not have recognition as an expert in any single area of study.

The variable relating to the roles Claire plays has perhaps been the most constraining. Her relative lack of success in achieving external support for research has made it difficult to see herself in the role of researcher and she finds it increasingly difficult to imagine herself as successful. Additionally, Claire spends a significant amount of time in her service roles at the university. Finally, Claire’s role as a woman has been constraining because of sexism, some exhibited by other women at her institution. Particularly pertinent to these constraints are the expectations other women have for how Claire uses her time because she does not have children.

Finally, Claire identified two constraints affecting the rules element of her activity system. The first focuses on the discipline. Disciplinary practices change over time, meaning that what may be acceptable within the discipline at one point in time may be unacceptable at another point in time. In other words, the rules associated with the profession are constantly evolving. Additionally, recent changes (e.g., reducing the levels of review from three to two) in how external granting agencies score grant applications have, in at least Claire's case, made it more difficult to receive external funding for research.

Sharon identified the fewest number of constraining factors (see Table 7). Her narrative contained evidence of two constraints representing the variables of tools and community. Sharon's heavier teaching load in her first academic position was a constraint in the tools category. Working within a community directed by what she called "male leadership styles," as she did in the CSD department in her first academic position, was constraining to her. Sharon found that community to be "too small and provincial" for her own growth and development as a researcher. In fairness, however, I must note that the differences in Sharon's situation were also a function of working in departments that belonged to different colleges than most CSD programs and had different kinds of oversight. Because the requirements for CSD programs are prescriptive, even those CSD programs being directed with what Sharon would call "female leadership styles" may have still been too small and provincial for Sharon.

Interaction of Enabling and Constraining Factors

Looking across the career, I again examined the quantity, or how many, and quality, or what kind (tools, community, roles, or rules), of factors that enabled the development of the participants' research identities in their post-doctoral academic

careers. Anna identified two enabling factors and two kinds of influences (2/2); Corinne identified two enabling factors and two kinds of influences (2/2); Claire identified three enabling factors and two kinds of influences (3/2); and, Sharon identified four enabling factors and three kinds of influence (4/3). This information is summarized in Table 8.

In terms of constraints, or impediments, to developing research identities throughout the career, Anna identified six constraining factors and four kinds of influences (6/4); Corinne identified seven constraining factors and three kinds of influences (7/3); Claire identified nine constraining factors and four kinds of influences (9/4); and, Sharon identified two constraining factors and two kinds of influences (2/2). This information is summarized in Table 8.

In chapter 8, I compared the quantity and quality of enabling and constraining factors up through the participants' doctoral education. That comparison showed the participants were more enabled than constrained in their efforts to develop a research identity. In contrast, this comparison at the post-doctoral career level shows the opposite. With the exception of Sharon, who had more enabling factors than constraining factors, the participants experienced more constraining factors than enabling factors in the development of their research identities across the career. In the cases of Anna, Corinne, and Claire, there were at least twice as many constraining factors than enabling ones. Additionally, for these three participants, there were more kinds of constraining factors than kinds of enabling factors.

Table 8: Enabling and Constraining Factors in Post-Doctoral Career

Participants	Enabling	Constraining	Enabling		Constraining	
			Quantity	Quality	Quantity	Quality
Anna	Tools (1) Community (1)	Tools (2) Community (2) Roles (1) Rules (1)	2	2	6	4
Corinne	Tools (1) Community (1)	Tools (2) Community (2) Roles (3)	2	2	7	3
Claire	Tools (2) Community (1)	Tools (3) Community (1) Roles (3) Rules (2)	3	2	9	4
Sharon	Tools (2) Community (1) Roles (1)	Tools (1) Community (1)	4	3	2	2

These data suggest that once the participants began their post-doctoral careers, ongoing development of a research identity became a formidable task. In chapter 1, I reported that only 50% of those individuals who obtain doctoral degrees in CSD take positions in higher education. If the challenges faced by Anna, Corinne, and Claire are any indication of the experiences of other women, then professional success in higher education is much more difficult to achieve than professional success in clinical practice. Claire articulated her concern about the challenges of being successful in higher education:

I think they [students] sometimes see our lives, and they don't think it looks very fun. ...It's not a 9-5 [job] and I think a lot of people don't want that. ... Especially women who want to have a family. ...I think it's really hard to feel

like you could do a good job at all of it, 9-5, and I don't think that's appealing.

Identity and Identity Development

Reybold and Alamia (2008) studied identity development over time (see chapter 2 for a summary of this work) and identified two types of faculty identities. First, they described a “provisional faculty identity” that commonly appears in doctoral students and faculty members in their early careers. Reybold and Alamia characterized this type of identity as tentative in nature. Individuals with this kind of identity experiment; they try on various identities as they strive to achieve balance among their faculty responsibilities of teaching, advising, service, and research. Second, they described a “resilient faculty identity” that is more commonly seen in experienced faculty members. Individuals with this identity demonstrate coherence and confidence in their work and are focused on achievements, rather than responsibilities.

Of the participants in this study, Anna and Claire most closely fit the description of provisional faculty identity, even though Claire has been a faculty member for a significant length of time. Both Anna and Claire are seeking to establish an area of research or coherence in their research. Additionally, both are attempting to develop confidence in their abilities. Sharon most closely fits the description of a resilient faculty identity. She has coherence in her work and confidence in her abilities. Additionally, she is less focused on her responsibilities as a faculty member than the other participants, although that may be simply because her teaching and advising responsibilities are far less than those of the other participants. Corinne appears to be transitioning from a provisional faculty identity to a resilient identity. Having achieved tenure, she has the opportunity to focus on a new line of research, which could lead to coherence and

confidence in her work. If successful, she would be well on her way to a resilient faculty identity.

In addition to Reybold and Alamia's (2008) classifications of identities, Åkerlind (2008b) created a typology of how academics understand identity development (see chapter 2). She found that faculty members conceived of development as a process of developing confidence and competence, gaining professional recognition, increasing productivity, or increasing research quality. Furthermore, although Åkerlind saw these categories as increasingly more complex conceptions of identity development, she also acknowledged that researchers move back and forth between these categories at various times in their careers.

Three of the four participants, Anna, Corinne, and Claire, hold understandings of identity development consistent with the first category in which researchers are developing competence and confidence. This category is most often associated with new researchers, like Anna. Corinne is a relatively new researcher and her new line of research is requiring her to develop competence and confidence as a researcher. Claire, although a seasoned faculty member, has recently trained for and pursued a new line of research involving imaging studies. Because she is undertaking something new, she is also developing competence and confidence. Once they develop more competence and confidence in their research, their identities as researchers will be more secure. Sharon, unlike the other three participants, has developed competence and confidence, gained recognition from her colleagues as evidenced by her publication and presentation record, has the most productive record as a researcher, and now has the luxury of increasing the quality of her research. Her identity as a researcher is firmly established.

The Practice of Research

Two important connections can be made concerning the practice of research in post-doctoral careers. CHAT suggests that people are motivated to change when there is tension among the variables of practice (i.e., subject; object, or goal; tools; community; roles; and, rules) (Engeström, 2000, 2001). Anna and Sharon both made changes. Anna changed her goal from continuing her line of muscle research to changing the culture of her department to more closely integrate teaching, research, and clinical practice. That change brought more harmony to the variables of her practice in a number of ways. First, her new objective required a different set of tools, many which were available to her. Second, her new objective was more closely aligned with the objectives of the departmental community, thus ensuring a greater amount of support for her work. Third, the roles Anna already played, especially her role as a teacher, were required to achieve her objective. And last, the rules associated with her new objective created less tension with the rules of the departmental community.

In Sharon's case, we saw a different kind of change. Sharon kept her objective but negotiated other changes that created more harmony in her practice. For instance, she negotiated a change in community when her appointment switched from CSD to reading. This change placed Sharon in a role and a rule system more compatible with her objective.

This analysis revealed a number of interesting phenomena. First, it appears that the process of developing a research identity becomes more complicated and difficult once doctoral degree holders move into their academic careers. This is especially discouraging in light of the fact that only about 50% (ASHA, 2008) of doctoral degree holders in CSD take positions in academia. Of the three participants at research

institutions, the most successful was Sharon. She has a large research lab, a staff, and millions of dollars in research grants. In addition, she is a prolific, published author of books and journal articles. Most troubling in that group is Claire's situation. In many respects, she has made little tangible progress toward meeting her initial goal of establishing a line of research. She has also experienced more constraints than either Sharon or Corinne. In between Sharon and Claire is Corinne. At this point in her career, she is poised to achieve her goals with her new line of research.

I considered Anna separately from Corinne, Claire, and Sharon for three reasons. First, Anna has only been in her post-doctoral career for two years, not long enough to determine if she is on the path to success as a researcher. Second, Anna has already changed her research objective—as I previously discussed—so her progress toward meeting that new objective cannot be meaningfully considered in the same context as the others. Finally, Anna was the only participant whose career was unfolding in a teaching-intensive institution. Anna's narrative does, however, offer a first look at what it means to move from the culture of a doctoral program at a research-intensive institution to a faculty position in a teaching-intensive institution.

Collectively, the participants represented two general kinds of experiences in developing their research identities on the career track. Anna, Corinne, and Claire—the three participants with appointments in CSD departments—told stories of adjustment and struggle. Sharon told a similar story but hers had a happier tone. Not long after beginning her first post-doctoral academic appointment, she negotiated a transfer to another department and a new workload. Doing research became considerably easier for her then. These initial challenges are ongoing for Anna, Corinne, and Claire, who are

struggling with tension between their identities as researchers and their identities as faculty members—the latter interfering with the ongoing development of the former. Even though these three participants told stories of struggle, their struggles are not the same. Contributing to their challenges then are variations in institutional support and demands.

CHAPTER TEN: INTERPRETATIONS AND RECOMMENDATIONS

The declining numbers of doctoral-level CSD faculty threaten the future of the discipline. The American Speech-Language-Hearing Association (ASHA) has launched numerous initiatives to resolve the problem. Most have focused on answering the question of why women in CSD do not become researchers. The gravity of the shortage, however, requires a comprehensive and efficient strategy. Consequently, an equally valid question is: How do women in CSD become researchers?

The purpose of this study was to develop understanding of the process of becoming researchers. To that end, I endeavored to answer the following questions:

1. What motivated the participants in the study to become researchers?
2. What factors facilitated the development of their research identities?
3. What factors constituted barriers and obstacles to the development of their research identities?
4. What role did schooling, especially research-related curriculum and instruction, play in the development of their research identities?

To answer these questions, I talked with women in CSD who had become researchers. I found Anna, Corinne, Claire, and Sharon using snowball and convenience sampling. All of them held earned research-based doctoral degrees, held Certificates of Clinical Competence as Speech-Language Pathologists (SLPs) from ASHA, were on academic appointments in institutions of higher education with expectations for research productivity, and either self-identified as researchers or had been named as researchers by others.

Using Seidman's (2006) three-interview series, I collected oral histories – or life stories – from Anna, Corinne, Claire, and Sharon. The first interview focused on their life experiences beginning with early childhood through doctoral education, the second interview focused on their research activities, and the third interview asked participants to reflect on the meaning of their experiences.

Data analysis was multi-faceted. I coded the interview transcripts in the following ways. First, I identified the stories they told. Second, I coded the transcripts according to the categories of early childhood and elementary education, secondary education, college education, interim activities (e.g., clinical practice), doctoral education, and career. Third, I coded the data using the categories of motivating factors, enabling factors, constraining factors, and the role of schooling.

To interpret the information related to the role of schooling, I relied upon Eisner's (1988, 1992) five dimensions of schooling. To interpret the information related to the motivating, enabling, and constraining factors, I relied on the cultural-historical activity theory (CHAT) to ensure a systematic and meaningful interpretation of the data.

Interpretations and Conclusions

Motivating Factors

In response to my question concerning what factors motivated these women to pursue doctoral education I have one major finding to report. The motivating factors described by the participants were internal and external in nature. Observations, such as Claire's that one must be "driven" to research, suggested that internal motivation might be a pre-requisite for external motivation. However, internal motivation alone may not be enough. The high cost of doctoral education in time and money may be a deterrent to

those who are driven solely by internal factors. In other words, individuals may need internal and external motivations to achieve their goals of completing doctoral programs.

This finding suggests that motivations are not discrete and static constructs. As I previously discussed, tension between two or more variables of practice motivates people to act. Anna provided an example of this way of thinking about motivation in her narrative. Prior to her enrollment in a doctoral program, she was a junior faculty member who wanted to learn, gain credibility and confidence as a teacher, and acquire the credential associated with researchers. In her practice, tensions existed between her goals, the tools at her disposal to achieve her goals, and the community in which she practiced. These tensions moved her to act, and she enrolled in a doctoral program.

ASHA has successfully implemented this strategy of manipulating the variables of practice in the past. In the late 1970s, ASHA increased the minimum educational requirements for certification as a SLP from the bachelor's degree to a master's degree. A master's degree would be one of the tools required to achieve the goal of engaging in clinical practice. This change created tension between two variables: goals and tools. Consequently, individuals were motivated to reduce that tension by obtaining a master's degree.

Changing educational requirements is but one example of the strategy of manipulating practice variables to motivate people to act in particular ways. And, while one possible manipulation could be to simply raise the minimum educational requirement to the doctoral degree, there are two reasons this may not be an effective strategy. First, the discipline requires both practitioners and researchers in order to thrive and grow. Raising the minimum degree requirements would affect both practitioners and

researchers. SLPs who are primarily interested in being practitioners would continue to pursue clinical careers in spite of having the terminal degree. The overall impact on the composition of faculties in higher education is not a certainty even if there are more SLPs who have doctoral degrees. The second reason is an issue of capacity. There are far fewer institutions that offer doctoral degrees than master's degrees. An increase in the minimum educational requirements would further restrict the number of certified SLPs, a restriction that would deepen the national shortage of practicing SLPs. Other manipulations might be equally effective in motivating SLPs to pursue doctoral degrees and are discussed in the following sections.

Enabling and Constraining Factors

In response to the second and third research questions relating to enabling and constraining factors and their relative influence on identity development, I have three key findings. The first relates to the emerging research identity, the second to the ongoing career research identity, and the third relates to specific enabling and constraining factors most often mentioned by the participants.

I analyzed these enabling and constraining factors in two parts: early childhood through doctoral education and in the career. In the former, the participants identified far more enabling factors than constraining factors. These findings, as they relate to the emerging research identity, suggest two things. First, the impact of enabling factors may be a function of quantity (how many) and quality (what kind – tools, community, roles, rules) of those factors. For instance, a given number of enabling factors may have greater influence if those factors represent more than one kind of factor. In other words, 10 enabling factors representing three kinds may have a greater enabling influence than 10 enabling factors representing a single kind.

Second, at the beginning stages of developing a research identity, enabling factors may have more influence than an equal number of constraining factors. In other words, supporting the emergence of a research identity may be more successful by increasing the number and kinds of enabling factors rather than focusing on the elimination of constraining factors (although in some cases, adding an enabling factor automatically removes a constraining factor). Careful selection and introduction of enabling factors of differing kinds may provide greater support for the emergence of a research identity.

The data suggest just the opposite regarding the development of a career research identity. Participants identified more constraining factors than enabling factors as they began post-doctoral careers in academia. These findings also suggest two things. First, the impact of constraining factors may be a function of quantity (how many) and quality (what kind) of those factors. For instance, a given number of constraining factors may have greater influence if those factors represent more than one kind of factor. In other words, 10 constraining factors representing three kinds may have a greater constraining influence than 10 constraints representing a single kind.

Second, in contrast to the theory that enabling factors may be more influential for emergent identities, constraining factors may have more influence on sustaining a research identity. In other words, sustaining a research identity across the career may be most successful by decreasing the number and kinds of constraining factors (although in some cases, removing a constraining factor automatically adds an enabling factor). Deliberate selection and elimination of different kinds of constraining factors that increase the congruence between the elements of practice may be more stabilizing on research practice than increasing enabling factors. Careful selection and elimination of

constraining factors, category by category, may have the necessary stabilizing effect on practice to facilitate the ongoing development of a research identity in the career.

The majority of influences on the development of the participants' emerging research identities were enabling, by over a two to one margin (42 enabling, 18 constraining). The most common enabling factors included financial support for schooling; preparatory experiences (e.g., statistics courses or previous research experience); and mentors such as teachers, dissertation advisors, and dissertation committees. The most common constraining factors included concerns about poor preparation in K-12 for college and inadequate backgrounds in research prior to doctoral education as well as dissertation advisors.

In either case, organizations such as ASHA or university programs may have more success attracting individuals to doctoral education by offering incentive packages that include a variety of kinds of enabling factors (e.g., tools *and* community support, not just tools). These packages can be constructed to meet the needs of individual students and should be evaluated periodically to ensure that students' needs continue to be met. This ongoing monitoring may increase the number of individuals who complete doctoral education.

The data suggest that the role of enabling factors may be different once individuals begin their post-doctoral careers. Anna, Corinne, and Claire experienced substantially more constraining factors than enabling factors at the career level, suggesting that post-doctoral academic careers do little to support the evolution of the research identities that emerged in doctoral programs. In other words, ongoing development of research identities in a work setting that demands research productivity

for job security and advancement may be difficult to achieve. Faculty may be more successful if efforts are made to eliminate constraining influences rather than increasing enabling influences.

Schooling

In response to the question concerning the role of schooling in the development of research identities, there were three key findings. First, master's degree programs in CSD contribute little, if at all, to the development of a research identity. With the exception of Sharon, who completed a modified graduate program of study because she had already decided to pursue a doctoral degree in CSD, none of the participants credited their graduate studies with being positive influences on the development of their research identities. The primary purpose of the graduate education experienced by Anna, Corinne, and Claire was the development of clinical identities and their programs were highly successful in achieving that purpose. Unfortunately, the singular focus of graduate programs to develop identities as clinical practitioners may be antithetical to the development of research identities. The success of graduate programs in facilitating the development of clinical identities can, however, inform doctoral programs, particularly in the curricular dimension.

The second finding is that curriculum matters in the development of particular identities. Here is where doctoral programs can learn from the success of graduate programs and identity development. The Council on Academic Accreditation (CAA) of ASHA primarily drives the curriculum of graduate programs through the standards for academic programs. In addition to coursework that leads students to achieve content benchmarks, graduate programs also require multiple clinical experiences. Overall, students must acquire 375 clinical clock hours, with 350 of those in direct patient contact.

Students typically meet these requirements through a series of clinical rotations that occur over a two-year period. In these rotations, students are usually placed at two or more different kinds of facilities (e.g., hospitals, schools, nursing homes) and are immersed in the culture of clinical practice. In these placements, students are supervised by licensed and certified SLPs who serve as mentors and aid in socializing students into the culture of clinical practice.

The rate of success of graduate programs in CSD suggests that immersion in research practice over time may likewise facilitate the development of strong research identities. Sharon's doctoral program of study, which excluded content courses in favor of conducting research in independent study courses, supports that assertion. She began researching in her first semester; the other participants started much later in their programs. Corinne, for example, did no research until she began her dissertation. Doctoral programs may facilitate the development of strong research identities by reducing the number of required content courses in favor of immersing students in the practice of research earlier in their programs of study.

The third finding is that teachers and teaching matters. The participants were quick to identify the many traditional and non-traditional (e.g., parents, clients) mentors in their lives who had shaped them in positive and negative ways. The positive contributions of teachers included their interpersonal interactions with students; they listened to what students had to say and challenged them. In overt and covert expressions of their values, beliefs, and practices, these teachers represented the "ideal." The participants imagined themselves as the ideal, which motivated them to appropriate certain characteristics of their teachers. In addition to their interpersonal relationships,

these ideal teachers stood out as excellent because they employed teaching strategies that gave the participants a measure of responsibility and control over their own learning.

Additional Narrative Themes: Disciplinary Leadership

A final point of discussion relates to two additional narrative threads, or themes, that emerged from the data. Both of these, gender biases and generational issues, relate to leadership in the discipline and, at times, they overlap one another.

Gender Biases: “You Don’t Have Kids”

At the outset of this study, I anticipated that issues relating to gender would emerge strongly and quickly. To my surprise, gender issues did not emerge until the participants talked about doctoral education. In these instances gender influences were relatively minor. For instance, in her experience, Sharon did not find that women are “fragile” and thus she encouraged her doctoral students to begin families and not wait until they complete their degrees.

Claire referred to gender in the context of her qualifying examination when she described her committee as “five men who all knew their area.” However, the point of her comment was not related to gender. Anna used language, such as “fight,” to describe her qualifying examination—language more commonly associated with male discourses.

Even more surprising, however, was how dominant gender became when the participants described their career experiences. Given what the literature reports concerning gender and the institutional cultures of higher education, my surprise revealed my own naïveté. Corinne attributed the delay in identifying herself as a researcher, which she did not do until her third year of her post-doctoral career, to an abundance of service to the university. In her view, a disproportionate number of service responsibilities are assigned to women: “The other [reason leadership is important] is the

inequity between females and males in academia. ... The women get singled out to do some of the things that could be divided, could be given to the male faculty. ... It's an intimidation issue."

Sharon described her challenges with departmental cultures dominated by men, a description which also hints at generational issues:

And I went into this rinky-dink, little tiny program [in] a house off campus and [met with the] sixty-year old, totally boring, lame man who's the chair of the program; not very creative; ... very narrow [who is a person that] if you talk about cooperation ... starts to shiver. [I thought], "oh my gosh, this is like [my institution]." Then I come [to another institution] and I meet with the chair of speech and hearing and it is the same thing. It's staggering how we have all of these programs that are like little programs; they have these men as the department heads. It's just—but I've seen three of them. ... It's not that they're men, although... it's just a ... lack of vision, lack of creativity, which is all really— from a feminine perspective [a] lateral, organizational structure.

And Claire questioned the balance of power within the discipline, noting that the majority of Ph.D. holders were men and the majority of clinical practitioners were women. Her point was that, even though women dominate the field, men in research

have more control over the discipline than female practitioners. An additional concern for Claire was the issue of sexism:

One of the things that's been really different for me is being a woman who doesn't have kids. ... You're treated like you don't have a life. You have nothing that you need to get home to, so you can put in more time, and there's also discrimination by women. You're not in the club. You can't understand, so I think maybe there's even more sexism from other women ... who don't have kids. [My collaborator has] done that a little to me about running subjects. ... The thing with Katherine asking me to run [a subject] at 10:00 at night after I had been at work all day. ... She ... [said] "You don't have them [kids], so I don't have to worry about that with you."

Generational Issues: "Fat Cats Are Going to Retire"

In addition to the generational references made by Sharon in the previous discussion on gender issues, the narratives included additional observations relating to generational issues and leadership within the discipline. Corinne's experience with her first grant provided an example of her concerns about the generational aspects of leadership in the discipline. She noted that review committees in small sub-disciplines were "incestuous" and tended to favor similar thinking and more experienced investigators:

Look at the [sub-discipline]. It's that same group of people who have been doing research for 25-30 years. I think one

of the problems we have in our profession is we are not encouraging those young investigators who are not going to get tenure, and they're going to get out [of academia] and then we're going to be in trouble because all these fat cats are going to retire. I think that's incredibly dangerous to research. They should be funding the people they are diametrically opposed to, but nobody wants to find out that what they've been doing might be wrong.

Claire also observed that the competitive nature of higher education complicates generational issues. Some strong researchers are not good mentors because they may view their bright students as “potential competitors in the area [of study].”

Disciplinary leadership in CSD is not well understood or studied but the future of CSD as a discipline relies upon our ability to raise new generations of researchers. The current generation must be enabled and empowered to participate in efforts to that end. The discipline cannot focus solely upon increasing the number of researchers—that may not be enough. I offer myself as an example. I will be 55 years old by the time I complete my doctoral program. Assuming I work until I am 65, I can only be counted as doctoral-level faculty for 10 more years. If the career experiences of Anna, Corinne, and Claire are any indication, sustaining my own research identity will take considerable effort, thus reducing opportunities for me to work with new researchers. While I am not minimizing my ability to contribute, overall the discipline will be better served by raising young researchers who will have many more years to contribute to the discipline and who will, in turn, raise more researchers.

Recommendations

Motivating, Enabling, and Constraining Factors

The findings from this study concerning motivating, enabling, and constraining influences lead me to the following recommendations:

1. Attempt to increase motivation to pursue doctoral education by manipulating the variables of practice. The findings of this study suggest that motivation can be manipulated. Possible manipulations might be made to the tools variable by having researchers partner with local practicing clinicians on research or by offering financial support, perhaps in the form of tuition waivers, for master's level SLPs to begin coursework, such as research design and statistics, which could later apply to a doctoral program of study. Such collaborations are eligible for Language Learning and Education Research grants from ASHA. A manipulation of the community variable could be accomplished with journal clubs hosted by educational programs that bring together the practicing clinicians from the local community and the researchers at the university.
2. Provide increased support for individuals at the beginning of doctoral education by increasing the number of and kinds of enabling factors, individualized to meet the specific needs of potential students. For example, some students may find the availability and affordability of childcare more enabling than health insurance.
3. Reduce the number of constraining factors on a category-by-category basis (e.g., eliminate all of the constraints in the tools category before shifting efforts to eliminating constraints from another category). In the event that

certain constraints cannot be eliminated, their negative impact may be minimized with the addition of an enabling factor. For example, having a poor science background is a constraint that cannot be eliminated. The availability of science tutors would be an enabling factor that would minimize the negative effect of that particular constraint.

Schooling

Findings relating to the role of schooling suggest that doctoral programs are not always successful in facilitating the development of research identities in their students, as was the case for Corinne. Furthermore, doctoral programs can influence the strength of research identities. Anna, Claire, and Sharon developed research identities during their doctoral programs. Sharon's identity, however, was more clearly defined than the other two. Consideration of the curricular and pedagogical dimensions of schooling may increase the likelihood that doctoral students will develop strong research identities as a result of, and during, doctoral education. To that end, I offer the following recommendations:

1. Doctoral programs should consider inverting the curriculum. In other words, students should begin with coursework in statistics and research design. Content and cognate courses can be taken later in the curriculum after a topic of interest emerges. This strategy would facilitate implementation of the second recommendation as well.
2. Doctoral programs should require students to engage in research in every semester of their doctoral programs, as Sharon did. This strategy is similar to the one used by graduate programs in CSD to immerse their students in clinical practice. This change could be managed by re-ordering the sequence

of classes (see previous recommendation) and reducing the number of content, cognate, or both, courses. This reduction would make room in the curriculum for an increase in hours for research apprenticeships. Of primary importance in any curricular restructuring is an increase in time engaged *in*, as opposed to learning *about*, research. An increase in scholarship in the field may be a welcome benefit from this strategy.

3. Doctoral programs should require students to take a course on grant writing and to submit grant proposals. Securing funding for their research prior to beginning their post-doctoral academic careers may eliminate some of the constraints on evolving research identities.
4. CSD programs should provide professional development opportunities for faculty (undergraduate, graduate, and doctoral) on how to effectively use research in teaching. When students have first-hand access to research and researchers, they are more likely to imagine themselves as researchers. When research enters the classroom, students can develop personal relationships with it.

Disciplinary Leadership

The narrative threads of gender biases and generational issues speak loudly, especially to a feminized discipline with a critical shortage of a new generation of researchers, and lead to the following recommendations:

1. ASHA should initiate a focused study on the kinds and effects of gender biases experienced by women in CSD faculty positions in institutions of higher education. Interdisciplinary efforts will be necessary to address

those issues because many, but certainly not all, of the gender biases come from outside the discipline (e.g., institutional expectations for women in service roles).

2. ASHA should initiate a focused study on the kinds and effects of generational issues influencing new researchers in CSD. Unlike the gender biases, many – but not all – of the generational issues that arose in this study were within CSD, suggesting that an intra-disciplinary approach may be utilized. Even though my data on these generational issues are limited, I anticipate that studies of leadership (or capacity-building) models and of the current leadership efforts in CSD could provide critical insights into the generational problems and thus lead to more effective solutions. These studies should begin immediately before the discipline experiences further decline.

Strengths and Limitations

A limitation to this study relates to participant selection. Early in the process of conceptualizing this study, I decided to study positive cases, or women who had become researchers. I justified my decision by noting that ASHA had primarily (if not exclusively) focused on negative cases, or women who did not become researchers. As this study shows, there is value in studying positive cases; however, I also recognize that there may have been benefits to including a negative case.

The strengths of this study relate to its design and significance. The purpose of this study was to better understand how women in CSD become researchers. Qualitative studies, such as this one, are uniquely suited to uncover the meaning of experiences and the contextual influences on those experiences and to discover processes (Maxwell, 2005;

Merriam, 2009) as I tried to do in this study. The interpretive aspect of the design also strengthened the study. That is, the assumption that there is not a single, static reality, but multiple, constructed realities is ideal for studying a phenomenon in context rather than decontextualizing experiences (Merriam, 2009).

This study addressed an issue that has been well documented by ASHA. Specifically, a severe shortage of doctoral-level faculty threatens the autonomy, and consequently the survival, of the CSD discipline. My findings are hopeful in that regard. There are ways to increase the number of doctoral-level faculty beginning with increasing the number of individuals who are motivated to pursue doctoral education. Furthermore, for those enrolled in doctoral education, modifications to enabling and constraining factors can provide greater support for emerging research identities. Curricular and pedagogical modifications may also provide additional enabling influences during doctoral education. Likewise, modifications to enabling and constraining factors for those in their post-doctoral academic careers can provide greater support for evolving research identities.

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APPENDICES

Appendix A: Curriculum Vitae

Appendix B: Institutional Review Board Approval

Appendix A: Curriculum Vitae

CURRICULUM VITAE

KAREN L. MCCOMAS

EDUCATION

Marshall University, Huntington, WV

Doctor of Education in Curriculum and Instruction, December 2010

Master of Arts in Speech Pathology and Audiology, August 1978

Bachelor of Arts in Speech Pathology and Audiology, May 1977

CERTIFICATION/LICENSURE

Certificate of Clinical Competence-Speech Pathology (CCC-SLP): Awarded by the American Speech-Language-Hearing Association.

Certificate of Clinical Competence-Audiology (CCC-A): Awarded by the American Speech-Language-Hearing Association.

Licensed in Speech Pathology and Audiology: West Virginia Board of Examiners.

Professional Service Certificate: West Virginia (Status: Permanent).

PROFESSIONAL EXPERIENCE

Assistant Professor (1986 - 2002)

Associate Professor (2002 - present)

Department of Communication Disorders

Marshall University, Huntington, WV 25755-2634

Speech-Language Pathologist

Clinical Supervisor, Marshall University Speech and Hearing Center, Huntington, WV (1986-present)

American Hospital for Rehabilitation, Huntington, WV (1990-1991)

Lincoln County Board of Education, Hamlin, WV

August 1981-August 1986

Carter County Board of Education, Grayson, KY

August 1978 - June 1981

Appendix B: Institutional Review Board Approval



Office of Research Integrity
Institutional Review Board
401 11th St., Suite 1300
Huntington, WV 25701

FWA 00002704

IRB1 #00002205
IRB2 #00003206

October 7, 2009

Karen McComas, M.A.
Communication Disorders Department

RE: IRBNet ID# 138120-1

At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Ms. McComas:

Protocol Title: [138120-1] BECOMING RESEARCHERS IN COMMUNICATION SCIENCES
AND DISORDERS: INTERROGATING WOMEN'S NARRATIVES

Expiration Date: October 6, 2010

Site Location: MU

Type of Change: New Project APPROVED

Review Type: Expedited Review

In accordance with 45CFR46.110(a)(7), the above study and informed consent were granted Expedited approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Chair for the period of 12 months. The approval will expire October 6, 2010. A continuing review request for this study must be submitted no later than 30 days prior to the expiration date.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Bruce Day, CIP at (304) 696-4303 or day50@marshall.edu. Please include your study title and reference number in all correspondence with this office.