FIGURING IT OUT ON THEIR OWN: HOW RURAL ADULT ONLINE STUDENTS

NEGOTIATE BARRIERS TO LEARNING ONLINE

by

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ABSTRACT

The health of rural communities depends, in part, on the education level of rural adults. Economic vitality is impacted by degree completion, and the rate of degree completion by rural adults lags behind that of their urban and suburban counterparts. Low completion rates suggest that there are conditions for rural students that prevent them from earning degrees. Online education addresses the geographic isolation that makes it difficult for rural adults to access brick-and-mortar college campuses. Online courses provide rural adult students with the opportunity to pursue degrees without leaving their communities or travelling long distances. Online education does, however, present barriers to rural students. The purpose of this multiple case study was to describe how rural adults negotiate barriers to learning online. Cultural-Historical Activity Theory (CHAT) guided the study. A series of interviews was conducted with nine participants, exploring their rural communities, their educational histories, and their experiences as online students. Five main themes, which represented the barriers the students faced and how the barriers were negotiated, emerged from the interviews. Reflecting the language of CHAT, the barriers were named disruptions. The themes, or disruptions, included: Disconnection from Faculty, Unreliable Technology Access and Support, Insubstantial Relationships with Other Students, Challenges of Balancing Classes with Work and Family, and Troubled Educational Histories. The findings could be used by faculty, administrators, and policy makers to improve the online learning experience for rural adults. The study concludes that rural adults students persist in negotiating barriers to learning online because they recognize the importance of earning their degrees, and appreciate the convenience and flexibility of online courses.

CHAPTER ONE

INTRODUCTION

Coming to the Question

I first learned about distance education in the late 1990s when my mother agreed to teach English composition online for the community college where she worked. Despite having limited technology skills, she accepted the challenge because she believed online education could reach students who might not otherwise have access to college. Her students were primarily single mothers with jobs that prevented them from attending classes during scheduled hours, working hard to complete their degrees in order to increase their employment options. I did not appreciate the importance of her work until years later, when she was recognized by her institution as an integral contributor to their online program, and won a teaching award based on the work she did to move her community college into the new world of online learning and educate students the college had previously been unable to reach.

Years later, when I asked my mother about her experience, she described a delivery method and course design that made online education today look positively cutting edge. The earliest format she worked with was a combination of documents made available on a website and recorded video lectures that students could access by tuning into the local Public Broadcasting Station late at night. Students e-mailed her assignments, which she graded and returned with feedback. They otherwise had very little contact with her and virtually no contact with one another. The community college where she taught eventually outgrew the system that had been developed with the local PBS affiliate, and my mother began working with early learning management systems. Despite remaining relatively static, these systems

gave her the ability to foster discussions with students in forums, and helped her attempt to build the community that she was so good at building in her face-to-face classrooms. She admitted that teaching online was a bigger time commitment than teaching face-to-face, but she truly believed in the impact it made on her students' lives. However, she also admitted that she never felt she was able to build the same sense of community online that she had in her face-to-face classes.

I started my job as a continuing education coordinator in a state with a large rural population at a time when educational technology was becoming more user-friendly and cost-effective, and just as the economy was forcing organizations to find ways to cut expenses for professional development. My mother's commitment to learning new technology and using online education to reach underserved students was an inspiration for me as more of my work with rural learners shifted to an online environment. Web conferencing software in particular was opening possibilities by providing increasing ways to meet with students synchronously, without the burdensome travel for the students and instructors alike that meeting face-to-face involves. Within months at my new job, I found myself coordinating and delivering an increasing amount of my organization's learning opportunities using web conferencing, despite having little experience with the format.

Over the past several years the quality of online education technology has improved and my organization now delivers well over half of our continuing education online. By delivering continuing education online, we are able to reduce travel costs and provide the convenience of earning continuing education credits anywhere in the state. Although the sessions are touted by my organization as synchronous, many of the individuals my agency serves live in communities without the Internet network speeds necessary to fully utilize the

technology. As a result, many of the students are unable to remain in the online spaces for very long, if they can access them at all, and routinely lose audio completely, forcing them to watch recordings at a later date. Having to watch recordings undermines the synchronous benefits of using web conferencing.

Despite my discomfort with the format and my recognition of the limitations of the online environment, I have tried to embrace the technology and learn as much as possible so I can deliver the most effective continuing education to the students I serve. Online education's potential to reach students like mine, who do not necessarily have traditional access to higher and continuing education, appeals to my belief that every adult has a right to equal educational opportunities. However, my experience as a provider of online education has consistently revealed limitations in technology that create barriers for my rural students who would benefit from the opportunities created by learning online. My organization has successfully overcome some of the technology barriers that my students experience, but I haven't been able to ignore the limitations. Technical problems continue to plague participants in rural areas, and despite improvements in the software and increased broadband capacity in some communities, connection problems persist. Insufficient network speeds in rural communities discourage me and my colleagues from utilizing video conferencing, and limit the amount of video we can stream during webinars.

Most notably, one of the earliest and frequent complaints I heard from students was that they missed the sense of community that our face-to-face events provide for them. The goal of my organization is to provide equitable access to continuing education statewide, and online learning has proven a cost-effective way to reach that goal. Yet my rural students continue to request local, community-specific events, insisting that their needs and interests

differ from other areas in the state, and are certainly different from issues that impact the profession nationwide. Many of my students work in isolation, with few or no co-workers, so the bonds they develop with their neighbors in similar, rural communities are just as important to them as the topics they are learning. While improvements in the web conferencing software and increased use of discussion forums in our learning management system have allowed us to facilitate a better online community statewide, we still seem unable to recreate the sense of community that our local, face-to-face events provide.

Considering the number of technology issues our rural students continue to experience, and the struggle with building community online, I have been surprised to discover that an increasing number of the people we serve participate in other online learning. Rita, a student in one of my online courses who, because of limited access to technology, was unable to participate in our classes using a microphone, could not scan documents, and regularly had her network connection drop her from online meetings, is completing an associate's degree online. As I talk with more people about their online learning experiences, I find increasing numbers of them are pursuing degrees and taking credit courses online in efforts to improve their employment options. Despite technology barriers and students' concerns that they lose a sense of community in the online continuing education my agency offers, there seems to be a growing willingness to learn online for other reasons. The benefits of online courses are important enough to my rural adult students that they find ways to negotiate the barriers in order to reach their goals.

My hesitation to fully endorse online learning as an effective solution to providing equitable access to higher and continuing education is largely a result of the compromises I have had to make between my frustration with the technology, and my recognition that the

ability to learn online creates educational possibilities for rural adults that they would not otherwise have. My student Rita lives in a town with fewer than 500 people, miles away from the nearest community college. Without access to an online program it is likely she would never complete a degree. Hopefully her degree will improve her life and the lives of her family members. She may, ultimately, be able to use her degree to improve her community. As the director of the town's public library, which also serves as the primary community center, what she learns online could result in better library service and improve the lives of the people she serves. Despite my skepticism about the effectiveness of online learning, I cannot deny that it has the potential to transform lives.

Statement of the Problem

The transformational potential of education for rural adults impacts both individuals and their communities. Rural communities suffer when residents do not have access to higher education because degree completion rates are directly related to the economic success of communities (Crookston & Hooks, 2012; United States Department of Agriculture, 2014). Despite the positive relationship between degree completion and rural economic vitality, the percentage of rural adults with degrees remains small. Between 2008 and 2012, only 18 percent of rural residents nationwide completed college degrees, compared with 32 percent of their urban counterparts (United States Department of Agriculture, 2014). Low completion rates suggest that there are conditions for rural students that prevent them from realizing degrees. However, earning a degree is becoming increasingly important for rural adults impacted by changes in local economies. Changes in rural economies have forced residents to update their skills in order to meet the demands of the new job market ("Associate degree completion rate higher in rural communities," 2015; Carr & Kefalas,

2009; Chesson & Rubin, 2003; Crookston & Hooks, 2012; Ritchey, 2008a; Ulrich, 2012; USDA, 2014). If rural adults continue to struggle with degree completion they risk losing opportunities to improve their economic conditions through employment.

The importance of rural adult education is not a unique development of the twenty-first century. Adult education has long been recognized as one way to ensure a healthy future for rural communities. From Chautauqua Circuits and correspondence schools in the nineteenth century, to land grant university extension in the early twentieth century, educational organizations have historically developed a variety of ways to reach rural adults with limited access to traditional educational institutions (Diekhoff, 1950; McDowell, 2001; Moore, 2003; Pelham, 1992; Schwieder, 1993; Scott, 1999; Scott, 2005; Smith-Lever Act, 1914; Tapia, 1997; Zacharakis, 2008). Just as these organizations extended educational opportunities to rural adults in the past, educational institutions today must find similar solutions to best meet the needs of rural adults, particularly because of the demonstrated connection between education levels and rural economic conditions. Community colleges, some of which have campuses in rural areas, have since the mid- to late twentieth century been one solution to meeting the education needs of rural adults (Beach, 2010; Chesson & Rubin, 2003; Crookston & Hooks, 2012; Miller & Tuttle, 2007). More recently, distance and online education have shown to be promising solutions for educational institutions to reach rural communities and help adults update their skills.

Online education provides a solution to geographic barriers experienced by rural students because it is available to any student with a computer and Internet access. However, rural adults face a variety of barriers to online education, including technology challenges and isolation from other students and instructors (Atkinson, 2008; Atkinson, 2010; Cejda,

2007a; Cejda, 2007b; de la Varre, Keane, & Irvin, 2011; Mason & Rennie, 2004; Zacharias, Tolar, & Collins, 2014; Glomb, Midenhall, Mason, & Salzberg, 2009; Ritchey, 2006; Rao, Eady, & Edelen-Smith, 2011). The multiple challenges faced by rural students enrolled in online courses suggest that online education may not, on its own, be an ideal solution to providing opportunities for them. One of the most pronounced technology barriers for rural adult online students is access to broadband, or high-speed Internet services. Rural areas lag behind in broadband development because of geographic isolation and cost ("Access to telecommunications technology", 2013; Mason & Rennie, 2014; Strover, 2014). Slow network speeds limit rural students' abilities to access online course components that are designed to enhance students' learning experiences, such as streaming audio, video, and interactive elements. Without the ability to use all of the features of online courses, rural students do not have the same learning experiences as their colleagues in communities with broadband (Atkinson, 2010; Mason & Rennie, 2004; Ritchey, 2006).

Among the course components that are optimized by access to broadband Internet service, interactive features that connect students to one another and instructors are particularly important for online students. Interactivity allows students to develop relationships that build community within their courses, and is made more effective by high-speed Internet-dependent tools such as web conferencing. Community plays a particularly important role in education choices for rural students (Carr & Kefalas, 2009; Corbett, 2014; de la Varre et al., 2011; Hlinka, Mobelini, & Giltner, 2015; Roberson, 2005). Accustomed to tightly knit, small communities, the ability to recreate a similar environment in their learning communities influences students' decisions about their education.

One outcome of strong relationships in rural communities is social capital, which is broadly defined as connections among individuals that result in benefits to both the individuals themselves and to the communities in which they live (Bourdieu, 1990; Carr-Chellman, 2005; Coleman, 1988; Flora & Flora, 2008; Putnam, 2000). Education is one way to build social capital (Coleman, 1988). Without the development of relationships, rural students may not have the opportunity to develop social capital through their education, thereby limiting benefits to them individually and to their communities. The isolated nature of online education is not ideal for building these relationships. Online education is routinely criticized for the lack of student-to-student and student-to-instructor communication (Carr-Chellman, 2005; Cassidy et al., 2008; de la Varre et al., 2011; Fetter, Berlanga, & Sloep, 2010; Hodgson & Reynolds, 2005; Jaggars, 2014a; Oztok, 2013; Oztok, Zingaro, & Makos, 2013; Peltier, Schibrowsky, & Drago, 2007; Söderström, Hamilton, Dahlgren, & Hult, 2006; Tichavsky, Hunt, Driscoll, & Jicha, 2015). Minimal interaction between students and between students and instructors may only contribute to rural students' sense of isolation, and prevent them from building social capital.

Purpose and Research Questions

The purpose of this case study was to describe how rural adult online students seeking higher and continuing education negotiate barriers to learning online, and if doing so allows them to reach their goals and satisfy their motives for enrolling in their programs. The study also helped determine how students reaching their goals contribute to the vitality of rural communities. An understanding of complex -- and sometimes conflicting -- relationships between rural adult students, the communities in which they live, their learning communities,

and their experiences with technology, all contributed to a clearer picture of how they negotiate barriers to online learning.

The primary research question was: How do rural adult online students negotiate barriers to completing online courses? Sub-questions included: what are the significant barriers that rural adult online students face in their online courses?; and, what are the educational motives of rural adult online students? While there are studies that examine the effectiveness and limitations of online distance education, and studies that focus on the history and future of rural adult education, there are few that exclusively draw attention to how rural adults negotiate barriers to learning online in order to satisfy their motives for enrolling in courses, and even fewer that connect online rural adult education to broader goals of social capital and community development. If online education is to continue being considered a viable alternative to reach rural adult learners, providers must better understand the experiences of rural adults engaging in online courses.

Theoretical Framework

Understanding the interplay between rural adults, their communities, and online learning requires a theoretical framework that helps explain complex, real-world relationships between individuals, their social conditions, and the educational process. Bracken (2008) suggested that cultural-historical activity theory (CHAT) is a valuable framework for understanding rural adult education because of its ability to "place human situations and human activity at the center of learning and analyze the interrelationships and processes within a given activity system" (p. 91). In CHAT, the interrelationships occur among six elements: the object, the subject, community, a division of labor, rules, and tools or artifacts (Jenlink, 2013). As the six elements interact to reach the object of an activity,

they produce contradictions. When contradictions are overcome, new learning occurs and the activity results in an outcome.

Because the goal of CHAT is "to understand and influence the nature of complex social practices through the contextual analysis of the historical origins, mediating artefacts and objects of local activity" (Darwin, 2011), it is appropriate for analyzing how rural adult online students experience their education using technology, and in the contexts of both their local communities and the communities they develop online. Additionally, CHAT is a useful framework for case study research. Yamagata-Lynch (2010) described the case study methodology and CHAT as compatible because "In activity systems analysis the object-oriented activities, goal-directed actions, and activity settings are bounded systems the investigators examine" (p. 79). Therefore, CHAT was suited to analyze how the challenges and benefits of online courses influence the experiences of rural adults as they learn online, and in the context of their rural and online communities.

Significance of the Study

This study contributes to the literature about rural adult education, and helps fill the gap in literature specifically related to online rural adult education. By examining how rural adult online students negotiate barriers to their online learning, the study explored the relationships between individual students, their communities, and their education. Through their experiences, the study also determined whether online education provides an effective solution to rural adult educational needs.

In addition to understanding the experiences of the students, this study helps practitioners and researchers understand the role of online education in improving the health of rural communities. The results of this study also help determine whether the success of

online education for rural adults is dependent on improved course design and expanded broadband infrastructure. The study contributes evidence to inform the future decisions of institutions designing and providing online education, and the corporations and policy-makers responsible for making broadband networks accessible and affordable in rural communities. Understanding the barriers experienced by rural adult online students aids in determining what they need in order to benefit from the educational opportunities available to them.

Summary

Rural adults must negotiate a variety of barriers in order to benefit from online education. Despite the rapid growth of online learning options and advancements in technology, adult students who live in rural communities do not have access to the same resources as their counterparts in urban and suburban communities, impacting their experiences learning online. In order for rural adults to meet their educational goals and contribute to the vitality of their communities, the barriers they face when accessing online courses must be examined so that they can fully realize the benefits of online education.

Higher and continuing education opportunities have been methods for rural adults to grow personally and professionally, both historically and in the present. Today, rural communities with a higher percentage of adults who have completed degrees have an economic advantage over communities without a high percentage of degreed adults. Because many rural areas struggle to remain vibrant as they experience low population growth and significant changes in local economies, an educated adult populace is necessary for communities to grow socially and economically.

In order to answer the question of how rural adult online students negotiate the barriers to learning online, this study closely examined the barriers and identified the goals of the students. This case study used CHAT to analyze the complex, real-life experiences that are inextricable from the context within which rural adults learn online. Findings from this study inform researchers and practitioners of online education of the ways in which they can improve the experiences of rural adult students, and also influence the corporations and government agencies that create the technology benefits and barriers faced by students.

Chapter one provides justification for the need to examine the research questions, and introduces the complexity of context in which rural adults students learn online. Chapter two reviews the literature about the history of rural adult education, the growth of online education, the benefits and challenges of learning online, and the theoretical framework guiding this study. Chapter three describes the research design for this study and details the case study methodology, the methods used for data collection, and how the data will be analyzed. Chapter four profiles the nine participants in this study and explores the unique outcomes of their online education, and chapter five provides analysis of the findings from interviews with them. Finally, chapter six presents a discussion of the findings, offers conclusions, and makes recommendations for further research.

CHAPTER TWO

LITERATURE REVIEW

This chapter provides a review of the literature about topics surrounding how rural adult online students negotiate barriers to learning online. It begins with an overview of the characteristics of rural communities, which provides an understanding of the importance of adult education to the vitality of rural communities, both historically and in the present. Literature about the evolution of online learning provides context for understanding the value of learning online for rural adults, and includes an overview of barriers that impede the effectiveness of online courses. The chapter concludes with a review of CHAT literature to explain why it is a valuable theoretical framework for understanding how rural adult students negotiate barriers to their learning. Deficiencies in the literature are identified throughout the chapter to highlight the importance of this study.

Characteristics of Rural Communities

Social, demographic and economic characteristics of rural communities influence both the need for adult education, and sometimes create barriers for rural adults pursuing higher education and job training (Flora & Flora, 2008; Ritchie, 2008b; USDA, 2014). Researchers (Flora & Flora, 2008; Hetzel, 2012) use definitions of rural from several federal agencies to understand of the characteristics of rural communities. The federal definitions generally focus on population density and distance from urban, or metropolitan, centers. The Unites States Department of Agriculture Economic Research Service (ERS) (2015), which uses nine definitions, suggested that to properly identify rural, "The key is to use a rural-urban definition that best fits the needs of a specific activity, recognizing that any simple dichotomy hides a complex rural-urban continuum, often with very gentle gradations from

one level to the next" (Para 10). Because this study sought to understand the interplay of social and historical context impacting the experiences of rural adult online students, a definition of rural with more complexity than population size and geographic distance was necessary. Ritchey (2006) wrote that to define rural, "it is important to note that the term is not only about *where* one lives but also *how* one lives (p. 3). Population numbers and distribution alone are insufficient to understand the lived experiences of rural adults. Flora and Flora (2008) used a definition of rural that integrated various federal guidelines and highlighted the importance of the allocation of government resources and policies. Accompanying this definition they warned, "In the past, small size and isolation combined to produce relatively homogenous rural cultures, economies based on natural resources, and a strong sense of identity" (p. 7), and that globalization has altered and de-emphasized these characteristics. Globalization and technology have indeed impacted the extent of isolation and homogeneity, but have not eliminated other realities of rural communities, such as geographic isolation and small population size. Similar to the lack of complexity that the federal definitions provide, the suggestion that globalization and technology have eliminated traditional rural characteristics neglects the complicated relationship that rural communities have between their pasts and their futures.

In order to provide some assistance in understanding rural communities, the ERS broad guidelines regarding population density and geographic features were used in this study. Based on county data, the ERS (USDA, 2013) identifies the following characteristics in rural areas:

1. open countryside
2. rural towns (places with fewer than 2,500 people), and

    3.   urban areas with populations ranging from 2,500 to 49,999 (Para 1)

In order to add complexity, the following characteristics were also considered: limited public services, social homogeneity, and limited political power (Ritchey, 2008a). Each of these characteristics impacts the vibrancy of rural communities. Without adequate public services rural communities find it difficult to attract new residents, which is reflected in homogeneity. Adding to the challenge is that rural populations are aging, which impacts natural population growth (USDA, 2014). Without the population growth generated by new residents and increasing birthrates, rural communities are at risk of continuing to experience population decline. Limited political power is influenced by the amount of social capital available to rural communities. Economic factors provide further complexity to a definition of rural.

Population decline presents a particular challenge to rural communities struggling to remain vibrant (Carr & Kefalas, 2009; Wood, 2008). Without the introduction of diverse and young residents, rural populations grow increasing insular. Outmigration and depopulation has been a rural concern for decades (Wood, 2008). Although individual counties have consistently lost population, there have been periodic fluctuations. However, the period between July 2013 and July 2014 saw the first overall period of population loss in rural areas as nearly 31,000 rural residents out-migrated (USDA, 2015). In addition to steady population loss, the rate of population growth in rural areas has also continued to decline. Between 2006 and 2014, the rate of population growth dropped to below zero (USDA, 2015). Without an intervention to attract new residents, the steady decline of rural populations will continue.

Also impacting population growth in rural areas are the economic changes and challenges of recent decades, which impact both outmigration and the ability to attract new

residents through employment opportunities. In interviews with rural adults, Bracken (2008) found that "concepts of economic and social class were at the forefront in discussions of community involvement and rural life" (p. 86). Rural areas have long been associated with primarily agricultural industries, but agriculture as a defining characteristic of rural areas has changed considerably as rural economies have shifted to manufacturing and service industries (Green, 2014; Reardon & Brooks, 2008; Ritchie, 2008a). Rural communities no longer depend on traditional agriculture to serve as the basis of their economy, and as a result need an adaptable workforce. However, without population growth there are fewer rural residents who can fill manufacturing and service jobs.

The economic challenges resulting from the 2007 recession have further contributed to the rates of rural outmigration and decreased population growth in rural areas. As rural residents struggled to find jobs, more and more adults found themselves travelling outside of their communities, and some left their communities entirely. In 2014, rural employment growth remained below pre-recession levels, growing only 1.1 percent between 2010 and 2014 compared with a five percent growth in urban areas (USDA, 2014). Despite overall improvements in the economy nationwide, rural economic growth continues to stagnate. In addition to limited job growth and stagnant economic conditions, the decline of median incomes and the rate of rural poverty has not improved. Although the poverty rate remains steady, it has not improved as the economy has recovered. Median incomes for rural families have declined since 2007 (USDA, 2014). Family incomes must rise in order to prevent increased poverty levels, but cannot do so without improved rural economies.

Without a significant improvement in the rural economy, communities are at risk of continuing to lose population and decline rather than grow. By providing employment skills

that contribute to more job opportunities, adult education is one method of improving the economic health of rural communities. However, if family incomes continue to decline or remain stagnant for rural residents, adults may not be able to afford the rising cost of attending educational institutions. Although shifting industries and the need for new skills may encourage residents to pursue further education, some rural characteristics, such as geographic isolation, serve as barriers to attending educational institutions. Long travelling distances to college campuses negatively impact the ability of rural adults to access education because of associated costs (Chesson & Rubin, 2003). Recognizing the interplay of these rural characteristics assists in understanding how adult education offers one solution to strengthen rural communities.

Importance of Adult Education for Rural Communities

The health of rural economies is in part dependent on the skills and education level of the rural workforce. Wright (2012) warned, "Despite the population declines occurring in many rural areas, the options for those remaining must include the pursuit of higher education" (p. 10). Poverty rates in rural communities decline as the percentage of adults with associate's degrees increases (Crookston & Hooks, 2012). However, attracting an educated workforce is a challenge for many communities. Rural communities need an educated workforce to remain economically healthy, but it is difficult for rural communities to attract educated workers without a strong economy (Chesson & Rubin, 2003). As a result, it is difficult for struggling communities to attract the very population that will make them more successful. The service industries that are growing in rural areas, such as education and health care, are predicted to grow more in the future but require workers that have specific skill sets ("Associate degree completion rate higher in rural communities", 2015; Crookston

& Hooks, 2012; USDA, 2014). New skills are also required for the jobs that already exist in rural areas. As manufacturing processes evolve and the agriculture industry grows more complex, the skills of rural workers must keep pace with the changes. Specialized skills and more education are now required even for jobs with low wages (Carr & Kefalas, 2009; Ulrich, 2011). In an economy already challenged by limited job growth, rural adults must update their education and skills in order to find and keep employment. Ritchey (2008a) wrote:

> [T]he economic reshaping of rural America predicts a corresponding educational reshaping of the rural landscape, with adult and continuing education helping to meet the ongoing training needs of new sectors while playing a critical role in reshaping traditional rural industries such as farming, mining, and logging (p. 9).

Changes in rural economies are, in part, changing adult rural education.

Despite the need for educated adults, rural adults complete degrees at a lower rate than their urban counterparts. Between 2008 and 2012, 18 percent of rural residents nationwide completed college degrees, compared with 32 percent of their urban counterparts (United Stated Department of Agriculture, 2014). One reason for the low rate of completion is age; rural college students tend to be older than urban college students ("Associate degree completion rate higher in rural communities", 2015). Older students tend to have more responsibilities outside of their studies, such as families and jobs, which impact their continued enrollment in higher education (Hetzel, 2012). When added to the challenges rural adults face as a result of having to travel long distances to campuses and declining family incomes, completing degrees becomes increasingly difficult. Education providers must consider the unique characteristics impacting their rural adult students and develop services

that will accommodate them in order to help students as they work towards degrees (Howley, Chavis, & Kester, 2013). Online education is one potential solution to overcoming the challenges faced by rural adults. Although learning online addresses the issues of scheduling and travelling distances, rural adults pursuing their degrees online face a variety of additional factors that may contribute to a lower completion rate. Access to technology, including broadband internet access, and the isolation of online learning have been shown to negatively impact the success of rural online learners (Atkinson, 2008; Atkinson, 2010; Cejda, 2007a; Cejda, 2007b; de la Varre et al., 2011; Mason & Rennie, 2004; Zacharias, Tolar, & Collins, 2014; Glomb et al., 2009; Ritchey, 2006; Rao et al., 2011). While online learning may be one alternative to reaching adult learners in rural communities, challenges related to technology, pedagogy, and access, are barriers for them.

Past and Present Sources of Rural Adult Education

Online education is the most recent in a long history of solutions to meet the learning needs of rural adults. Rural adult education was identified as important to the vitality of communities long before online learning became a viable option for pursuing training and degrees, and organizations began providing learning opportunities to rural communities beginning in the nineteenth century. Early providers of rural adult education included various organizations with a physical presence in rural communities, most notably Chautauqua circuits, land-grant university extension services, and community colleges (Diekhoff, 1950; McDowell, 2001; Moore, 2003; Pelham, 1992; Scott, 1999; Scott, 2005; Tapia, 1997; Zacharakis, 2008). In the latter part of the nineteenth century, Circuit Chautauquas and Chautauqua Literary and Scientific Circles extended their reach to rural America (Scott, 1999; Scott, 2005; Tapia, 1997). The original Chautauqua School in New

York was developed according to the principle of democratizing education, and the Circuits and Circles extended that principle to rural adults. Between 1878 and 1894, "10,000 local reading circles were established, mainly in small towns of the rural midwest" (Scott, 1999, p.396). Thousands of rural adults benefitted from the primarily liberal arts and cultural education provided by Chautauqua, and extended the opportunity to learn about topics to which their urban counterparts had more access.

The Chautauqua focus on cultural and liberal arts education may have opened the minds of rural residents, but there was a need for practical, vocational training that could benefit the changing economic and social conditions of rural communities. In the early twentieth century, land-grant university extension held an important role in educating rural adults (Pelham, 1992; McDowell, 2001; Schwieder, 1993; Zacharakis, 2008). McDowell (2001) describes land-grant universities as providing a "vulgarization" of education to populations without traditional access to higher education, thereby creating "people's universities" to rural residents in the late nineteenth and early twentieth centuries (p. 3). The Smith-Lever Act of 1914 specifically established Cooperative Extension Service to educate rural adults and provide "instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities" (Smith-Lever Act, 1914). Extension's practical education for rural residents contributed to the economic vitality of rural communities. By quickly communicating new technical and scientific information to rural areas, Extension ensured that farmers were staying abreast of the newest developments to make them more productive and successful (Schwieder, 1993). In addition to the practical education they provided, Extension activities also provided rural residents with opportunities to connect socially, contributing to a strong sense of community.

More recently, community colleges have been an important provider of rural adult education. Junior colleges, the predecessors of community colleges, were an outgrowth of nineteenth century normal schools, which served as preparation for elementary school teachers. Beach (2010) explained how "many normal school students saw these institutions as a vehicle for social mobility," and considered them "more accessible than college because of geographical proximity, lower cost, and easier admission policies" (p. 4). As their popularity grew, normal school students began seeking instruction in subjects extending beyond teacher training. William Rainey Harper, who was instrumental in the Chautauqua movement, helped establish one of the earliest junior colleges in Joliet, Illinois, which combined liberal arts and vocational training. According to Beach (2010), early junior colleges served as an option for students to explore the possibilities of college without committing to long courses of study. The number of junior and community colleges grew rapidly in the twentieth century, from 325 in 39 states in 1910, to 1,091 in all 50 states in 1970 (Beach 2010). By the first decade of the twenty-first century there were 922 rural community college campuses in 533 community college districts (Miller & Tuttle, 2007). Much of the growth of rural community colleges occurred in the middle of the twentieth century, after World War II. Diekhoff (1950) described how, following the war, states such as New York and California examined the impact of geographic isolation on education opportunity and developed local higher education institutions to meet the needs of rural adult students. Unlike the less formal opportunities provided by Chautauqua and Extension, community colleges have long provided rural adults with options to earn formal degrees contributing to personal and professional development.

One of the primary ways that community colleges have continued to serve rural communities has been by providing the workforce with the skills and education required for a healthy economy. Indeed, community colleges are often the only local providers of formal workforce training and education for rural adults (Chesson & Rubin, 2003). In addition, the cost of community college makes education and training more accessible to a wider audience of rural adults. Because poverty levels in rural areas remain higher than urban and suburban communities (USDA, 2014), the need for low-cost higher education opportunities is pronounced for rural students. Community colleges enroll large numbers of low-income students, and campuses situated in rural areas help mediate some additional expenses of attending classes, such as commuting costs (Chesson & Rubin, 2003). The importance of local campuses is supported by evidence that demonstrates how distance from a four-year campus increases the likelihood of students to attend community college. Crookston and Hooks (2012) explained "that the likelihood that a person will attend a community college increases 3.6% for every 10 miles of distance between where he or she lives to a four-year institution" (p. 354). As the distance from a four-year campus increases, the need for community colleges increases.

Unfortunately, access to a local community college campus is not available to all rural residents, and many rural Americans live in areas that are not within a reasonable travelling distance to a campus (Crookston & Hooks, 2012). Distance may therefore prevent rural residents from pursuing much needed higher education and workforce training. Just as institutions with physical connections to rural communities developed throughout the nineteenth and twentieth centuries, distance education grew as one alternative to providing geographically isolated adults with learning opportunities. Chautauqua again played an

important role in developing distance options for adults without traditional access to education. After the Chautauqua Correspondence College was established in 1881, correspondence education grew increasingly popular through the late nineteenth and early twentieth centuries (Moore, 2003). Instruction delivered via radio and television introduced new technology to distance education following World War II, and later Internet technology was in place to continue the distance education tradition. According to Moore (2003), "the spread of contemporary Internet technology stimulated new ways of organizing distance teaching" (p. 16). Considering the rapid changes in Internet technologies since the 1990s, distance education is likely to continue capitalizing on new developments in the future in order to meet a wider student audience.

Social Capital, Community, and Rural Adult Education

In addition to providing opportunities for workforce training and college degrees, local educational institutions contribute to rural communities in other ways, which distinguish them from distance education providers. Miller and Tuttle (2007) contended that rural community colleges positively contribute to the identities of their communities by providing the space and opportunity for individuals to come together. Additionally, rural community colleges have been shown to positively impact the economic health of rural communities by providing employment opportunities to local residents (Chesson & Rubin, 2003). Because of the many ways in which rural community colleges contribute to their communities, they continue to be relevant and important fixtures in the rural landscape.

Social capital. Illustrated by the impact of community colleges and inherent in rural adult education is the connection between education, community, and social capital. Individuals build social capital through education, and the bridges and bonds that accompany

that capital ultimately benefit entire communities (Putnam, 2000). Depending on the context

in which it is being used, social capital may be defined in a variety of ways. Bourdieu (1990)

used social capital to describe the resources that result from social connections between

people. For Bourdieu, under certain circumstances social capital can transform into

economic capital (Dika & Singh, 2002). If transformed into economic capital, the social

connections between individuals have the ability to impact entire communities through

improved economic conditions. Students who create social capital through their interactions

with fellow students, instructors, and others involved in their education, can use that capital

to contribute to their local communities. If a student makes a connection with a fellow

student that results in a job, or an idea exchanged with an instructor serves as the basis of a

new business or community service, the social capital gained by that student through their

education contributes to the economic well-being of the entire community.

According to Coleman (1988), "social capital inheres in the structure of relations

between actors and among actors" (p. S98). Similar to Bourdieu's (1990) belief that social

capital may produce economic gains, Coleman holds that social capital is productive in that it

helps groups of people achieve goals that, individually, they may not otherwise be able to

achieve. For Coleman, these goals may or may not include economic development. Further

describing social capital as having more than only economic benefits, Putnam (2000)

described social capital as "connections among individuals – social networks and the norms

of reciprocity and trustworthiness that arise from them" (p. 19). Putnam focuses on the

importance of trust, and his reciprocity is similar to Bourdieu's belief that social capital is a

"form of credit" (Flora & Flora, 2008, p. 119). Despite subtle differences in definitions, the

thread connecting each is that social capital emphasizes how lives and communities are made more productive through social connections (Putnam, 2000).

Two important connective elements of social capital are bonding and bridging. Putnam (2000) describes bonding social capital as at the networks between members of a specific community. Bonding social capital is effective in "undergirding specific reciprocity and mobilizing solidarity" (Putnam, 2000, p. 22). Individuals living in tight-knit communities, such as small, rural towns, build strong bonding capital to maintain a shared identity. Bridging social capital is what connects members of a community to external resources from other communities. According to Putnam (2000), "bridging social capital can generate broader identities and reciprocity, whereas bonding social capital bolsters our narrower selves" (p. 23). Whereas bonding social capital reinforces group identities that may already exist, bridging social capital exposes groups to ideas and identities they may not have previously considered. For example, rural students attending classes with members of their own community will likely build bonding social capital that will reinforce their shared identity, while students attending online classes with members of outside communities will likely develop additional bridging social capital.

Referring specifically to the benefits of rural community college education, Chesson and Rubin (2003) synthesized various definitions of social capital and wrote that it "encompasses the relationships, networks, and bonds of trust among people that facilitate problem-solving and collective action within a community" (p. 5). Interactive learning provides students with the opportunity to solve problems and develop ways to apply those solutions. Essential to coming together and solving problems is the ability of students to identify shared experiences. Oztok, Zingaro, Makos, Brett, and Hewitt (2015) argued the

educational benefit of social capital develops when courses provide students with opportunities to find "common ground" (p. 22) and develop a sense of community.

  Community. Because social capital results from social interactions between individuals and groups within and between various communities, understanding rural communities is vital to identifying the importance of social capital to them. In their study of rural community characteristics, Flora & Flora (2008) defined community:

> In one use of the term, community refers to a place, a location in which members of a group interact with one another. A second use of the term looks at the social system itself, the organization or set of organizations through which a group of people meets its needs. Finally, sociologists also use the word community to describe a shared sense of identity held by a group of people who may or may not share the same geographic space" (p. 13).

Rural communities can therefore be understood as a combination of place, social structure, and identity, all of which impact educational opportunities and choices.

  Sense of community and shared identity among rural residents is both influenced by and impacts future decisions about adult education, even for young adults. Carr and Kefalas (2009) explored the impact of a strong sense of community in their examination of the education choices of rural young adults in northeastern Iowa. In determining what made young adults choose to stay in town, leave, or leave and return, they found that there were varying feelings of connection to the community that influenced future education choices, including being with like-minded people, and the security of being surrounded by people they had known all of their lives. College-aged students and adults alike sometimes chose

their connection with the community over educational opportunities that would take them away from home.

Confirming the findings in Iowa, in interviews with students considering higher education options, Hlinka, Mobelini, and Giltner (2015) discovered that decisions were strongly influenced by sense of belonging to their communities, and their connections to place and family. Community contributes significantly to the identities of rural residents. As a result of their interviews, Carr & Kefalas (2009) found that people "simply were not willing to reinvent themselves or give up the familiarity and comforts of small-town life – such as never being surrounded by strangers or being the big fish in a little pond" (p. 44). The small, rural community in Carr & Kefalas' study so strongly defined the identities of its residents that some chose identity over education options. Further supporting the importance of community to the choices of rural students, Roberson (2005) found that rural residents' familiarity with one another created a learning environment in which people felt comfortable turning to one another when they needed to learn something new, making learning highly collaborative. In Roberson's study, sense of community not only influenced the education choices of rural adults, it influenced the way that rural adults learned. According to Corbett (2014), the importance of community for rural students is a well-established way to describe what influences the way students learn, and what needs to be provided for optimal learning.

Online learning and the ability to take classes from the convenience of students' home community may provide a solution to the dilemma of choosing education over community. However, in a study of rural high school students taking online courses, de la Varre, Keane, and Irvin (2011) found that rural students are accustomed to close-knit schools and communities, making it difficult to succeed in online environments that feel isolated and

disconnected from what is familiar to them. In addition, barriers to online education may prevent rural students from fully participating in online courses, thus preventing them from building the bridging social capital that results from connecting with students from outside of their communities.

There is literature that addresses the importance of social capital to rural communities (Chesson & Rubin, 2003; Flora & Flora, 2008; Oztok, Zingaro, Makos, Brett, & Hewitt, 2015), literature that identifies the importance of education in building social capital (Bourdieu & Passeron, 1990; Coleman, 1988; Putnam, 2000), and literature that identifies the importance of a sense of community among rural students and the shortcomings of online education in creating community (Carr & Kefalas, 2009; Corbett, 2014; Hlinka et al., 2015; Roberson, 2005; de la Varre et al., 2011). However, there is a notable absence of literature that connects the sense of community that contributes to the success of rural adult students, the capacity of online education to create community for rural adult students, and if online education for rural adults can build social capital.

The Benefits and Barriers of Online Education

For students in communities without a local community college or other higher education institution, online learning overcomes the geographic barriers faced by rural students, removing the negative effects of the cost and time required to travel sometimes long distances to campuses (Reardon & Brooks, 2008). For students, the attraction to online education is related to the increased number of choices it provides. Regardless of geographic location, students report that one of the primary reasons for taking classes online is the ability to use time efficiently and the flexibility of scheduling (Hetzel, 2012; Jaggars, 2014a; Picciano, Seaman & Allen, 2010; Stenberg et al., 2010). After interviews with students

taking online courses, Jaggars (2014a) found, "When asked why they chose to take online courses, almost all respondents explained that they had busy lives with multiple responsibilities and that the flexibility of online learning helped them better balance their schedule" (p. 29). The flexibility of online courses makes learning more convenient for students, and it does not appear to compromise the quality of the education. There appears to be no significant difference in educational outcomes between online students and those attending classes on campuses (Allen & Seaman, 2014; Bell & Federman, 2013; de la Varre, et al., 2011). Online learning may also contribute to increased social capital, particular bridging social capital, and sense of community among students (Aleksic-Maslac & Magzan, 2012; Peltier et al., 2007). The benefits of taking courses online has led to steadily increasing popularity of online programs for students. Flexibility is also beneficial to online education providers, making programs equally attractive to education institutions.

The popularity of online education has grown exponentially since the beginning of the twentieth century. Allen and Seaman (2014) reported that between 2003 and 2012, the number of students enrolled at degree-granting higher education institutions taking at least one online course grew from 1.6 to 7.1 million. Although the numbers of students taking online courses began to level out in 2014, 70.8 percent of chief academic officers indicated that online learning was critical to their strategy, suggesting a strong commitment to future growth in online courses and programs (Allen & Seaman, 2015). Similar to how Cooperative Extension and other early providers of rural adult education were able to take educational opportunities to adults far from formal education institutions in the early twentieth century, the popularity of online education suggests it may be a promising solution to overcome location barriers in the twenty-first century.

Despite the popularity of online education and the optimism of both students and administrators, critics point to a number of barriers created by online learning (Calvin & Freeburg, 2010; White & Selwyn, 2012; Sitzmann, Ely, Bell, & Bauer, 2010; Carr-Chellman, 2005; Sims, Vidgen, & Powell, 2008; Söderström et al., 2006; Oztok et al., 2013). Barriers identified by critics include lack of digital literacy skills, inadequate broadband access, limited teacher-to-student and student-to-student interaction, poor pedagogy, and a widening of the digital divide. Although rates of growth over the past decade suggest that online education will become increasingly popular, its continued growth is dependent on addressing and correcting these barriers (Calvin & Freeburg, 2010; Oztok et al., 2013; Sitzmann, et al., 2010). Regardless of convenience and flexibility, online courses must also maintain high standards of quality in order to continue attracting students and the support of higher education administration. Additionally, students must be prepared with, or provided with the support to develop, the skills necessary to effectively participate in online courses.

Digital literacy. Digital literacy skills are vital for students to successfully participate in online education. Hobbs (2010) describes digital literacy as having five components: 1) Accessing and making information choices, then comprehending ideas presented in choices; 2) Analyzing messages and evaluating their quality; 3) Using various formats to create content; 4) Reflecting on one's own information behavior in a socially responsible manner; and 5) Taking social action to share knowledge and participate in a community. Choosing and analyzing information, creating content, reflection, and taking action are all integral components of education, regardless of medium. Digital literacy adds the component of the ability to do all of these things using technology. The Office of Information Technology and Policy (OITP) task force of the American Library Association

(2013) defines digital literacy as "the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills" (p. 2). Although related to other literacies and critical thinking, the key component of OITP's definition of digital literacy is the use of communication technologies. Reder (2015) identifies digital literacy as the final stage in attaining digital inclusion, which emphasizes its importance in preparing students for full participation in learning by using digital technology. Without achieving digital inclusion, students are prevented from being full participants in their online education.

Technology issues in online courses are exaggerated for students without adequate digital literacy skills, and prevent them from succeeding. After evaluating online professional development modules and interviewing students, Sitzmann, Ely, Bell, and Bauer (2010) found that those who experienced technical difficulties had lower test scores and struggled to learn the material more than those who did not encounter difficulties. Because of the impact that technical issues have on online students, institutions providing online education need to provide adequate support to address technical problems. Calvin and Freeburg (2010) reported that even online students who did not identify their lack of technical skills as a barrier to learning indicated that they would have benefitted from more technical training and support. In addition to creating problems accessing class material, Bell and Federman (2013) found that technical difficulties contribute to decreased confidence for online students, impacting retention and completion rates. For students who lack adequate digital literacy skills, technical difficulties in online courses may contribute to existing insecurities about being able to succeed, and contribute to their decisions to quit. Furthermore, in a study of online adult learners in the United Kingdom, White and Selwyn

(2012) found that despite a rise in Internet usage, there was a bigger increase in non-educational activities, and use of the Internet for purposes such as education lagged behind in both rate of use and growth.

One possible solution to the barriers created by limited digital literacy skills is for instructional designers and online instructors to pay close attention to communicating clear directions and providing adequate support for assignments (Calvin & Freeburg, 2010). Sitzman et al. (2010), reasserted this potential solution by suggesting that a way to counter the barriers that technical difficulties cause for students is to provide technical support that can resolve problems efficiently. Online education providers can intervene to improve students' digital literacy skills, but other technology barriers, such as access to high-speed Internet connections, are more difficult to overcome.

Broadband access. The Federal Communications Commission (n.d.) defines broadband as "a new generation of high-speed transmission services, which allows users to access the Internet and Internet-related services at significantly higher speeds than traditional modems" (Para 1). Although typically used to describe the speed of Internet connections, access to broadband implies the ability to take advantage of particular online activities. Stenberg et al. (2010) wrote, "With the convergence of video, audio, text, graphics, and other analogous enduring and transient products and services into digital streams that can be transported across the Internet, broadband Internet connections have become a necessity for common Internet usages and applications" (p. 63). Some of the technical applications that make online learning more engaging may result in larger file sizes and interactive components that are dependent on such faster Internet connection speeds (Sims et al., 2008). Students who do not have access to the broadband capacity necessary to use all of the

technological components of their online courses do not have the same learning experience as their peers with access to broadband. Despite the need for broadband to access a wide range of information and activities on the Internet, Stenberg et al. (2010) reported, "Whereas an estimated 55 percent of U.S. adults had broadband access at home in 2008, only 41 percent of adults in rural households had broadband access" (p. 60). In addition to impacting individuals, inadequate broadband access also impacts entire communities. Individuals in communities without access to adequate broadband for services, including education, could experience slow economic development and decreased prosperity ("Access to telecommunications technology", 2013). Many Internet providers now increase fees as network speeds increase, which puts communities with higher rates of poverty at a disadvantage compared to communities with higher socio-economic status. Areas with low population density and diminishing population – both characteristics of rural areas – experience higher costs associated with broadband access. Stenberg at al. (2010) explained, "These characteristics can make the fixed cost of providing broadband access to high, or limit potential demand, thus depressing the profitability of providing service" (p. 61). Advocating for an extension of broadband to more rural communities, Stenberg et al. (2010) suggested that access to educational resources is one of the ways in which broadband can improve rural communities. As the technology used in effective online education continues to require more and more bandwidth, requiring higher network speeds, students unable to afford the higher network speed are at a disadvantage in their education. This disadvantage perpetuates a digital divide between people who have can access broadband, and people who cannot afford broadband or live in areas where it is unavailable (Strover, 2014).

Interaction. Although online courses cannot entirely duplicate face-to-face learning, there is technology available to increase interaction between students and between students and instructors. Synchronous video and screen sharing applications continue to develop and are increasingly used to add discussion components to online classes. Interaction may be a key to ensuring that online education provides students with the same high-quality and effective educational opportunities as those who have the resources and proximity to traditional campuses (Hodgson & Reynolds, 2005). Unfortunately not all online courses use interactive elements and not all students can effectively use them. Oztok, Zingaro, and Makos (2013) argued that the lack of interaction and isolated nature of online learning diminishes social interaction and neglects the need for students to connect beyond the boundaries of course content. Lack of interaction may also contribute to high drop out rates in online programs. De la Varre et al. (2011) cited students' feelings of isolation in online classes as contributing to high rates of attrition. Without interaction, students are unable to connect with one another in the same ways they do in face-to-face classrooms. Söderström, Hamilton, Dahlgren, and Hult (2006) concluded that the lack of interaction prevents online students from connecting, marginalizing them and leading to decreased completion rates.

Lack of social connections with fellow students and instructors makes it easier for students to drop out of a course rather than find support and persist. Peltier, Schibrowsky, and Drago (2007) reinforced the importance of interactivity in their study of online students. In addition to connecting with one another, interactivity allowed the students they surveyed to express themselves freely, learn from fellow students, and easily access the instructor, resulting in good course evaluations. Carr-Chellman (2005) argued that educators recognize that online courses are good for distributing information, but that they often fall short of

using it effectively for connecting their students. Furthermore, she asserted that the nature of online education is to isolate learners from one another. Students who choose to enroll in face-to-face classes identify interaction and connection with other students and instructors an important part of their decision (Jaggars, 2014a). Jaggars also reported that in a survey of students who enroll in both online and face-to-face courses, "almost all students noted that the nature of student-instructor interaction was more 'distant,' less 'personal,' less 'immediate,' less 'detailed,' or less 'solid' online. In particular, they missed the direct instruction that they received in face-to-face course, and many felt as though they were 'teaching themselves.'" (p. 31). In another study, Jaggars (2014b) found that low interactivity impacts students with low confidence much more than those who are high achieving and highly motivated. Less confident students are frequently members of social groups with barriers to higher education, such as low-income and ethnic minorities, and the anxiety that accompanies the lack of confidence can "manifest in counterproductive strategies" and lead to low completion rates (Para 12). Negative impacts on students who are traditionally excluded from, but would benefit as a result of higher education opportunities, reinforces some of the barriers that already exist for students such as low-income rural adults.

One of the potential benefits of higher education to students of traditionally excluded social groups, such as low-income rural adults, is the opportunity to develop social capital. Interaction and communication are necessary to build bonding and bridging capital that can benefit both the individual and the community to which he or she belongs. Online courses with limited or underutilized interactive components do not have the same ability to build social capital as face-to-face courses (Tichavsky et al., 2015). Cassidy et al. (2008) argued that despite online courses having the ability to provide students with barriers to higher

education the opportunity to participate in learning, "stimulating and sustaining participation is identified as a problem in many studies of virtual communities" (p. 223). Courses may have the technology to provide interactive elements, but if their use is not encouraged, students are unable to participate and make the connections necessary to build social capital.

Oztok (2013) warned that without the opportunity to interact and develop relationships in addition to consuming the academic content of the course, the online learning environment becomes an "impoverished form of socialization" (p. 25). Impoverished socialization further prevents the relationship-building necessary to build social capital. Fetter, Berlanga and Sloep (2010) argued that "to foster social capital in an LN [learning network], participants need to be connected, stay in the network by feeling a part of it, and have actions through which benefits are gained" (p. 391). It is insufficient to simply provide students with the opportunity to interact – they must maintain those connections and stay in the course in order to benefit from the social capital they develop. Furthermore, Pigg and Crank (2004) recognized the importance of relationship-building to providing online students with opportunities to benefit from their connections, and specifically addressed the important of reciprocity in these relationships. For the students they surveyed, "reciprocity was an important aspect of strong ties in which many turned to their strong ties in times of need for material and emotional supports" (Pigg & Crank, 2004, p. 68). The reciprocity described by Pigg & Crank (2004) is similar to Flora & Flora's (2008) interpretation of Bourdieu's original concept of social capital, which treats it as "a form of credit" (p. 119). Trust is inherent in reciprocity, and without that trust, the credit system of social capital deteriorates. If students enrolled in online courses are unable to develop trust and reciprocity with their fellow students and instructor, they cannot fully benefit from an exchange of social capital.

Pedagogy. Problems with pedagogy are often related to the limitations of the technology used in online education, and frequently return to a lack of connection between students, and between the instructor and the students. However, Calvin & Freeburg (2010) claimed that by continuing to focus on technology barriers in online courses, issues of pedagogy are diminished and overlooked. Despite claims that there is no difference between the effectiveness of learning online versus learning face-to-face (Bell & Federman, 2014), Jaggars' (2014b) examination of students' experiences with online courses indicated students feel as though they learn material better face-to-face. Furthermore, Jaggars (2014a) found that students chose to take their more difficult courses face-to-face, anticipating that they would not be able to learn the material as well online. After examining evaluations for online courses, Fabry (2012) found "students want an instructor who is an active participant in the class, sets clear expectations, and provides timely and meaningful feedback on assignment" (p. 48). Although Fabry was looking specifically at evaluations by students enrolled in online courses, the findings could be equally applied to face-to-face courses. While technology may exacerbate some teaching issues, it does not necessarily create all of them.

Digital divide. Digital divide has for decades been used to describe the inequality resulting from lack of access to technology. Despite advances made in technology and the expansion of Internet access, the digital divide remains an issue of equality in the U.S. and other countries (Wiite, Kiss & Lynn, 2013). Early it described the inability to access technology hardware, but has evolved in include lack of access to the Internet, and lack of adequate digital literacy skills to use available technology. Offering a far more complex description, van Dijk (2005) defines digital divide as less of a single inequality and more of a

system of inequalities. For van Dijk, there is a cyclical relationship between the digital

divide and social inequality. Inequality creates unequal access to resources, and unequal

access to resources causes unequal access to technology. The inability to access technology

creates unequal participation in society, and that unequal participation in society reinforces

the very inequality that prevented initial access to resources. When understood as a system

of inequality, the technology barriers that already challenge rural adult students can be seen

as contributing to a reinforcement of the digital divide. Connecting the digital divide

specifically to education, Sims, Vidgen and Powell (2008) described a similar, cyclical

pattern by concluding, "income and education are the major determinants of digital

exclusion, yet education and digital inclusion are determinants of higher levels of social

inclusion and higher income" (p. 432).

Proponents of online learning claim that the ability to access courses online

democratizes education (Bonvillian & Singer, 2013). However, in part because of the digital

divide, skeptics argue that online education is more likely to reproduce inequality rather than

correct it (Carr-Chellman, 2005; van Dijk, 2005; Wei, 2012; White & Selwyn, 2012). Carr-

Chellman (2005) specifically criticized the rhetoric that online learning is democratizing by

pointing out that she had "never been to a homeless shelter or soup kitchen that had Internet

hookups available to the patrons" (p. 155). While online education would certainly benefit

homeless people, their inability to access the necessary technology precludes them from the

benefits envisioned by online learning proponents.

Both age and occupational class also impact the digital divide: older people and those

of lower socio-economic status are more likely to experience barriers to Internet access, just

as they experience barriers to higher education (White & Selwyn, 2012). Rural populations

tend to be older and experience a higher level of poverty than their urban and suburban counterparts, making them more vulnerable to the effects of the digital divide. Wei (2012) reinforced the connection between social position and the digital divide by finding that "those who have a higher SES tend to take up more opportunities when going online and have more sophisticated and comprehensive use of the Internet than do those lower status segments" (p. 312). Even when members of lower socio-economic status do have access to the Internet, they do not necessarily use that access to participate in activities such as education.

White and Selwyn (2012) counter the argument that the Internet removes barriers to education and participation in society by pointing out that there is a lack of evidence proving otherwise. Instead, there is evidence of a genuine relationship between socio-economic status, access to the Internet, and access to adult education. Adults who regularly use the Internet and engage in educational activities "are also those who are already relatively advantaged in the 'offline' aspects of their lives" (White & Selwyn, 2012, p. 464). Even proponents of online education have recognized that by focusing exclusively on online education there is a risk of reinforcing social inequality. Bonvillian & Singer (2013) recognized that the most effective form of online learning is a blended model, which incorporates elements of face-to-face learning, but that blended models favor the upper middle class because travelling for even occasional face-to-face meetings requires additional resources.

Carr-Chellman (2005) identifies additional barriers created by online learning that can contribute to social inequality. In addition to the disadvantages of isolation in online learning, degrees offered by online institutions may not provide students with the same

opportunities for advancement, higher salaries, and leadership development as degrees

offered by traditional or face-to-face institutions. Because they have the resources to attend

brick and mortar institutions that provide courses of study that result in high salaries and

leadership positions, the already-privileged will continue to benefit more from education than

those who actually need it to improve their social condition. Carr-Chellman (2005)

concluded, "In the end, a publicly funded 'open access' system is serving relatively more

white young working male adults with some financial advantage and relatively fewer

minority, female, homeless, or poverty-stricken members of our society" (p. 156). The

production and reinforcement of inequality created by a persistent digital divide does not

allow for a realization of the idealistic vision of online education. Because of the barriers

created by lack of access to technology, effective online learning is not available to all

people.

Online Education for Rural Adults

For rural adults, online education may provide a solution to the geographic barriers

that prevent them from pursuing higher education. De la Varre et al. (2011) argued that

online learning can be "transformative" (p. 37) for rural students by providing access to

diverse ideas and high-quality instruction. However, some of the barriers created by online

education are magnified for rural students. In particular, limited broadband Internet service

impacts rural students' abilities to participate in online learning in the same manner as

students with access to high-speed Internet. One of the issues preventing broadband

expansion to rural areas is the cost of installing the networks. In order to justify the cost,

providers want to see the technology already in place and being used prior to developing

services, which unfortunately means that the technology, not the needs of rural residents,

drives the expansion ("Access to telecommunications technology", 2013; Mason & Rennie, 2014; Strover, 2014). The cost of installing networks in rural areas is often passed on to consumers, making access even more difficult for low-income rural students, which perpetuates unequal access to higher education.

Unreliable Internet connections and low network speeds compromise the learning experience for rural students (Atkinson, 2010; Mason & Rennie, 2004; Ritchey, 2006). The current status of broadband availability in rural areas already creates barriers, but the uncertainty of future expansion may only exacerbate the problems created by slow network speeds. The expansion of broadband infrastructure to rural areas lags behind expansion in urban and suburban areas ("Access to telecommunications technology", 2013; Strover, 2014). Without future expansion, the potential benefits of online learning will continue to elude rural students.

While broadband infrastructure development lags behind in rural areas, technology continues to develop in ways that require higher network speeds. When rural adult students enroll in courses that use advanced technology requiring broadband connection speeds, access inequalities are further perpetuated. Despite the economic importance of higher education and job training for rural adults (Crookston & Hooks, 2012), and the potential of online learning to provide more educational opportunities, lack of access to the necessary resources ultimately puts rural adults at a disadvantage to students living in communities with access to high-speed Internet. Atkinson (2008) recognized the democratizing potential of online learning for rural adults, particularly for rural adult literacy, but also warned that low-income learners unable to afford high-speed access, or even recognize its importance, may see a "perpetuation of illiteracy" (p. 45). Not only does access impacts students' already

enrolled in online courses, it impacts those considering online options. Some rural adults

will not even consider online learning opportunities when they are unsure that their

broadband access will be sufficient enough to fully experience class material (Atkinson,

2010). Mason and Rennie (2004) similarly reported that for rural students, the potential

equality provided by the opportunity to access education regardless of location is undermined

when not all students are able to access the course material with the same quality of

broadband connectivity.

One of the outcomes of limited access to course materials and features is the ability to

use interactive tools. In addition to general criticism regarding online pedagogy and

interactivity, Zacharakis, Tolar, and Collins (2014) expressed concerns about the ability of

online education to create the same bonds among rural students that face-to-face courses

provide. A potential benefit of online education is exposure to diverse ideas and

perspectives. For members of communities isolated by geography and limited population

growth, using online education to connect with people from outside communities creates the

potential to build bridging social capital. Individual gains in social capital can subsequently

benefit entire communities (Putnam, 2000). However, the benefits of using online education

to develop social capital is undermined for rural adults if they do not have access to the tools

necessary to build the relationships that create capital.

Rural students also need other skills that online learning does not necessarily support

as well as face-to-face learning, such as communication, human relations, and problem

solving. As a result, "technology is not a solution to all the training needs in rural settings.

(Reardon & Brooks, 2008, p. 80). Following a study of online students in rural high schools,

de la Varre et al. (2011) concluded that rural students have unique characteristics influenced

by their local community, and that a substantial amount of learning for rural students happens outside of the classroom. A local connection is not necessarily available in online classrooms. Because rural students are accustomed to more intimate learning environments than their urban and suburban counterparts, the isolation of online education is particularly difficult for them (de la Varre et al., 2011). Recognizing the importance of overcoming isolation and creating interactive learning environments for adult learners, Glomb, Midenhall, Mason and Salzberg (2009) suggested that online learning providers should incorporate local mentors and learning communities to help mitigate the problem. The addition of face-to-face, local support emulates a blended learning model, which Bonvillian & Singer (2013) suggested is an optimal way to use online education because "online can absorb much of the information content-conveyance tasks (first-order learning), and the face-to-face classroom can focus on the understanding and conceptual depth of second-order learning" (p. 27). Second-order learning is enhanced by interactivity. In the absence of local campuses where students can interact face-to-face, and the broadband capacity necessary to fully benefit from interactive technology elements of online courses, rural students are at a disadvantage when trying to develop second-order learning. The barriers to online education that rural students face suggests that, on its own, online learning may not be the ideal solution to providing more rural adults with educational opportunities.

The literature addresses a number of barriers that rural adults encounter when learning online (Calvin & Freeburg, 2010; White & Selwyn, 2012; Sitzmann, Ely, Bell, & Bauer, 2010; Carr-Chellman, 2005; Sims et al., 2008; Söderström et al., 2006; Oztok et al., 2013), and identifies numerous benefits of learning online (Aleksic-Maslac & Magzan, 2012; Hetzel, 2012; Jaggars, 2014a; Peltier et al., 2007; Picciano at al., 2010; Reardon & Brooks,

2008; Stenberg et al., 2010). However, the literature does not examine the ways in which rural adult students negotiate the barriers of learning online in order to fully benefit from it. Without this connection it is difficult to determine how negotiating the barriers contributes to students' abilities to meet their educational goals, and results in new learning for them.

Cultural-Historical Activity Theory (CHAT)

CHAT is a theoretical framework that uses activity systems to analyze behavior. Although individual behavior is an element of activity systems, CHAT is more concerned with communal activity and its motivating elements.   Activity systems analysis demonstrates that these motives cannot be separated from the cultural, historical, and social contexts in which they occur (Jenlink, 2013; Kang & Gyorke, 2008). It illustrates the complexity of the relationship between individual action and collective activity towards reaching a desired outcome. According to Darwin (2011), "CHAT offers researchers a robust conceptual framework for inquiry that understands social activity as an area of contest, tension and contradiction, which is strongly mediated and shaped by historical, social and cultural artifacts" (p. 222). CHAT examines the interplay of the individuals with one another, culture, and history, and activity systems are dialectical in that they represent the connections between human activity and consciousness (Darwin, 2011). Additionally, CHAT can uncover motives that individual participants in a study may not be capable of recognizing on their own (Engeström, 2000).

Development of CHAT. CHAT developed in three generations, beginning in Soviet Russia in the early twentieth century (Engeström, 2015; Nussbaumer, 2012; Yamagata-Lynch, 2010). In the first phase, Vygotsky drew on the Marxist tenet that contradictions in human activity influence history. Vygotsky developed a model that demonstrated how

human behavior is not directly influenced by environment, but rather socially mediated by artifacts, or tools (Jenlink, 2013). Leont'ev expanded on Vygotsky's work in the second generation of CHAT by more clearly representing the complexity of human activity and distinguishing between collective and individual action (Kang & Gyorke, 2008). Leont'ev added community and division of labor to Vygotsky's original model (Nussbaumer, 2012). The third generation CHAT is largely attributed to Engeström, who further advanced the work of Vygotsky and Leont'ev by developing activity systems analysis that include "networks of interacting systems to deal with tensions and contradictions that encourage collective learning through change" (Nussbaumer, 2012, p. 39). Engeström is credited with describing activity, rather than the individual, as the unit of analysis (Jenlink, 2013). Engeström's model is more complex than those of Vygotsky or Leont'ev, representing "a multitude of relations within the triangular structure of activity" (Jenlink, 2013, p. 227). The multiple relations represent the complexity of human behavior within the context of history and social practices.

Elements of CHAT. Activity systems are comprised of six elements: the object, the subject, community, a division of labor, rules, and tools or artifacts. The elements are culturally and historically situated, and the relationships among them help determine the outcome of the activity system. The relationships among the elements are frequently characterized by disruptions that must be overcome in order to reach the object, and the outcome represents the solution used to overcome the disruptions and reach the object (Yamagata-Lynch, 2010). Figure 2 illustrates the six elements of CHAT, with arrows depicting the multitude of potential relationships.
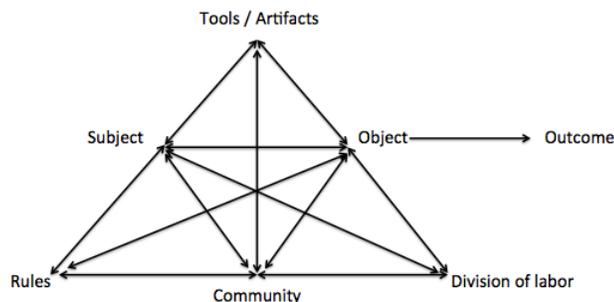
Figure 2.1 Engeström's Activity System.

Object. An activity system's object is particularly important because it represents the purpose of the activity. According to Jenlink (2013), "The object (objective or goal or common task) of the activity system refers not only to persons or objects in a passive state (what is acted upon) but also the goal of an intentional activity" (p. 220). Objects represent motives for activities. According to Engeström (2015), "what distinguishes one activity from another is its object," and "the object of an activity is its true motive." (p. 54). Thus each activity has a unique motive, or object, and objects meet individuals' needs (Engeström, 2004b). Engeström warned, however, that objects and goals are not interchangeable. While the object is the motive for the activity system, goals are related to "specific actions" (Engeström, 2004b, p. 381). Roth and Lee (2007) further described the relationship between goals and objects as "dialectical, for actions constitute activities, but activities motivate particular action sequences" (p. 201). Individuals take specific actions to meet goals, but activity is collective behavior taken towards an object.

Subject and community. In CHAT, the subjects are individuals (Jenlink, 2013). While subjects engage in various actions towards the object, activities may be engaged in by multiple subjects or by entire communities. Community provides cultural-historical context in which subjects "engage in activities that are part of large human activity systems"

(Jenlink, 2013, p. 221). Human activity is not to be understood as individual activity.

Engeström (2015) reinforced the importance of distinguishing between the action of

individuals and activities by explaining, "Human activity is not only individual production.

It is simultaneously and inseparably also social exchange and distribution. In other words,

human activity always takes place within community governed by a certain division of labor

and by certain rules" (p. 114). The relationship between subjects and communities is one of

the several dialectical relationships within activity systems.

  Division of labor and rules. Communities provide boundaries that define the

division of labor and rules, which impact how subjects engage in goals that progress towards

an object. According to Jenlink (2013), "Sociocultural conventions, guidelines and rules

regulating activities in the system reflect cultural norms" (p. 221). Conventions and norms

define the rules and division of labor. Subjects, however, are not always aware of the

conventions that influence their role in activities. Because of this lack of awareness,

Engeström (2015) argued, "The total activity system seems to control the individual, instead

of the individual's controlling the activity" (p. 54). While individual actions remain integral

to the activity system, they are regulated by powerful cultural norms.

  Tools or artifacts. Further impacting activity systems are tools, or artifacts. Jenlink

(2013) described artifacts as guiding interactions between people and the structure created by

rules and the division of labor. As the interactions continue, new artifacts are created, which

in turn influences the structure (Engeström, 2015). Engeström (2004) explained, "The idea is

that humans can control their own behavior – not 'from the inside,' on the basis of biological

urges, but 'from the outside,' using and creating artifacts" (p. 29). Engeström therefore

suggests that human behavior will change as a result of the dialectical relationship between

artifact mediation, creation, and structural change. Expanding on Engeström's explanation, Kang and Gyorke (2008) added that "artefact-mediated activity constitutes the main source for the explanation of human activity; it links psychological processes with human beings' external behavior" (p. 207). Individual subjects' external behavior impacts their goals, which collectively contribute to the object's activity.

Jenlink (2013) described the dialectical process of artifact mediation, creation and structural change as a source of learning. Despite the use of the terms "tools" and "artifacts," which suggest physical objects, contemporary CHAT does not limit mediating artifacts to physical objects. Kang and Gyorke (2008) explained that "In CHAT, artefacts are ubiquitous: anything that is used within an activity system is potentially an artifact (sign or tool)" (p. 206). Lee (2011) explained that subjects, community, and rules also serve to mediate activity. Additionally, cultural and historical contexts influence both the creation of artifacts and the activities mediated by them (Kang & Gyorke, 2008). As the relationship between the six elements of CHAT suggests, analyzing activity systems is dependent on understanding the rules and division of labor created by the cultural-historical contexts of communities, and the artifact-mediated actions of individuals.

Principles of CHAT. Engeström (2001) built upon the six elements of CHAT to outline five principles:

1. The activity system is the unit of analysis;

2. The activity system represents multiple points of view;

3. Activities and objects are historically situated;

4. Contradictions within the activity system stimulate change; and

5. Activity systems are expansive.

The five principles of CHAT help to understand how the six elements operate within an activity system. Additionally, they provide a framework that analyzes the dialectical relationship between elements and where change occurs.

Activity system as unit of analysis. Although CHAT is used to understand individual experiences, it does not focus on the individual as the unit of analysis, but rather "the cultural and technical aspects of human actions" (Jenlink, 2013, p. 220). Consistent with Engeström's first principle, the result is that the activity rather than the individual is the unit of analysis (Yamagata-Lynch, 2010). Recognizing the activity as the unit of analysis also points to the distinction CHAT makes between actions and activities. Individual actions are important to the object of the activity, but the object is characterized by complexity of the activity. In order to understand the object, the entire activity system must be analyzed.

Multiple points of view. Engeström's second principle is related to the CHAT element of community. The principle is characterized by "the multi-voicedness of activity systems. An activity system is always a community of multiple points of view, traditions, and interests" (Engeström, 2001, p. 136). The subjects of an activity system may represent a variety of opinions and experiences that influence their actions. When taken together, these multiple points of view impact the activity of the collective, or community.

Historically situated. Community also plays an important role in Engeström's third principle, which defines activity systems as historically situated. Activity systems analysis requires the understanding that "History itself needs to be studied as local history of the activity and its objects, and as history of the theoretical ideas and tools that have shaped the activity" (Engeström, 2001, p. 136-137). The elements of any activity system are inseparable from the cultural and historical contexts in which they exist. For this reason, the contexts in

which subjects, tools, and rules and regulations interact must be fully understood in order to analyze the object of an activity.

Contradictions. Contradictions in activity systems are similarly historically and culturally situated, and can stimulate learning and change. Just as many individuals learn from their mistakes, "the most well-planned and streamlined actions involve failures, disruptions, and unexpected innovations" (Engeström, 2004a, p. 32). Considering the distinction between individual actions and collective activities, contradictions can only be fully understood in the context of the entire activity system. According to Engeström (2004a), contradictions "are very difficult to explain if one stays at the level of actions. The analysis of the activity system may illuminate the underlying contradictions that give rise to those failures and innovations as if 'behind the back' of the conscious actors" (p. 32). Similar to how individual goals contribute to object of an activity, individual failures and disruptions contribute to contradictions that arise in the activity system. According to Roth and Lee (2007), "As in all dialectical units, activity systems harbor inner contradictions, which come with the coexistence of mutually exclusive elements" (p. 203). Inner contradictions are powerful agents of change when they are conscious.

Expansive learning. Engeström's final principle of CHAT is that activity systems are capable of "expansive transformation." For Engeström (2001), "expansive transformation is accomplished when the object and motive of the activity are reconceptualized to embrace a radically wider horizon of possibilities than in the previous mode of the activity" (p. 137). When contradictions are identified and overcome, the resulting change can expand to influence and create other activity systems. Overcoming contradictions generates new learning. For Engeström (2004b), "expansive learning should

be understood as construction and resolution of successively evolving tensions or contradictions in a complex system that includes the object or objects, the mediating artifacts, and the perspectives of the participants" (p. 384). Contradictions that cannot be overcome prevent expansive learning.

Summary

The history of education for rural adults demonstrates its importance for rural communities. Over time, rural adult education has taken advantage of technological innovations to provide opportunities to a wider audience. However, barriers such as broadband access, insufficient digital literacy skills, a lack of interactivity between students and between students and faculty, and pedagogical limitations may prevent rural adults from experiencing the full benefits of online education. CHAT analysis, because it takes into consideration the cultural context of rural communities and the history of rural adult education, is a valuable method for analyzing the impact of barriers on how rural adults experience and benefit from online education.

CHAPTER THREE

METHODOLOGY

This chapter provides an overview of the methods used in this study. The purpose of this case study was to describe how rural adult online students seeking higher and continuing education negotiated barriers to learning online, and if doing so allowed them to reach their goals and satisfy their motives for enrolling in their programs. The study also suggested how students reaching their goals contribute to the vitality of rural communities. The primary research question was: How do rural adult online students negotiate barriers to completing online courses? Sub-questions included: what are the significant barriers that rural adult online students face in their online courses?; and, what are the educational motives of rural adult online students? Included in the chapter is an explanation of why qualitative research was the most appropriate method for the study, and the theoretical framework that guided the research. So that the research process can be fully understood, descriptions of the participants, sampling methods, data collection and analysis are also included. Design issues, limitations and delimitations, and ethical considerations are also outlined in this chapter.

Rationale for a Qualitative Approach to Research

Because the goal of this study was to describe how rural adult online students seeking higher and continuing education negotiate barriers in order to satisfy their motives for enrolling in online programs, and the literature shows numerous and complex issues that contribute to the barriers and motives, a qualitative approach was most appropriate. According to Merriam (2009), "Qualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences" (p. 5). By describing the benefits of learning online, and the

barriers they faced, rural adult students provided the study with insight into how effective online learning was for them. Creswell (2013) identified five reasons for conducting qualitative research:

1. When there is a problem or issue that needs to be explored;

2. When there is a need for a deep understanding of an issue;

3. When story-telling is the most effective style for conveying experiences;

4. When the researcher wants to empower a group of people; and

5. When the researcher wants to understand context.

The reasons for this study parallel those described by Creswell.

The issue that needed to be explored was how rural adult online students negotiated barriers to learning online. In order to identify students' methods of negotiating the barriers, the study sought a deep understanding of the barriers, and also the motives for enrolling in online programs. The necessary depth of understanding could only come from stories told by the participants. Participant stories provide the rich description that is a defining characteristic of qualitative research (Creswell, 2014; Stake, 1995). Stories uncover the context in which participants experience a phenomenon. Merriam (2009) described context as a primary characteristic of qualitative research because "individuals construct reality in interaction with their social worlds" (p. 22). Because the study examined the environments in which rural adults learn online, their rural communities, and the technology used to access their courses, understanding context was a vital component of the study.

Theoretical Framework

This study was guided by cultural-historical activity theory (CHAT). Theory is a necessary component of qualitative research, and must guide the researcher's questions, data

collection, and analysis (Merriam, 2009). According to Malterud (2001), "The theoretical framework can be equated with the reading glasses worn by the researcher when he or she asks questions about the material" (p. 486). Because I was concerned with how rural adult students negotiated barriers to their online learning, and the motives that drove the negotiations, the social and historical contexts of rural communities and online learning were of crucial importance. While the individual experiences of rural adult online students helped to gain an understanding of the negotiations, they could not be separated from the contexts in which they occurred. CHAT guided my research questions about how rural adults are challenged by and benefit from online education.

CHAT uses activity systems to analyze behavior. Activity systems are characterized by six elements: the object, the subject, community, a division of labor, rules, and tools or artifacts. The object represents an activity's purpose, and serves as motivation for the activity (Engeström, 2004b; Engeström, 2015; Jenlink, 2013; Roth & Lee, 2007). Subjects are individual participants in the activity (Jenlink, 2013). Individual participants and their behavior are important components of activity systems, but CHAT is more concerned with analyzing the collective, or community (Engeström, 2015). When understood, the community provides cultural and historical context for the analysis (Jenlink, 2013). Community activity is governed by a division of labor and the rules that provide boundaries and dictate individual actions (Engeström, 2015). Tools and artifacts mediate activities and guide the interaction between people and the division of labor and rules (Engeström, 2004; Engeström, 2015; Jenlink, 2013; Kang & Gyorke, 2008). Taken together, these elements constitute the activity system.

CHAT developed in three generations (Engeström, 2015; Nussbaumer, 2012; Yamagata-Lynch, 2010). This study will use Engeström's third generation CHAT, which is characterized by five principles of the activity system: it is the primary unit of analysis; it represents multiple points of view; its activities and objects are historically situated; it is characterized by contradictions that stimulate change, and; it is expansive. The contradictions that occur within an activity system result from tensions among the elements (Engeström, 2004a). When contradictions are overcome, new learning occurs which can transform and expand the activity system (Engeström, 2004b).

Both the elements and principles of CHAT were applied to an understanding of how rural adults negotiate barriers to online education. As subjects, rural adult online learners take individual actions towards goals, which may include earning a degree to obtain a better job, or making family and friends proud. Taken together, those actions comprise the activity of the community of learners that rural adult online students belong to, and the activity of their rural communities. The object of the participants' activity systems was to complete their online courses. The rules of the institution providing the online courses, or the rules of the local community governed individual actions and collective activity. Tools included the technology used to participate in online courses, instructors of the online courses, local resources, such as individual experts and advisors or public libraries and community centers, and support from a close network of friends and family in the community. In addition to providing principles to understand the complex interplay of the various elements that exist within activity systems that influence how rural adults negotiate barriers to online education, CHAT is compatible with case study research (Yamagata-Lynch, 2010). Just as CHAT

provided the framework guiding my questions, it guided my choice of methodological approach.

Methodological Approach

The case study was the most appropriate approach for this study because it examined the activities of learning online by individuals with the shared object of completing their courses. Case studies provide in-depth analysis of a phenomenon (Merriam, 2009; Stake, 1995; Yin, 2014). Because I recognized the complexity of the context within which rural adults learn online, an in-depth analysis was necessary to fully understand how they negotiated barriers. Each individual case was a unit of analysis bounded by the participants, time and activity. The bounded systems of the individual cases in this study were the activity systems of the participants. Because the factors operating within the bounded system investigated in this study were complex, the case study was ideal because it "offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon" (Merriam, 2009, p. 50). Additionally, analyzing the context of a case is an important part of gaining a deep understanding of the phenomenon within a case (Stake, 1995). The objective of this study was to understand the barriers experienced by rural adult online students, their motives for learning online, and how they negotiated barriers to satisfy their motives.

When broadly examined, this case study was bound by the participants' common object of completing their online courses. Therefore, a multiple case study approach was most appropriate because each participant had a unique activity system, and was therefore a unique subunit of the larger case. Multiple case studies allow for a close examination of subunits of larger cases, followed by cross-case analysis (Merriam, 2009; Yin, 2014). While

each participant was bound by a unique activity system, the common object of course completion served as the unifying factor in the analysis (See Figure 3.1). Multiple case studies also allow for "a deeper understanding of the processes and outcomes of cases, the chance to test (not just develop) hypotheses, and a good picture of locally grounded causation" (Miles, Huberman, & Saldaña, 2014, p. 30).
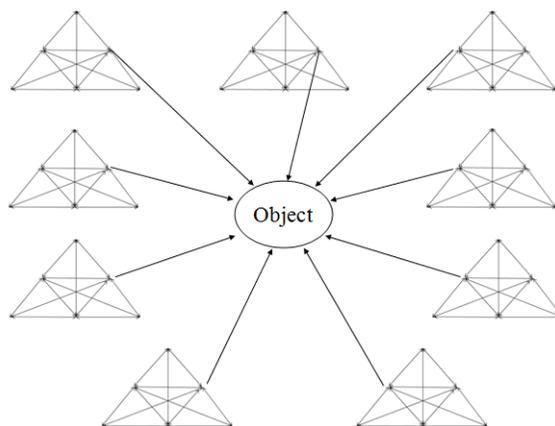
Figure 3.1 Multiple Case Study with Shared Object.

The case study was also an appropriate methodological approach for the CHAT framework that guided this study. Because the study examined the complex, real world relationships between rural adults, their rural communities, their learning communities, and the technology used to participate in their online learning, it called for a method that:

> involves the examination of self-sustained systems that are difficult to remove from the context and when investigators engage in data collection and analysis they need to be able to treat goal-directed actions, object-oriented activities, and activity settings as separate yet highly interrelated bounded systems (Yamagata-Lynch, 2010, p. 79).

The unit of analysis in CHAT is the activity system, which is bound by the activity taken to achieve an object (Jenlink, 2013). The case is the activity system.

Additionally, a case study was appropriate for this topic because it sought to understand how the relationships between adults, their learning communities, the social and historical context of rural communities, and the technological tools they use to access online education, all contributed to the benefits and barriers of learning online. The multiple relationships are what comprise the activity system, or the individual cases. Merriam (2009) explained, "The unit of analysis, *not* the topic of investigation, characterizes the case study" (p. 41). Because the relationships that created the activity are the true focus of this study, the case study approach was an ideal method for examining how they impacted the experiences of rural adult online students.

Participants and Sampling

The participants of this study were rural adults who had recently completed or were currently enrolled in credit courses online. Purposeful sampling was used to identify participants who met specific guidelines in order to produce meaningful data on how rural adults experience online education. Merriam (2009) explained that "Sample selection in qualitative research is usually (but not always) nonrandom, *purposeful*, and small, as opposed to larger, more random sampling in quantitative research" (p. 16). Specifically, qualitative case study research requires the researcher to make two decisions regarding the sample (Merriam, 2009). First, the case must be identified. Second, individuals within the case must be identified. Both a purposeful case selection and identification of specific individuals within the case contributed to the relevance of the data.

The cases selected for this study were individual rural adults enrolled in online programs, with the object of completing their courses. Consistent with the CHAT framework that informs the questions, data collection, and data analysis of this study, the cases were also

bound by the activities involved in online learning (Yamagata-Lynch, 2010). Participants

within the case were Midwestern male and female adults living in rural areas who were

currently or in the last 12 months enrolled in online courses for credit. To make the sampling

more purposeful, rural areas were limited to communities with fewer than 2,500 residents.

The population size is consistent with the United States Department of Agriculture's (2013)

definition of rural towns. In addition to living in a community of a specific size, participants

fit Knowles' (2015) psychological definition of an adult learner as being self-directed and

having a developed self-concept, which typically occurs after leaving school to gain

employment, commit to a partner, or start a family.

To be consistent with Seidman's (2013) recommendation that researchers balance

available resources with sufficiency and saturation, I sought 10 participants for the study, and

ultimately identified nine. I relied on snowball sampling because I did not have access to

records from institutions that provide credit online courses. According to Merriam (2009),

"Snowball, chain, or network sampling is perhaps the most common form of purposeful

sampling. This strategy involves locating a few key participants who easily meet the criteria

you have established for participation in the study" (p. 79). I contacted key participants to

initiate the snowball sampling through my job as a statewide continuing education

coordinator. I have work relationships with two individuals who met my participant

guidelines. I asked them to refer me to other individuals in their communities or similar

communities who they knew were taking credit courses online. Initially I believed that my

relationship with my key participants through the certification program I manage, which is

connected to state funding for their organizations, prevented me from asking them to

participate in the study, but ultimately they also served as participants. I contacted my key

participants first by an e-mail (See Appendix A) that described the purpose of the study, the

anticipated interview schedule, and other information that was useful to the data collection,

so that they could describe the study to potential participants and also decide if they wanted

to participate.

In addition to contacting the two individuals with whom I have a work relationship, I

asked my colleagues to distribute a message regarding the study in their weekly district e-

mail newsletters (See Appendix B). Because the newsletter is distributed to individuals with

whom I am connected to by the certification program I manage, the initial message specified

that participants could not be enrolled in that program. The message outlined the

qualifications for participation in the study, and asked for referrals to individuals meeting the

qualifications. Referrals included contact information for each potential participant,

including e-mail addresses and phone numbers.

Once I received referrals to potential participants I initially made contact with each by

an e-mail outlining the purpose of the study, the anticipated interview schedule, and the other

sources of information I planned to include with my data, and to ask if they were interested in

participating (See Appendix C). After my initial e-mail contact, I made phone calls

conveying similar information, and asked questions to determine if each individual indeed

qualified to participate in the study (See Appendix D). I communicated exclusively via e-

mail with several participants. If they qualified I scheduled the initial meeting during the

phone call or in subsequent e-mails.

Data Collection Procedures

In order to gain an in-depth understanding of the activities that influence the

experiences rural adults learning online, the data for this case study included interviews,

documents, observations, and analytic memoing. Creswell (2013) warned that in order to

conduct an effective case study, researchers should not rely on one source of data.

Additionally, multiple sources of data are necessary for triangulation, which ensures the

validity of a study (Merriam, 2009; Miles et al., 2014; Yin, 2014). While interviews were the

primary sources of data, documents and observations were thoroughly considered and

analyzed so that the study was meaningful and valid. Analytic memoing allowed me to

contribute my own reflections on the research process to the data.

      Interviews. Interviewing is a crucial component of qualitative research (Creswell,

2014; Merriam, 2009; Patton, 2014; Seidman, 2013). In interviews, participants provide

descriptions of their experiences by talking about the central phenomenon in their own

words. These descriptions allow the researcher to gain a deeper understanding of the

phenomenon. According to Seidman (2013), interviewing "affirms the importance of the

individual without denigrating the possibility of community and collaboration" (p. 13). Just

as the participant helps the researcher understand the phenomenon, the researcher helps the

participant explore his or her own experiences. Effective case study research also depends

on the depth of understanding gained as a result of interviews (Stake, 1995). The cases

identified in this study, which centered how rural adult online students negotiate barriers to

learning online, required a deep understanding that took context into consideration. Seidman

(2013) explained, "context is crucial to understanding the meaning of participants'

experience from their point of view" (p. 19). Consistent with the CHAT framework,

interviews helped identify tools used by participants (or subjects) and their perspectives

regarding the activities (Yamagata-Lynch, 2010). Because the focus of this case study was

how rural adult online students negotiate barriers to learning online, the experiences of the participants were the most effective way to explore the case.

This study used semi-structured interviews, which combined a structured section with a list of questions that intended to encourage both the interviewer and participant to explore issues raised during the interview (Merriam, 2009). Seidman (2013) suggested a series of three interviews when using the semi-structured approach. The first interview focuses on the life history of the participant, which "establishes the context of the participants' experience" (p. 21). In my first interview with the participants in this study, I asked them to describe their rural communities, their educational backgrounds, and their motives for enrolling in online programs. The second interview, which sought to uncover details of the experience, asked participants to describe the details of their online learning activities. The third interview "encourages the participants to reflect on the meaning their experience holds for them" (p. 21). The questions designed for the third interview encouraged participants to consider the meaning of their experiences learning online, and the factors that impacted the effectiveness of online education for them. The interview protocols and questions are included in Appendix E and F.

Seidman (2013) suggested that 90 minute interviews are most effective for gaining an in-depth understanding of participants' experiences. The three, 90 minute interviews with each of the participants in this study were conducted at least two weeks apart, with no more than four weeks between them. The lapse between interviews allowed me to review transcripts and adjust my questions for the next interview in the series, and also allowed for the participants to reflect on our conversation before meeting again. During their reflection, participants discovered additional details about their experiences that provided me with a

more in-depth understanding. Interviews were scheduled according to the availability of the participants, and face-to-face in the communities where they lived. Only one of my participants did not complete all three interviews. We conducted the interviews in her home, and during them I sensed some tension between her and her spouse related to the time we were spending together. She cancelled our scheduled third interview, and when she did not reply to two e-mails in which I asked if we could reschedule, I chose not to pursue it further. I did not want our meetings to exacerbate disagreements she may have had with her spouse.

Rapport. Establishing trust between researcher and participant is necessary for effective case study research because of the need for an in-depth understanding of participants' experiences (Creswell, 2013; Merriam, 2009; Stake, 1995). Patton (2014) added that rapport between researcher and participant should be nonjudgmental and empathetic. I established trust and rapport with my key participants during my first e-mail communication with them, in which I explained the purpose of the research and how I was referred to them. I continued to build rapport with those I was referred to through both e-mail and telephone conversations.

While developing a rapport with participants is necessary, it is also important to delineate between rapport and relationship. Developing too close of a relationship could compromise neutrality (Patton, 2014). Seidman (2013) suggested, "The interviewing relationship must be marked by respect, interest, attention, and good manners on the part of the interviewer. The interviewer must be constantly alert to what is appropriate to the situation" (p. 99). In order to maintain an honest and neutral exchange with my participants, I built a respectful rapport while maintaining a professional distance, and reflected on my relationship to my participants throughout the research process.

Recording and storing data. Audio from participant interviews was digitally recorded. I took notes during the interviews in order to record body language and emotions that were not adequately documented in the audio files. I transcribed 18 of the 26 interviews, with eight completed by a professional transcription service. Prior to the professional transcription, I reviewed the audio files in order to capture voice inflection and emotions. All of the data and notes were stored on a password-protected computer.

Document analysis and observation. Consistent with the need for effective case study research to include more than one form of data collection (Creswell, 2013; Yin, 2014), I collected syllabi from my participants and observed their behavior and environment in order to gain a deeper understanding of their experiences and activities related to online learning. I also observed them as they accessed their online course platforms. Merriam (2009) recommended that "observations take place in the setting where the phenomenon of interest naturally occurs instead of a location designated for the purpose of interviewing," and that "observational data represent a firsthand encounter with the phenomenon of interest rather than a secondhand account of the world obtained in an interview" (p. 117). For the participants in this study, the setting where the phenomenon of interest occurred was first the rural community in which they lived, then ideally also a location where they learned. I conducted interviews with my participants in their homes, at their work places, in local restaurants, and in public libraries. Furthermore, the observations provided insight into how participants interacted with the online course elements that impacted their experiences.

Merriam (2009) explained that observations should be guided by the theoretical framework. In order to gain insight using a CHAT framework, Yamagata-Lynch (2010) suggested that "investigators need to observe situations in which participants are engaging in

goal-directed actions and object-oriented activities relevant to the study" (p. 71). Observing how rural adult students interacted with their online courses and the technology used to participate in them assisted in uncovering the relationships between the participants, their technology tools, and their environments. These observations led to a better understanding of the activity system where their learning occurred.

In addition to observations, documents were collected from participants to provide more depth to their experiences. Yamagata-Lynch (2010) explained, "Document and artifact analysis often provides new contextual information that explains and verifies what investigators learn from interviews and observations" (p. 71). In order to gain a better understanding of my participants' experiences with their online courses, I requested that they shared copies of their syllabi with me.

Analytic memoing. The third source of data for this study was generated by analytic memoing, which I engaged in during data collection and analysis and captured on my digital recorder and in a notebook. Miles, Huberman, and Saldaña (2014) described analytic memos as "brief or extended narrative that documents the researcher's reflections and thinking processes about the data" (p. 95). Saldaña (2013) suggested the following types of reflections for analytic memos:

1. Personal relation to the participants or phenomenon;

2. The study's research questions;

3. Code choices and definitions;

4. Emergent patterns;

5. Possible networks;

6. Emergent or related theory;

7. Problems with the study;

8. Personal or ethical dilemmas;

9. Future directions for the study;

10. The analytic memos already generated; and

11. The study's final report

By capturing my reflections on the various aspects of the data collection process and analysis, memos provided an additional method to help make sense of the data. According to Miles et al. (2014), analytic memos "are one of the most useful and powerful sense-making tools at hand" (p. 96). I travelled significant distances to conduct interviews with my participants and used the driving time as an opportunity to reflect on our conversations and begin analytic memoing. I listened to each recording in my vehicle immediately following the interview, allowing me to begin analyzing the data during my return drive. Prior to my third interview with each participant, I again listened to the recordings from the first and second interviews in order to write questions for our third meeting. As I listened to each recording while driving, I captured reflections on my digital recorder. I often made additional reflections in a notebook when I returned from my trips.

In addition to the analytic memos I made while reviewing my data, I also reflected on my observations of each participant's community and the environments where we met. Because the interviews were conducted in the communities where the participants lived, I had the opportunity to drive through each town and the surrounding rural areas. I often captured my observations on my digital recorder while driving, but during those extended, solitary, trips I constantly reflected on the settings and made mental notes of my impressions.

These observations allowed me to situate my interviews in the context of each participant's rural community, and helped me make sense of the data.

Ethical Considerations and Bias Statement

In order to guarantee that this study was ethically conducted, the research process was guided by ethical considerations. Agee (2009) suggested, "Part of the process of developing questions in qualitative research is being reflective about how the questions will affect participants' lives and how the questions will position the researcher in relation to participants" (p. 439). Informed consent is one of the methods for ensuring that the questions participants are asked during the data collection process minimize risks to them (Seidman, 2013).

Institutional Review Board. A proposal for this study was submitted to and approved by Drake University's Institutional Review Board to guarantee that it included the required elements for informed consent and participant safety. I completed the National Institute of Health's *Protecting Human Research Participants* online training in October of 2013. The training ensured that I fully understood the rules and guidelines regarding human subjects research. I complied with and implemented all recommendations made to me by the Institutional Review Board to ensure that this study was conducted ethically.

Informed consent. I provided participants in this study with an informed consent document that detailed the purpose and procedures of the study, and their rights during the research process. As suggested by Patton (2014), the informed consent addressed the following issues: the purpose of collecting the information; how the information will be used; the type of questions that will be asked in the interviews; and how the interview data will be retained and kept confidential. My informed consent (See Appendix G) includes the purpose

of the study, how the information will be collected and used, how the information will be stored and kept confidential, a statement about the risks to participants, and contact information for further questions and concerns.

Confidentiality. Seidman (2013) addressed the need to ensure participants' right to privacy and right to request confidentiality. In addition to the interview and other data being stored on a password protected computer, names of all participants, the names of their communities, and the names of the institutions providing their online education were changed in order to ensure confidentiality.

Power dynamic. Creswell (2013) warned that interview relationships are often at risk of creating a power dynamic in which "the interview is 'ruled' by the interviewer" (p. 173). Seidman (2013) believed that not all power dynamics can be resolved, but need to be recognized. In addition to having important ethical ramifications, they may impact the methodology of the research. Striving for equity "is the foundation for the trust necessary for participants to be willing to share their experience with an interviewer" (Seidman, 2013, p. 111). Because this study was dependent on an in-depth understanding of the participants' experiences with online education, which can only be reached through rich description, I recognized the potential inequity in my relationships with participants and strove to create a more collaborative interview process. Collaboration was balanced by the need to maintain a professional rapport with my participants.

Positionality and bias statement. Acknowledging my bias towards the topic of this study was an important component to ensure that the research was conducted ethically and effectively. According to Malterud (2001), the background of a researcher impacts the choice of subject, the framework applied to the study, the data collection process, and the

data analysis. Because researcher bias is ever present in the research process, Merriam (2009) suggested that before "interviewing those who have had direct experience with the phenomenon, the researcher usually explores his or her own experiences, in part to examine dimensions of the experience and in part to become aware of personal prejudices, viewpoints, and assumptions" (p. 25). I identified several personal viewpoints that could potentially impact this study.

The participants of this study were from rural, Midwestern communities with populations of less than 2,500. I grew up in a suburban community outside of a large city on the East coast, and currently live in the largest city of a Midwestern state. Although my mother was born and raised in a rural community similar to those of my participants, I have never lived in a rural community and therefore do not have the same experiences as the participants. I am accustomed to amenities such as high-speed Internet access, physical proximity to higher education institutions, and diverse populations, which made it difficult for me to relate to the experiences of my participants.

Additionally, my own experience as an online education provider impacted my attitudes towards the effectiveness of online learning. In my work I have witnessed first-hand the technology barriers that rural online learners face. Insufficient Internet network speeds, a lack of digital literacy skills, and technology limitations all impact my daily work. As a result, it was difficult for me to see beyond the technology barriers in order to fully recognize the benefits that my participants reported.

I used bracketing to ensure that my biases did not impact this study. Tufford and Newman (2012) defined bracketing as "a method used by some researchers to mitigate the potential deleterious effects of unacknowledged preconceptions related to the research and

thereby to increase the rigor of the project" (p. 81). I wrote memos throughout the data collection and analysis to ensure that my biases were not compromising the research. According to Tufford and Newman (2012), "memoing one's hunches and presuppositions, rather than attempting to stifle them in the name of objectivity or immersion, may free the researcher to engage more extensively with the raw data" (p. 86). My memos included notes about my engagement with the research process, ranging from comments about the methodological process to my feelings about the study and findings.

Data Analysis Procedures

Interviews with participants, documents provided by them, observations of their rural communities, observations of their online learning activity, and analytic memoing provided the data for this study. In order for the data to be analyzed effectively, it must be prepared and organized, coded and themed, then represented visually or in writing (Creswell, 2013). Stake (1995) advised that in case study research, "There is no particular moment when data analysis begins" (p. 71). Data analysis for this study was ongoing, from beginning to end, and what Creswell (2013) described as holistic, meaning that I analyzed the entire case and the sub-cases, not just individual aspects of them.

Horizontalization. Merriam described horizontalization as "the process of laying out all the data for examination and treating the data as having equal weight; that is, all pieces of data have equal value in the initial data analysis stage" (p. 26). An organized compilation of all data is particularly important in case study research, which draws equally from interviews, documents and observations. Following recommendations made by Yin (2014) and Merriam (2009), I horizontalized my data by organizing it into documents where I could easily locate specific, relevant data during the analysis.

Thematizing. Identifying themes, or categories, is a crucial step in qualitative data analysis (Merriam, 2009; Miles et al., 2014). I thematized my data using three phases of a coding process, as recommended by Miles et al. (2014); the first phase assigned codes to chunks of data in order to uncover patterns; the second phase categorized the patterns into clusters, and; the third phase found interrelationships among the categories.

Phase one. The first phase of thematizing utilized open, or initial coding so I could "reflect deeply on the contents and nuances" of the data and "take ownership of them" (Saldaña, 2013, p. 100). In this phase, I identified the disruptions between elements of the participants' activity systems. Identifying contradictions are crucial to CHAT analysis. Provisional coding was also used in phase one. Miles et al. (2014) describe provisional coding as beginning with a list "of researcher generated codes, based on what preparatory investigation suggests might appear in the data before they are collected and analyzed" (p. 77). I generated provisional codes based on the six elements of CHAT: the object, the subject, community, a division of labor, rules, and tools or artifacts. Because the codes were generated by the theoretical framework, the provisional codes were deductive (Miles et al., 2014). Using the elements of CHAT helped categorize the disruptions. In CHAT, disruptions indicate areas where learning and change occur (Engeström, 2004a).

Phase two. Following the identification of patterns based on the disruptions, and the provisional codes provided by CHAT, I categorized the disruptions into themes based on the participants' common experiences. I organized the themes for each individual participant, then identified which were the strongest among the participants.

Phase three. The goal of the third phase of analysis is to make inferences, develop models or generate theory (Merriam, 2009). In this phase of analysis I examined the

contradictions that rose from the data, and used them to examine the negotiations that allowed the participants to reach the object of the activity. The negotiations illustrated the "expansive transformation" (Engeström, 2001, p. 137) of the system.

Reporting findings. Miles et al. (2014) suggested that there are multiple methods for reporting findings. Stake (1995) advised that for case studies such as this, "The report needs to be organized with readers in mind" (p. 122) and recommended including the following elements:

1. Case biography or chronology

2. How the researcher learned about the case

3. Systematic descriptions of the major components of the case

Miles et al. (2014) emphasized, "Reporting is not separate from thinking or from analysis" (p. 325). This study is reported with the reader in mind, and just as the data collection and analysis was comprehensive and held to ethical standards, the report reflects the same high standards.

Design Issues

Merriam (2009) wrote that in order to produce trustworthy qualitative research there must be rigor throughout the study. Stake (1995) explained, "In our search both for accuracy and alternative explanations, we need discipline, we need protocols which do not depend on mere intuition and good intention to 'get it right'" (p. 107). In this study, rigor was upheld by ensuring credibility, transferability, and dependability, and confirmability.

Credibility. A study is credible when it achieves internal validity. According to Merriam (2002), "Internal validity asks the question, How congruent are one's findings with reality" (p. 25)? Miles et al. (2014) identify a study as credible when it authentically

represents the subjects, issues and environments being investigated. Creswell (2013) contended that credibility is a strength of qualitative research because of "extensive time spent in the field, the detailed thick description, and the closeness of the researcher to participants in the study all add to the value or accuracy of the study" (p. 250). I ensured credibility in this study by extensive interviewing, observation and document analysis, and analytic memoing, all of which will provided me with an in-depth understanding of what influenced the experiences of rural adult online students.

To provide further credibility I used member checks with the participants of this study to ensure that I was authentically representing their interview responses. Stake (1995) described participants as actors who "play a major role directing as well as acting in case study" and member checks allow them the opportunity to review data for "accuracy and palatability" (p. 115). At the conclusion of the three interviews with each participant and after I transcribed the audio recordings, I sent each transcripts of our conversations so that they had the opportunity to review them for accuracy, and to make clarifications.

Transferability. Transferability, or external validity, "is concerned with the extent to which the findings of one study can be applied to other situations" (Merriam, 2009, p. 223). Both Merriam (2009) and Creswell (2013) regarded rich, thick description as a valuable method to ensure transferability. It is only through in-depth description that one can determine whether or not findings are applicable in an alternative setting. In order to ensure transferability in this study, I thoroughly described the barriers impacting rural adults' experiences learning online, and the negotiations they used to reach their object, so that my findings can be applied to other populations or learning environments.

Dependability. Creswell (2013) suggested that in qualitative research "Rather than reliability, one seeks dependability that the results will be subject to change and instability" (p. 246). Merriam (2002) recommended that dependability does not rely on whether one can get the same results as the original researcher, but rather that the results are consistent and sensible. Several steps can be taken to ensure dependability, including an audit trail and peer review or examination (Creswell, 2013; Merriam, 2009). For this study I maintained an audit trail, or record of my research process, which included descriptions of how the data were collected, how codes and categories were developed, and the decisions that guided my choices. Following the data analysis I shared my conclusions with peers who also work with rural adult online students to ensure that my interpretations were consistent with their own experiences.

Confirmability. Miles et al. (2014) described confirmability as "relative neutrality and reasonable freedom from unacknowledged researcher biases – at minimum, explicitness about the inevitable biases that exist" (p. 311). Seven steps are recommended to ensure confirmability: providing detailed descriptions of the methods and procedures; a clear sequence of how the data were collected and analyzed; a clear connection between conclusions and the data; a record of the methods and procedures used in the study; researcher self-awareness regarding biases; consideration of alternative conclusions; and retention and availability of data for other studies. To provide confirmability for this study, I provided in-depth descriptions of the research process using an audit trail that detailed my research process, remained aware of my assumptions and biases towards the topic throughout the study, retained my data according to the guidelines set forth by Drake University's Institutional Review Board, and reported my findings so that others can confirm them.

Delimitations and Limitations

The scope of this study was delimited to adults living in rural areas in the Midwestern United States, who were enrolled in credit courses online. The study focused on how rural adult online students navigate the barriers to online learning. Additional issues arose from the interviews, documents, and observations, but they were not explored if they did not impact how the participants learned online.

One limitation of this study is that I did not have access to the online courses in which the participants are enrolled. Without access to the course content, I had to rely on participants' descriptions of their courses, the level of their interactivity within the courses, and the level of their efforts to overcome barriers. Observing how the participants accessed their courses, and reviewing their course syllabi provided me with useful data, but did not necessarily provide the in-depth understanding of what it was like to be enrolled in the courses.

Summary

This chapter provided the rationale for using the case study approach to examine how rural adult online students negotiate barriers to their online learning. It included a description of the data collection and analysis procedures that I used to ensure a comprehensive understanding of the case. In addition, the chapter examined how I addressed ethical issues and my own bias so that design considerations were maintained, and recognized the delimitations and limitations of the study.

CHAPTER 4

INTRODUCTION OF THE PARTICIPANTS

This chapter provides profiles of the participants and brief descriptions of their communities. Pseudonyms are used for the participants, and community and educational institution names are changed to protect the identities of the participants. Additionally, participant career and job titles are changed because of the small sizes of the communities and the potential for identifying participants through their work.

The participant profiles provide context integral to using the CHAT framework. Descriptions of where the participants live are relevant to the community element of CHAT, and educational, family, and employment histories identify some of the tools and divisions of labor present in each participant's activity system. Each profile includes the benefits of online education that the participants recognize, both intentional and unanticipated. The benefits address the outcome of each participant's activity system, which reflects the result of new learning gained by overcoming barriers to their online education. The profiles also answer the research sub-question, "What are the educational motives of rural adult online students."

The participants in this chapter represent nine of the 14 rural online students asked to contribute to the study. Eight of the nine participants were women, and ages range from the early twenties to mid-fifties. Community sizes of the participants range in population from fewer than 200 to over 2,000, all falling below the 2,500 population size limit set to define the cases. All of the participants were either currently enrolled in online classes, or had been enrolled in an online class in the 12 months prior to the interviews. Degrees sought by participants ranged from Associate's to Doctoral degrees.

Amber

Amber is in her early twenties and lives with her parents and two young children in Paxton, a city with a population under 500. Paxton is less than an hour's drive from one of the state's mid-sized cities and a mid-sized city in a neighboring state. Amber described Paxton as "pretty quiet" and "more of an older community." Since moving to Paxton two years ago, she recognized that younger families were moving out of not only Paxton, but also neighboring small communities. She expressed some benefits of being in a small town, such as living close to a park where her children can play, and having neighbors that look out for her and her family. However, she recognized that "the good thing is you get to know people, but the downfall is everybody knows what you're doing." When asked what she would change about Paxton, she replied, "I'd rather be closer to bigger stuff. That way you don't have to drive." Amber described the distance she must drive to work at a health care facility in a neighboring town, the anticipated distance she will have to drive her older child to meet a school bus, and the distances she travels to get health care for her children.

Amber's older child, who suffered a serious illness as a toddler, requires care only available at hospitals in the surrounding mid-sized cities. After several years of receiving care in the neighboring state, Amber recently discovered that, due to changes in Medicaid in her home state, she would no longer be able to take the child to out-of-state doctors. Her only solution was to drive almost three hours to the hospital in her home state's largest city. Because her youngest child, who was born months premature, also suffers from health problems that need to be treated in the city, Amber was trying to determine a way to schedule back-to-back appointments for both children so she could minimize the time and expense related to required travel.

Given the challenges of raising two small children with serious health problems, Amber's parents were instrumental in providing the support she needed to return to school. Her oldest child fell ill following her parents' work-related move to a city far from where Amber grew up, so she "moved down there for the support." While living with them, her youngest child was born prematurely. When her parents moved to Paxton, they encouraged her to join them so that she could attend the area community college and they could help care for her children. Amber spoke respectfully of her parents. She recounted how her father, who went to college after decades of working for his family's agricultural business, "pushed me for my education," and told her "if I can do it, you can do it." Her mother, who has worked in the same health care profession Amber hoped to join, encouraged her to pursue her career "dream." In addition to her parent's encouragement, Amber described how her boyfriend encouraged her to remain in school, telling her, "if you get out of school, then we'll get a place." When asked what inspired her to pursue her career dream, Amber cited observing her mother throughout her career, but also the help she received from the nurses when her children were in the hospital. She described the nurses as a "second family," and recalled, "You saw them more than you saw your own family."

Amber identified that getting the necessary education for her professional dream was the primary reason for attending her online and on campus classes. Describing the importance of earning her degree, she said "I'll be able to make enough where I don't need two, three jobs. That's where I'll be able to do what I love but be able to support myself." Amber identified herself as a good student and member of her college's honor's society. Her good grades and hard work were not only helping her complete her degree, but also earning her a unique opportunity to get a job that would help pay for her future education. Amber

recently learned that by getting a position with a local health care organization and making a three-year commitment to working there, the organization would pay for her remaining credits at the community college she attended. Following the third interview, Amber reported that she was hired by the organization.

Carla

Carla is in her early fifties and lives in Barkley, a city with a population of around 300 people. Barkley is located 12 miles from Ashworth, a larger city with over 5,000 residents. Carla described Barkley as "very small," but convenient because of it's proximity to other, neighboring communities such as Ashworth. Carla and her family moved to Barkley because they wanted to live in the country, and had been living on a hog farm prior to the move. She said, "Even though I grew up in town, after we lived on the farm it's like, this is where I would rather be as well." Carla did not, however, explain why she preferred living on a farm, and when asked which community she identified with she named Ashworth, not Barkley. In response to questions about the changes she had seen in her community, Carla only spoke of changes in Ashworth. She only mentioned Barkley and the other small, neighboring cities in the context of the overall economic security of the county.

Carla spoke extensively about the importance of her large family. She identified her husband Gary as a vital source of support to her throughout her education. Carla waited to complete her four-year degree until she was in her early forties, after earning her associate's degree at a local community college. Although spurred in part by wanting to leave her career in health care, she cited Gary as her primary motivator. While she attended classes towards her bachelor's degree at a university an hour away from where they lived at the time, Gary took responsibility for their growing family in addition to holding a physically challenging

job. When talking about her support from Gary, Carla said, "there are times that I'm like, oh my gosh, I would never be able to do this without you." In addition to supporting her while she completed her Associate's and Bachelor's degrees, Gary encouraged Carla to enroll in and complete her online Master's degree.

Carla did not receive comparable support from her parents when she was growing up. She described a time when her mother returned from school conferences, angry with Carla's younger brother and sister for not having good grades. According to Carla, when her siblings asked why their mother was so angry with them and not with Carla, she replied, "that's because she's not as smart as you are." Carla recounted feeling like "the stupidest person on the planet," and said, "It made me feel like I was an idiot." Despite the difficult memory of her mother's words, Carla admitted her parents "didn't have much for parenting skills," and that her "mother did the best she could." Carla recalled her school years as difficult, and she struggled in particular with reading and math. She remembered a school counselor who encouraged her to enter therapy, which she attributed to her eventual graduation.

Carla did not describe similar academic struggles in her higher education experience. Indeed, she expressed a great deal of self-assurance when describing her work in her online Master's program. At times during her online courses, Carla felt as though she knew more than her professors. Describing projects that required citations in the American Psychology Association format, Carla recalled, "There were professors that I knew more about APA than they did, and they would tell me to do it wrong." She also did not appear to value professors' comments on her papers, saying, "even if they put remarks on my papers I ignored them, because if it isn't going to change my grade I really don't care." Carla recognized that many of her professors were likely adjuncts, and that the format and material in her courses was

consistent because "they really have it down to a science." Despite appreciating that she could complete her degree at her own pace, without travel, and while working full time, Carla did not believe she would ever enroll in another fully online program. Comparing her online Master's degree to her previous college experiences, she said that the online program "probably could have been better if it had been in person," and admitted that she learned much of the material without the support of the faculty.

Although Carla had misgivings about the quality of her online program, she enjoyed the subject matter and identified that it would be helpful in future jobs. She particularly liked the classes on management and entrepreneurship, and at the time of her interviews was in the process of establishing her own business, with plans to start another in the near future. Carla admitted that she began the program because of a stressful job situation, and said, "I just needed to know there was a way out." Upon completing her online degree, she left her job with the intention of using her new credentials to begin another career.

Crystal

Crystal is in her late twenties and lives with her husband and child on a remote farm outside of Brixton, a city with a population of less than 200 people. Brixton is among several small communities bordering larger cities, and Crystal identifies more with Castor, a city with a population over 8,000. Not only does her child attend school in Castor, the majority of her and her husband's friends live there. Of Brixton and the other small communities outside of Castor, Crystal said, "There really isn't anything there" other than the occasional bar and farm co-ops. She lamented the fact that there are not even gas stations in the small towns, and that she has to drive to Castor to get groceries. She wished "other people could support smaller towns so they could at least afford to keep something small." Despite the

small towns' lack of services, Crystal expressed that she liked living in the country because of the quiet, and because "it's simple and not a fast-paced environment." She also appreciated the safety of living on the farm, where "I don't have to worry about stranger danger if my daughter wants to go out and play."

Although Crystal's daughter attends school in Castor, and she and her husband socialize there, she did not describe the larger town favorably, calling it "run down and crappy." She attributed Castor's struggles to the agricultural industry there, which had deteriorated in recent decades because the large corporation that owns the facilities pay their employees insufficient salaries, which she recognized "affects everybody." While working at a job that required transport of large sums of money in Castor, she recalled feeling unsafe, as opposed to when she had to do the same transport in a small town, where "if it was going to be anybody that was going to rob you, it would be somebody that's not from the town." Having lived in East Suffolk, a suburb of the state's largest city, and currently driving to work there every day, Crystal recognized the benefits of living in a rural community, and described how during her commute home she felt relaxed once she drove out of the traffic surrounding the city.

With the exception of a year she spent working closer to Brixton, Crystal has been employed at the same job in East Suffolk for nearly a decade. She said that she liked her job, and expressed gratitude for the fact "we're all kind of like family there." She recounted a time when her employers allowed her to work part-time during an illness in her family, and about how they respected her commute of nearly 100 miles a day by allowing her to stay home in bad weather. Despite appreciating the family atmosphere of her job, Crystal recognized, "I just know it's not something I want to do the rest of my life," and, "When I'm

done with school I'll be leaving." She expressed her desire to use her work to help people, and said, "I just feel like I'm not put to good use where I am." Crystal returned to school with the intention of pursuing a new career in community service, which she hoped would help her find employment in the communities closer to her home.

Prior to enrolling in her online courses, Crystal attended classes on campus at a four-year college and later at a local community college. After graduating from high school, she enrolled at the private college, where she only attended classes for a semester because she discovered she was pregnant with her first child. She returned to school five years later, enrolling in on-campus classes at one of the community college campuses close to her job in East Suffolk. After marrying and moving to her husband's family farm outside of Brixton, Crystal recognized, "Once I moved out here I knew that it was out of the question to go to any kind of campus, because I wouldn't be getting home until 10 o'clock every night." She repeated several times that she learned better in person, and admitted, "I'm surprised I even do online classes." Despite recognizing that her preferred learning environment was face-to-face, Crystal said, "I've done really well with it and I'm kind of surprised," and attributed her success to self-discipline and goal setting. However, Crystal planned to return to face-to-face classes once she exhausted her online options, and her ultimate goal was to be accepted into a program at a large state university where classes are only offered face-to-face at a satellite campus.

Mary

Mary is in her mid-fifties and lives with her husband in Dunham, a city with almost 400 residents. Although she is not originally from Dunham, she appreciates the quiet community, and the amount of land she and her husband are able to own there. She also

referred to the safety of living in Dunham by telling a story of how she and her husband found a set of keys. It took them a while to determine that they were a set of house keys, and that they did not recognize them because they never lock their doors. When asked about changes she has seen during the nearly 10 years she has lived in Dunham, Mary noted that the population had aged, and said, "Since they shut down the schools, it's becoming more of a retirement community." She believed that the consolidation of the local schools discouraged new families from moving to Dunham. Mary acknowledged that there were families that had lived in town for a long time, but she also referred to a newer group of residents, whom she referred to as an "odd ducks club" of people who did not fit in elsewhere. Mary believed that she and her husband fit into the "odd ducks club." When asked why she thought new people were moving to Dunham, she replied, "Cheap living."

Mary recounted a variety of jobs she held over the years. In addition to working in factories, she had been a welder, a cook, and had done numerous odd jobs such as sewing, upholstery, and painting. Mary had been in difficult financial positions, and admitted, "I actually spent a year and a half living out of my car, all over the country." She and her husband still lived frugally, growing and canning much of their own food and cutting out non-essentials such as television and internet access. A job loss seven years ago convinced Mary to return to school. The corporation that she worked for offered to pay for their laid off workers to attend a local community college, and despite reservations about returning to school, Mary took the opportunity. She described feeling "scared to death" in her first classes. After taking a study skills class, Mary gained confidence and reported getting good grades. At the time of the interview she was completing her second Associate's Degree. Mary claimed that earning the second degree was not an attempt to change her career, and

that she was happy in her current job. However, she felt the degree was a "back up plan" in case anything ever happened with her current job, or to her husband.

Mary's experiences with education prior to her Associate's Degrees were challenging. She described being shy and overshadowed by her sister in school. Mary said, "I was always pushed aside, just part of the woodwork. I didn't do well in school, I was always…well let's just put it this way, I might have said 10 words a year from kindergarten to graduation." Mary recounted a story about drawings she had included in an art show her senior year of high school, and a comic strip she created and shared with an art teacher. None of the items were returned to her, and when asked why, she replied, "I don't know if they kept it for psychological reasons, because it was mostly about my family and the goofy things that went on in my house." As a result of her poor performance in school, Mary was placed in special education classes. She spoke positively of her special education teacher, recalling,

> I always thought I was just stupid. She told me, when I did that, the IQ test that I was
> way above average, she wanted to let me know that I was, so I might realize that I had
> more potential than just being my sister's shadow.

Despite the challenges she faced in school and her belief that she was not smart, her success at community college gave her confidence in her academic ability. She said, "Well, then I started to realize that the teacher years ago was on the money when she said there's more going on up here than I realize. That I'm not as dumb as I thought I was."

In addition to realizing that she was better academically than she previously thought, Mary believed that her success in college was part of a process of self-improvement. She wanted to share her experiences with others in order to help people who struggled as she had,

and was writing a book about her life. When asked about the goal of the book, Mary said, "In the end, I'm hoping that it will be a motivational type of life change experience, so people can see that you can go from rock bottom, where your life spirals out of control, and bring it back." She spoke openly about her own struggles, including with employment, and believed that her enrollment in college was directly related to securing her current job.

Megan

Megan is in her thirties and lives with her family in Humber, a city with a population of approximately 2,000. She grew up in Humber, and after living in one of her state's largest cities, which is less than an hour away from Humber, and briefly living out of state, she returned to her hometown with her husband and child after a family emergency. Megan claimed, "about a half hour of moving back I realized what a horrible mistake I've made." She described Humber as too small, and expressed irritation that "There's really not a whole lot to do, and you have to drive to do anything." Megan spoke extensively of her perception that the town had changed considerably since she lived there as a child. She expressed frustration with her neighbors, who she did not talk to, and said, "it boggles my mind because that's not the town I grew up in. It's changed so much but it's the same people." She described a community closed off to newcomers and resistant to change.

Megan recognized a shift in the demographics of Humber, and how the agriculture and food production industries attracted a growing Hispanic community. She believed that the long time residents of Humber saw the "newcomers as taking way from their community, of making services hard to get," and that "it's hard for some of them to accept that things change, other people move to town." Megan acknowledged how the isolationism of Humber impacted her when she left after graduating from high school to live in a larger city. She

described being "scared of everybody and everything. All we were ever told is that people in the city, they're bad and they're horrible and they're mean and they'll steal from you, and they're ungodly." However, despite her strong, negative opinions of Humber, she did recognize some benefits of living there. She described "a pride of ownership", a "very clean town." She also expressed appreciation for the safety of the community, and described an incident where her child was in a dangerous situation and a neighbor called to tell her about it so the child would be protected in the future.

Megan had similar, conflicting attitudes towards her school experiences as a teen. She attended a private high school, where, despite disliking classes and homework, she "always felt comfortable there." She spoke with fondness of her principal, who took a special interest in her. Megan described a difficult home situation, and how, "After being kicked out, there was one time I did quit school, and I was living with my cousin in Lenape City, and he [the principal] called and told me all the reasons why I should not be quitting school. And I think that kind of helped." In addition to her principal, Megan named others in her support system as a teen, and admitted she "didn't have support from traditional types of support." Her support included a former father-in-law, who bought her senior pictures and graduation gown when her parents refused, and a boss and his wife, who taught her how to manage her money.

Because of her challenging home life, Megan held three jobs while in high school, including one with a two to seven A.M. shift. She remembered difficulty staying awake in classes, but believed her jobs kept her out of trouble. Most importantly, she identified, "It kept me out of the house and I think it instilled a work ethic in me." Megan expressed pride in her work ethic, and said, "To me, when I go to work, I try to work as hard as I can, as

much as I can, in order to pay my bills and just succeed, basically." She admitted, however, that not having a college degree kept her in minimum wage jobs.

Despite instilling a strong work ethic, Megan recognized how her jobs as a teen negatively impacted her grades, and almost prevented her from graduating high school. Her challenging high school years and negative attitudes towards schoolwork were evident in her opinions towards her current online program. She repeatedly referred to herself as a bad student, and when faced with challenges she admitted, "So then I just throw my hands in the air and say, 'I'm done.'" She described a situation where she was given poor advice from an advisor in her online program about her remaining courses, and her frustration served as a reason not to enroll in classes that semester. Balancing her inclination to give up, however, was her recognition that she needed to stay in school to improve her employment options. She admitted, "The whole school thing wasn't to better myself intellectually or whatever. It was to better myself financially," and, "In all honesty it's probably all about the money." Megan and her husband struggled financially, and she was prompted to start her online degree as a means to improve their situation.

Megan began her degree without having without any experience in her field of study. Based on attractive, higher-paying job openings in larger cities, she pursued the degree in order to acquire the skills necessary to gain employment in the field. She believed that her enrollment in the program helped her get her current position in local city government. She expressed that her work experience was more valuable than what she was learning in her online program. Megan seemed frustrated with the relationship between what she was learning in school and her work, saying, "I found that working in the field, I learned more than I did taking the classes." At work, she discovered that she was particularly skilled at

doing certain job duties, like research, which she liked and felt proud of. She described how co-workers would come to her for help finding information, which she was able to find quickly because she enjoys "poking around for things," which she recognizes "comes out when I'm working, that I can usually find an answer to most items." Megan felt confident in her job abilities, and believed the work experience would benefit her in the future.

In addition to discovering she had valuable work skills that would serve her in future employment, Megan also admitted that, during her online program, she discovered she was capable of being a good student. She recounted a time when she was recognized by a professor for good work, and described it as "a really good feeling." Despite disliking school and feeling as though her work experience was more valuable to her, Megan succeeded in her online classes.

Penny

Penny is in her mid-twenties and lives with her parents in Pearson, a city with fewer than 2,000 people and located less than an hour outside of the state's largest city. She grew up in Pearson, as did her parents and grandparents. Penny acknowledged that the city lacks entertainment, that it is difficult to attract businesses there, and that she does not anticipate it will change significantly in the future. She describes Pearson as "pretty stagnant," a place where people do not move away and newcomers do not arrive. Despite Pearson's shortcomings, she likes living there. She said, "It's nice to be able to know everybody, I guess that's what I like about it, is knowing people and they know you and you just feel comfortable living there." Penny expressed that she would prefer staying in Pearson or a similar-sized community after completing her online degree, but recognized that it might not be possible because of limited employment opportunities in small towns. She lamented, "I

would love to stay in a small area but I don't think I could afford that with my student loans."

Penny repeated that she was concerned about her loans, and that the need to re-pay them may

require that she move to a larger city in order to find employment that would pay a high

enough salary. She acknowledged, "I'm prepared to do what I have to, whether I have to

move somewhere else in order to do a job that I'm interested in." In addition to her concern

about finding a job to help re-pay her students loans, Penny repeated that she wanted a job

that she enjoyed and felt was a good fit for her personality.

Penny's undergraduate degree was in a field that allowed her to find employment in

small communities, but a negative experience with an employer in Pearson forced her to

reconsider her career choice and prompted her to enroll in her online program. She tearfully

recounted the incident, which resulted in a probationary period and forced her to go before a

local board to defend her actions. Penny acknowledged that the incident was more difficult

because of the tight knit community, and that it was particularly devastating because the

punishment was issued by a person who knew her. Of the incident she said, "I don't think it

would have been as difficult if it had happened somewhere else because those people didn't

know me as well." By continuing to live in the community Penny was unable to avoid

community members involved in the incident. However, she remained in Pearson because of

her preference for living in a small town, and she appreciated the support of her close-knit

family. Although she felt uncomfortable at times, the benefits of small town life outweighed

the outcome of the incident.

Penny began to consider other careers following the negative experience at her former

job. After securing her two current, part-time jobs, she decided that she liked the work

enough to pursue her online degree so that she could advance in the career. She admitted that

the decision was not an easy one because she felt as if her undergraduate degree had placed her in a career that was not a good match for her personality. Penny described her decision making process as "an agonizing time period" because she "wanted to make sure this was something that was going to suit me well." Of her morning job, Penny said she liked "being able to work at my own pace and organize things and get them done." Her afternoon job appealed to her because of the "contact with people in town" and the opportunity to get to know community members better. Despite a significant amount of travel between the jobs, and weekly hours exceeding a standard full-time job, Penny appreciated that her jobs allowed her the flexibility to complete her coursework while making payments on her student loans.

Penny recognized a direct relationship between what she learned in her online courses and the skills she needed for her jobs. She expressed surprise that she was good with technology, and that she was "kind of excited to get into the technology programs" in her coursework. Referring to her technology skills, she said it "didn't make sense because I didn't enjoy math, I didn't like figuring those things out." Penny recognized that her technology skills were not only useful for her online courses, but that she could use them to help others. She acknowledged, "it's something everybody uses so it's just being able to help people." Penny spoke of fellow students in her program as struggling with the technology necessary to successfully complete the coursework, but did not cite having any problems herself beyond coping with regular maintenance issues created by the University's learning management system. Although her program requires a wide variety of technology tools, she expressed confidence in using all of them.

Penny recognized the benefits of online learning in the context of her personality and learning preferences. She self-identified as learning best by listening, and appreciated the

opportunity to review content at her own pace, including listening to lectures several times to ensure she had a complete understanding of the concepts. She admitted, "I don't like to take notes and that just doesn't work for me, so actually going back and listening to it again is a helpful thing." Penny also liked the opportunity to think through her discussion forum posts before making them public. She claimed, "I can't think of things off the top of my head in the group because I'm focusing on what everybody's saying to each other and then I'm not able to jump in there." For Penny, communication was important to her online learning experience. When asked what she had learned by being an online student, Penny replied, "I've had to learn how to communicate with people in different ways, and that's been interesting." She also recognized the benefits of being able to communicate with students from across the country, and even internationally.

Rachel

Rachel is in her mid-thirties and lives with her family in Hamanatown, a city with a population of less than 500. She describes Hamanatown as a "bedroom community" to one of the mid-sized cities in the state, which is approximately a 45-minute drive away. Rachel believes Hamanatown is "a pretty safe town to live in," where she does not have to concern herself with her family's well being. She appreciates that in Hamanatown and towns of similar population size, "you know your neighbors and your neighbors know you, and you kind of watch out for each other." Rachel does recognize some limitations of living in a small town, such as school consolidation, loss of local businesses, and access to services such as health care and retail. She also realizes that small town life can impact the development of young people growing up there. Included in her aspirations to help her community is "to bring that awareness to them that life is not always just what's in our small town." Despite

the sheltered nature of small town life she identifies, or having to drive a significant distance to go grocery shopping and take her child to music lessons, Rachel remains positive about the benefits of her "close knit" community. She laments, "one of the things that's hard about living in a small town is to get people to realize what benefits there are." Although she recognizes the limitations, Rachel is committed to Hamanatown and does not wish to leave.

With the exception of two years during her childhood when her family moved to a nearby state for her father's work, Rachel grew up in neighboring cities, none more than a 30 minute drive from Hamanatown and none with a population greater than 10,000. She attended college less than an hour from where she grew up. Rachel describes her childhood positively, assured by being "told you can do whatever you want to do," and feeling as though "anything I wanted to try I could." Her educational experiences were equally positive, and she repeatedly expressed feeling "very fortunate" about both her academic and social lives. Rachel identifies family values as contributing to her success as a student. She recalls that growing up, she was told, "respecting your teacher and following directions was very much pushed in my house." With a family member employed in the public school system, she recognized that any deviant behavior would come to her parents' attention.

Rachel describes her strong family as contributing to her success. With the exception of a sister who lives in a different state, all of her family members live within 30 minutes of Hamanatown. Although she identifies that, growing up, her family was "lower or middle class," she remembers camping vacations fondly as times when she felt close to her parents and siblings. When discussing the support she had during her online program, Rachel specifically cites the support of her husband, who took more responsibility for child-rearing and household duties, and her parents and in-laws, who regularly watched her children so she

could complete schoolwork. She even describes the understanding of her young children, who learned to respect her need for time to complete work, and their flexibility in accepting when her need to complete work impacted family vacations. One of the things Rachel looked forward to after completing her degree was that "this will be the first year we go camping and I don't have to worry about are we going to a place that has Internet, and if not, where is the closest hub?" Rachel's dedication to her online program, which allowed for her to complete her degree in 20 months, was supported by her close family.

Rachel's dedication is reflected in her work. As an early childhood professional, she is passionate about the role she plays in young children's lives. Rachel attributes her passion to loving children, and says "seeing the brightness in their eyes when they first grasp a new concept, or when they have that ah-ah moment, is really exciting for me." When asked about her dream job, she replies, "What I'm doing now is what I've always wanted to do." She admits, however, that her passion for her job has not been consistent throughout her career, and that she started her online program at a time when she began to feel burned out. She describes that time as "a crossroads where I either was going to drop out…or I was going to re-find that passion." Her primary motivation for returning to school and earning her degree was to complete state-mandated credits to advance in her job, which she described as "very selfish goals," which she wanted to meet quickly.

Despite being motivated to enroll in her online program in order to meet job certification expectations, Rachel expressed several unanticipated benefits that resulted from her online education. In addition to re-discovering her passion for work, which she describes as "a spark that's back," Rachel recognized the value of learning from other professionals outside of her usual network. Accustomed to meeting with other professionals in her field

once a year, where they only "get to collaborate for an hour of two," Rachel appreciated the opportunity to regularly interact with students from different parts of the country and the world. She described the opportunity as "the really cool part of the online" experience. Rachel recognized the importance of hearing "the different challenges they have because diversity is huge as far as, not even just the socio-economic, but you've got religions and you've got race differences." She felt that learning about diversity from other professionals in her field "was really good to get those blinders off and to be able to see things differently than I do now." Rachel identified how her increased awareness of diversity not only had a positive impact on how she approached her work, but also on her personal life and community involvement.

Describing herself as an introvert, Rachel admitted that in past educational settings she "did not speak up in front of a group," and "did not have a voice." Through her interactions with other students and her professors in her online program, Rachel said she "learned to have that voice and that confidence, and my knowledge that I can speak and it is valid." She recognized that, because she did not know them personally, she "probably disclosed more than to maybe a classroom of people I might have known, because they weren't going to go back with anything to people I knew." Her newly discovered voice extended beyond her online program, and she felt increasingly comfortable to voice her opinion to others. Rachel admitted, "having a voice is so different for me because I am used to being very passive. Growing up that's what you were taught, is that women were very passive, and you didn't speak out." With her exposure to diversity, and the freedom to express her opinions to her fellow students in her online program, she described how she "started speaking out against things I don't agree with." Describing how her newly

discovered voice has impacted conversations with her father, she explained her effort towards "bringing an awareness to him of how really things have changed since he grew up, and how, you know, we've just got to learn acceptance and to honor diversity." Rachel believed that by bringing this awareness to her father, "he's starting to see where things that brought, I know, maybe some extra hardships on families when he was growing up are very different now, and that all it's going to take is some acceptance and some honoring diversity for us to be able to get past those views."

In addition to recognizing how her awareness of diversity could help change the views of her family, Rachel began to realize how her education could positively impact the community of Hamanatown. She described how her commitment to working with her church could:

> make this community more welcoming and a place that you'd want to, I don't know…we want to make it more accepting for anyone that would want to come and see our community, because we've got a cute little community and it's very nice. It's just not always as welcoming to those that maybe look and think a little differently than we do.

Rachel repeats the church motto several times: "No matter where you are on life's journey you are welcome here." Working with her pastor, who she described as "super excited" about what she learned in her online program, Rachel was planning education and outreach programs celebrating diversity to "help the community be more open to those that are not like they are."

By completing her online program, Rachel not only met the professional requirements that motivated her to enroll, but grew personally. In addition to applying what she learned to

her job and re-discover her passion for her work, Rachel discovered ways to use her education and newly discovered voice to improve Hamanatown.

Rick

Rick lives and works in Athens, a city with a population of just under 2,000. Athens is a "bedroom community" to two larger cities, and because of its proximity to larger, metropolitan communities, Rick describes it as, "different from the small towns I grew up in. In Raleigh you couldn't really escape the small town-ness because you were just kind of stuck there." Raleigh, where Rick lived with his parents and siblings when he was in grade school, has a population of less than 250. Although Rick had fond childhood memories of Raleigh, he appreciated the ever-improving services in Athens, and that he and his family were able to quickly travel to larger cities where they could go to a restaurant and "very rarely run into somebody" familiar. Rick recognized changes in Athens, but perceived them as beneficial. An improving restaurant scene was attracting people from neighboring communities, and new businesses had begun to move in. He also cited safety as a benefit of living in Athens, saying, "It's nice to go on a walk and not be worried about crime." Rick did, however, cite a lack of diversity. Due to the city's relative affluence he also recognized that, because people had the means to get services in the larger cities, there was little incentive for Athens to develop recreational options.

Rick moved to Athens for employment over a decade ago, and during that time advanced to an administrative position within his organization. Rick valued the flexibility in his current job, saying, "I just like being able to set my own schedule." He did not express any significant frustration with his job, and when asked about his dream job replied, "Aside from this job, I think I would like to work in higher education." He considered higher

education his "dreamy job," where he would have increased flexibility and the autonomy to conduct research and use his work experience to help prepare future professionals in his field. He considered higher education as "an opportunity to explore deeply specific topics through research or other scholarship." Rick considered pursuing his terminal degree as a way to maintain the possibility of his "dreamy job."

Rick also expressed that flexibility was an advantage of taking classes online. He identified as a "self-starter," capable of structuring his course work to accommodate his job and family life. Prior to enrolling in his doctoral program, he completed a Master's Degree and certification that both had a significant amount of coursework online. In both of those programs and in his current program, Rick talked about the importance of building relationships with his fellow students. He recognized, "In every program along the way I've had some close group." Rick believed that the "critical friends" he developed throughout his higher education contributed to his academic success. He admitted, "Where I would think I would struggle, and I've experienced it a little bit, is taking a totally online class that's not part of a cohort and there isn't that opportunity to interact face-to-face." He did recall several classes where he worked in isolation, and admitted that he had enrolled in them "just do it and get it done because there was a bigger purpose in mind."

Developing relationships with faculty was equally important to Rick. He spoke fondly of a high school teacher who supported him in his senior year, when his family moved and he remained in order to graduate with his class. In addition to helping Rick at that time by providing him with a place to live, the teacher continued to influence him throughout college and his professional life. When recalling his teacher, he said, "He's helped me think

about education, maybe outside the box a little bit." Rick admitted that he didn't always think "outside the box." When he considered the impact of his teacher, he said,

> I find myself looking for solutions within the box, but he is probably one of two or three people in my life that has continually, as I think about him or as I interact with him in e-mail of a Christmas card I think, man I need to be pursuing more solutions outside the box because that's what he would be doing.

Although Rick built different types of relationships with faculty and advisors in his online doctoral program, he identified the benefits of close communication with them. He described a situation where he felt university politics was impacting his dissertation progress, and how his chair stepped in to mitigate. He appreciated his chair's communication style, and recognized, "I think he and I have developed that type of relationship where, if he knows an answer he's just going to give it." He had only met his chair in person twice, but regularly communicated with him by phone, e-mail, and videoconferencing.

Rick identified that a benefit of his online doctoral program was learning from professionals in other parts of the country and building relationships with them. He valued knowing about his colleagues' different work experiences, and said, "I'm really glad that I decided to enroll in the program to get a broader perspective on the world." Through annual, in-person meetings on campus, social media, e-mail, and texts, Rick developed a strong network with his fellow doctoral students, where he not only learned more about this work, but also their personal lives. He described supportive "critical friends" who were ushering one another through the dissertation process.

Shirley

Shirley is in her mid-fifties and lives with her husband in Clifford, a city with a population of just over 1,500 people. She and her husband moved to Clifford as a young married couple and stayed to raise their family. Shirley referred to the community as a faithful community with a strong, Catholic heritage. When asked what she likes about living in Clifford, Shirley cited the solitude she is able to find, and the security. Referring to the solitude, Shirley said, "As much as I like people I do like solitude." As she described the safety benefits of living in a small community, she recounted a story about how she and her husband recently went on a short vacation and came home to discover they had not locked up their house. She emphasized that they were not naïve to think that a home invasion could not happen in the community, but said that, "knowing my neighbors, knowing everyone" gave them a sense of security.

Shirley also spoke about how Clifford remained an attractive place to live, even for young people who left to go to college. She was proud of the fact that Clifford was "good about recognizing what people need to keep them here." Shirley identified strong schools, a number of professional positions, and the strong sense of community as reasons for young people returning to work and raise their families. When describing Clifford's appeal to young families, she said, "I'm so pleased with that because, like I said, that's what keeps us going." The only criticism Shirley had of Clifford was its lack of diversity and limited outdoor recreational opportunities.

Shirley spoke passionately about her job at the community center, calling it "another child." When describing her excitement for her work, said, "I just love taking care of it." She recognized the importance of the center to the community, and recounted a story about

how she gave special attention to two children who lived in town and visited the center regularly. She believed that without the community center, the children would not get the level or care and attention that they needed to stay safe and healthy. She was proud of the role she played in their success.

Shirley's strong work ethic was rooted in her childhood. She started her first job when she was 12 years old, and in high school worked enough to buy a car for her parents and help with medical bills for her chronically ill mother. Shirley's parents struggled financially, particularly after they lost a farm when she was a child, and as a result, "To them work was more important than school." She recalled an incident in high school when she and other students were allowed to leave school for a short period in order to apply for jobs at a new grocery store in town. Shirley admitted that she and some other students chose to socialize rather than return to school on time, and as a result, she was disciplined by the principal and her parents were called to the office. Shirley remembered that her parents were more angry with the principal than they were with her, because it "was more important in getting that job than for me to be in school." Although she devoted herself to her family throughout much of her adult life, she always held part time jobs, finally returning to work full time after her children left the house.

Shirley's decision to enroll in online classes was not motivated by improving her employment options. She repeated how strongly she felt about the value of education, saying, "To me education means that the world is at your fingertips. If you've got an education you can obtain anything." Shirley was especially proud of her children's education, and described how she encouraged them to pursue higher education from the time they were small. Her decision to enroll in her first online class was prompted by her son,

who at the time was taking online classes to advance his own career, and encourage her to take a class with him. Of her decision to enroll, Shirley said, "I happened to be turning 50 that summer, and I said, 'This is my gift to me', to take an online class and see if I could do it. Well, then I discovered I could." Shirley continued to take classes, because, as she explained, "That was something that I always regretted, was not having an education." Her lack of education impacted her feelings of self worth. Prior to pursuing higher education, she said, "I did not have confidence in myself to feel like what I had to say was very valuable." She attributed her academic success to her life experience and commitment, and although she did not plan to pursue a degree beyond her Associate's, she expressed pride in her accomplishments, and was looking forward to the recognition of graduation.

CHAPTER 5

FINDINGS

This multiple case study of nine participants answered the primary research question of how rural adult online students negotiate barriers to completing their online courses. It also addressed sub-questions asking what constituted the barriers, and the educational motives of the students. Establishing the significant barriers that students faced was crucial to identifying negotiations, and knowing their educational motives contributed to a richer understanding of their negotiations. Each participant in the study was a case, and each participant had his or her own activity system. Participants' activity systems were bound by the six elements of CHAT: subject, tools / artifacts, rules, community, division of labor, and object. A multiple case approach allowed for close examination of each of the nine cases, and cross-case analysis revealed shared experiences among the participants. Participants' activity systems had unique characteristics influenced by their individual experiences, but all shared the object of completing online courses. The common object served as the centerpiece of the nine cases. This chapter presents five themes and their sub-themes identified from the data (Table 5.1).

Because identifying the barriers that adult online students face in their courses was crucial to understanding their negotiations, the themes developed around the barriers themselves. In activity systems analysis, barriers are represented by disruptions between CHAT elements; therefore the themes are labeled as disruptions. In order to identify common barriers, the analysis focused on the disruptions experienced by each participant. In addition to identifying disruptions that demonstrate the significant barriers, uncovering the methods the participants used to negotiate those barriers was crucial to answering the

primary research question. As the themes emerged from the disruptions, so did the methods

of negotiation. Negotiations are woven into the analysis of the themes.

Table 5.1

Themes & Sub-Themes

Disruption #1: Disconnection from Faculty
    • Disconnection with Faculty Results in Distrust of Their Expertise
    • Poor Communication Negatively Impacts Assignment Completion

Disruption #2: Insubstantial Relationships with Other Students
    • Isolation Prevents Relationships
    • Interactive Assignments Do Not Foster Relationships Among Students
         ○ Discussion Forums Perceived As Ineffective
         ○ Group Assignments Frustrate Participants

Disruption #3: Unreliable Technology Access and Support
    • Not All Rural Communities Have Reliable Internet Access
    • Technology Support is Difficult to Access

Disruption #4: Challenges of Balancing Classes with Work and Family
    • Difficulty Balancing Jobs with Academic Responsibilities
    • Difficulty Balancing Family with Academic Responsibilities

Disruption #5: Troubled Educational Histories

Identifying the motives of the rural adult online students in this study extended

beyond their shared object. In CHAT, the outcome of the activity system is where new

learning occurs, and the progression towards the outcome is the motive of the activity

system. Each participant in this study had his or her own outcome, which resulted from

unique learning experiences. Individual outcomes were addressed in the participant profiles.

Disruption #1: Disconnection from Faculty

All of the participants experienced a disruption between themselves and the faculty

teaching their courses. Carla and Mary claimed to know so little about their professors that

they could not even determine their genders. When asked whether any of her professors

attended her recent graduation, for which she travelled to the brick and mortar campus of her

online program, Carla said:

> I didn't even ask. I don't know if I met any or not. I didn't even remember any of
>
> their names, to tell you the truth. And I had a hard time keeping track of who they
>
> were, if they were female or male. Even though they had pictures and bios, I just did
>
> not have time to invest in keeping track of who they were online. If I had been in
>
> class it would have been different because I would have gotten to know them.

Because faculty were tools essential for the participants to complete their courses, the

disconnection between faculty and the participants was a disruption between the subjects and

their tools. In CHAT, tools include anything used within an activity system to achieve the

object (Kang & Gyorke, 2008). Additionally, tools are not limited to physical items and may

include experiences or other socially mediated artifacts, such as communication. Participants

cited poor communication and insubstantial relationships with faculty as the primary sources

of their disconnection from them. Communication barriers were often an outcome of

participants' inability to build relationships with faculty, and resulted in distrust of faculty

expertise and misunderstandings about assignments. The severity of the participants'

struggles varied from mere complaints to acute dissatisfaction.

Relationships with teachers played an important role in the educational histories of

most of the participants, making the absence of relationships with online faculty more

notable. Penny recalled a kind elementary school teacher who cared for her after an accident

on the monkey bars, and Carla remembered a guidance counselor whose referral to therapy

helped her overcome a tenuous relationship with her mother. Mary told a poignant story of

how she recently reconnected with a special education teacher who positively impacted her

high school experience, and Rick shared how one of his high school teachers regarded him as family. None of the participants described similar, close relationships with their online faculty.

Disconnection with faculty results in distrust of their expertise. Some participants felt that they were unable to gauge faculty expertise because they did not know enough about them. Not trusting their professors' expertise threatened to undermine some participants' online education experiences. Despite expressing overall satisfaction with his online experience, Rick's most explicit complaint rested with not knowing the faculty. He shared:

> I'd say that's been my biggest complaint about the professors is that some of them, I can't really say a percent, but some of them have just been … It's almost as if they either didn't have experience or just they drew the short straw and had to teach that class and didn't have anything to share.

Not knowing his professors' experience was particularly bothersome for Rick, to the extent that he wondered if "anyone could have taught" some of his classes. In describing his dissatisfaction, Rick said, "I didn't really ever feel like I knew what the professor's experience was." Underlying Rick's concern about not knowing his professors' experience was the distrust that they were experts in his field of study and therefore could not provide him with the resources he needed to advance in his studies and in his career. Despite describing himself as self-directed, Rick still looked to his professors as experts with the knowledge he needed to succeed.

Megan expressed a similar distrust of the faculty in some of her online courses, and also worried about how their level of expertise could impact her education. For Megan, the distrust rested with the currency of her professors' knowledge. Describing the majority of

the faculty teaching in her program, Megan said, "And I do feel like, for what they're teaching, they should probably still go out there because things change so much." This was particularly difficult for Megan to come to terms with because she was a new practitioner in her field of study and was concerned about connecting what she was learning in her courses to her daily work. She shared, "And I think a lot of my information may have been outdated a little bit. I wouldn't say outdated, but just no longer relevant, or what they're teaching is not actually how it's being done." Megan's concerns about whether faculty were adequately preparing her for advancing in her career verged on becoming a barrier between her and the object of completing her online courses. She explained:

> I've actually, for the courses that I'm taking, for the field that I'm in, I honestly don't
> think I have learned as much as I should have for the time I've put into it. I found
> that working in the field, I learned more than I did taking the classes. As weird as
> that may seem. I'm kind of one of those believers now, after being in school,
> working in the field that I'm in, I kind of joined that weird little group where it's like,
> I don't think that everybody needs an education to work in certain jobs.

Although Megan recognized that the prestige of earning her degree would help her gain future employment, she seemed unconvinced that her professors were teaching applicable material.

Despite initially expressing that her lack of relationships with faculty did not impact her academic experience, Carla's distrust in her professors' expertise resulted in a lack of respect for them and a disregard for the content of their classes. Describing the level of feedback she received on assignments, Carla shared:

As long as I was getting the grades I wanted I didn't care. And even if they, I know

this sounds terrible, but even if they put remarks on my papers I ignored them,

because if it isn't going to change my grade I really don't care. Some of them didn't

know as much about, I'm not claiming to be an English student, but I do know the

basics, and some of the professors didn't. Please don't comment on my paper when

you don't know as much as I do about it.

Continuing to describe her attitudes towards professors' feedback, she said, "I had one

professor who hardly ever said anything. And then there were others, 'Now make sure that

you read my comments. This could make a difference in your future papers.' Whatever.

Because you're so great." In some cases Carla's lack of respect led to a disregard of her

professors' content. Referring to the lecture notes that her professors posted online, Carla

said, "I started out reading them but then I thought, this is pointless because they're pretty

much pulling from the resources that they're asking us to read anyway, so why waste my

time?" Carla's disconnection with her professors resulted in disregard for their teaching and

advice, but she did not express regret over it and felt confident that she could compensate for

their lack of expertise with her own knowledge. Carla never acknowledged that by

dismissing her professors' content she may have been missing valuable information.

Carla reflected on how her professors' lack of expertise impacted the overall quality

of her education. Referring to an experience with a particularly challenging math class, she

shared:

The quality of that education is probably not as high as if you're in an in-person

institution, or at least partially in-person. Like that math thing, I had to go on

YouTube and find people that could teach me how to do math. When you're in an in-

person class, you have someone there that will teach you how to do math.

Carla admitted that not all of the supplemental resources she found were valuable, but felt

that the time she invested in searching for alternatives was more productive than seeking help

from her professors. Despite her belief in the overall benefits of her online education, Carla

cited numerous examples of when she had to pursue other avenues to learn what she needed

to complete her courses. She supplemented course material with her own online research,

watching YouTube videos, and with software programs she discovered on her own. Carla so

distrusted the expertise of her professors that she opted to use resources other than those paid

for by her tuition, most importantly the faculty.

Carla, Megan, and Rick negotiated their distrust of professor expertise in different

ways. Because of her confidence in her own expertise and her ability to "figure it out" on her

own, Carla was able to complete her courses without the feedback of her instructors. Rick

had a more conventional negotiation; he expressed his dissatisfaction with the professors'

lack of expertise through formal evaluations issued after each of his online courses. Megan's

negotiation was less purposeful. She depended on her daily work and the confidence that she

was supplementing her education with experience. Because the distrust of her professors'

expertise threatened to become a barrier to completing her online courses, Megan also drew

on the value she recognized would come from completing her degree. Explaining why she

continued to study online despite the disappointments and challenges, Megan shared, "I can

do this, I can get this done, it's time, this is only going to help me in my future, and it's going

to do wonderful things for my family." While each participant who expressed dissatisfaction

with how well they knew their professors found different ways to negotiate the disruption,

the object of completing their online courses prevented the disruption from coming between them and their object.

Poor communication negatively impacts assignment completion. Many participants cited times when they misunderstood assignments because of a lack of communication with their professors. Misunderstanding assignment guidelines sometimes resulted in poor grades, which participants found frustrating and discouraging. Assignment guidelines may be considered as rules in the participants' activity systems. As such, in addition to being a disruption between the participants and faculty, misunderstanding assignment guidelines is also a disruption between the participants and rules.

The participants who had difficulty completing assignments because of disruptions between themselves and faculty attributed it not only to miscommunication of the original assignment instructions, but also to miscommunication that occurred during subsequent questions they had about assignments. Megan recalled an experience with an assignment she found particularly challenging:

> I struggled. I hated that assignment. I'm not quite sure how I passed that class, but just barely enough to squeak by. That was one where I tried very hard to figure it out on my own and I wasn't getting it. I did ask her a few times just simple questions, and she got back right away with the answer, but I didn't understand the answer either.

Like Carla, Megan had a preference for figuring things out on her own, so her failed effort to clarify the assignment guidelines was particularly frustrating for her. She felt as if she wasted her effort, and the experience only confirmed why she rarely sought help from her professors. Megan admitted that she had figured out a "system" that allowed her to negotiate

unclear assignment guidelines. She said, "This is going to sound really bad, but by the fourth

week I know what assignments I can skip and not have to do in order to get a good grade."

What Megan did not recognize was that her frustration may have had less to do with the

assignment instructions and more with her preference for figuring things out independently.

Had she felt comfortable communicating with her professors, she may have overcome her

adherence to a practice that created problems for her throughout her prior education. Her

experience and her "system" only reinforced her tendency to figure things out without

communicating, which sometimes hurt rather than helped her academic performance.

Penny, despite having met some of her professors at a face-to-face orientation to her

program, had a similar difficulty communicating with them to clarify assignment guidelines.

She shared:

> People ask them questions but I don't think they interpret it the same way as if you
>
> were to ask them face to face, because they don't read it the same way as you're
>
> trying to ask them the question.

Penny struggled to communicate with one of her professors in particular, who she introduced

with a story of a synchronous online class meeting during which the professor interrupted the

lecture to attend to baking cookies. Despite this glimpse into the professors' personal life,

Penny found it difficult to relate to her. Penny said:

> I don't know where her mind is at. I know she's probably very smart and everything,
>
> but it's just kind of difficult to communicate with her because she doesn't process
>
> what we're asking, and it's an easy question and she'll go into something that's not
>
> related that she thinks we're asking about.

Even the professors who provided rubrics did not make assignment guidelines clearer for

Penny. She recalled, "One teacher gave us a rubric but it was very vague. I guess in that

class I thought I was adhering to the rubric, but it didn't work. I don't know what I was

misunderstanding." Penny felt as if she ultimately did not do as well on the assignment

because of her misunderstanding of the professor's expectations.

Incidentally, Penny was the only participant who requested a copy of the interview

questions ahead of our meeting. She admitted that she communicated best when she was

prepared and could think about her responses, and was initially uncomfortable diverting from

her prepared answers to my questions. Penny's behavior in our interviews substantiated her

need for clear guidelines, making it easier to understand why she felt frustrated when she did

not get clearly communicated assignment instructions from her professors. Penny turned to

communication with other students as a way to negotiate misunderstandings she had with

faculty. She and her fellow students used a Facebook group to clarify assignment guidelines

with one another, and share any helpful information they may have individually received

from the professors. Other students served as a community for Penny, which she used to

negotiate her frustrations with faculty. Penny also drew on the tools she developed by being

a good student in her prior education in order to successfully complete poorly communicated

assignments.

Crystal recalled an assignment that made her so uncomfortable she feared the reaction

her misunderstanding could elicit from her professor. She shared:

She was all over that, and I just felt like when I read through it, it was African

American teachers or Hispanic teachers, and just the fact if you don't call them by

their name, like Instructor or Doctor, then it's a slap in the face. It was a rant article,

and you had to write about that. So if you hadn't read the syllabus ahead of time and looked through that, if I would have e-mailed her and not addressed her like that, I feel like it wouldn't have been good.

Crystal sensed from the tone of the "rant" article that she was in danger of being politically incorrect, which would only widen the disconnection she already felt with her professor.

Crystal's hesitation in completing her assignment without offending her professor set the stage for future miscommunication with the same person, who was also her advisor. The second miscommunication nearly threatened Crystal's ability to meet her object of graduating from her program. While she was trying to determine which classes she needed in order to complete her degree, including which she would be able to take online, Crystal contacted the professor for advice. She said:

When I e-mailed her about it, asking her about if I should take the class I had signed up for this semester, she wouldn't give me any information over e-mail, which is understandable because things get lost. So everything was in person.

When Crystal made the 50-mile trip to her college's closest campus to meet with the professor, she discovered the woman was unavailable. Instead she met with the only other available advisor, who told her that she had enrolled in the wrong courses for her major. She continued:

I was in tears because I had tried to spend hours doing it by myself, and I asked her and she told me to come in, so I did, and then she wasn't available. I feel like it's impossible to get hold of anybody down there. I guess just with what I had told her what I wanted to do, and with the program, she should have known that I shouldn't have been signed up for the classes I was.

Crystal was able to negotiate the barrier created by her professor with the help of a different college employee. However, the negotiation came at the expense of her time and emotional energy. Crystal enrolled in online classes because of the convenience it allowed her, and so she could continue to work, take care of her family, and complete her degree. Due to the miscommunication with her professor/advisor, the convenience was undermined by an additional trip to campus. Had Crystal and her professor/advisor had a more established relationship, they may have been able to find alternative ways to communicate so that Crystal would not have to visit the physical campus.

Mary's frustrations with her professors' poor communication bordered on anger. She cited numerous examples of times she attempted to contact them to no avail. Of one professor she said:

> I had questions all over the place and I didn't have any answers, because I would e-mail the teacher, I would call the teacher, and I got no response. She'd never answer her phone. She would take three days to answer her e-mails.

Mary believed that her professor was intentionally ignoring her and other students, which exaggerated the barrier between them by exacerbating her frustration.

Although she lived about an hour from the brick and mortar campus that offered her online courses, Mary opted to take face-to-face versions of the online classes that frustrated her. Her willingness to travel to campus also allowed her to locate her professors and talk with them one-on-one. Referring to a particularly frustrating assignment from the professor she found difficult to communicate with, she said:

> I finally nailed her down and made an appointment with her and met with her face-to-face and said, "This is what I'm dealing with and I don't understand it and I'm not

alone. I figure if you can get me to understand it, I might be able to help somebody

else understand it." I sat there with her for an hour one day.

Mary used her ability to travel and meet with her professor in person as a method of

negotiating her misunderstanding of class content. Because she recognized that she was not

the only student struggling with the assignment, Mary also saw the meeting as an opportunity

to share what she learned from the professor with her classmates.

Like Crystal, Mary compromised the convenience of taking online classes by

travelling to campus to better communicate with faculty. Neither Crystal nor Mary appeared

to know of alternate ways to communicate with faculty that would prevent travel. Both were

enrolled in community colleges with multiple campuses, and it was as if the colleges

assumed their students would be willing to occasionally drive to a campus for access to more

resources. Unlike the online programs of other participants, this assumption of on-campus

time prevented the community college programs from being truly online. Megan had a

similar experience with her online community college program. Although she was initially

told that she could complete all of her classes online, after two semesters she discovered that

there were several classes she would have to take in person. Because Megan lived nearly

2,000 miles from her community college's physical campus, travelling to the campus was out

of the question. Once again, a communication barrier created a disruption, but in Megan's

case it was a potential disruption between the tools she needed to complete her classes, and

the object of completing her degree.

Consistent with her distrust in faculty expertise, Carla felt that her professor's

inability to clearly communicate assignment expectations indicated that they did not

understand the assignments themselves. She was particularly irritated with faculty

interpretation of discussion forum post guidelines. She shared:

> Some of the professors didn't seem to understand that whole thing. If there was a
>
> discussion thread, and you get in on a thread, and there are several people responding,
>
> some of the professors wouldn't count that as your response to another student
>
> because it was inside of…if Sarah posted this, and John posted this, and Tom posted
>
> this, and I posted something to Tom about what he had said to John or Sarah, they
>
> wouldn't count that. They would say you have to go back to Sarah, which makes no
>
> sense because you're responding to something that another student said. That kind of
>
> irritated me.

Carla believed she understood the requirement to post responses to other students better than

her professors, and shared an analogy to describe how she negotiated her frustration with the

discussion forum posts:

> Just tell me what you want and I'll jump through that hoop for you. Once you find
>
> that out, OK so I can't respond to anybody but, OK then you are cutting off your nose
>
> to spite your face because that's all I'm doing here are those two people. Otherwise
>
> I'd be communicating back and forth with these people, you know? It's just like a
>
> tip. If you tell me I have to give you a 15 percent tip because I'm in a group, and I
>
> usually tip 20 percent, you're getting your 15 percent. Because I'm just that
>
> stubborn. I'm the same way with discussion posts.

Rather than clarify or challenge the guidelines of the assignment by communicating with her

professor, Carla opted to go through the motions in order to get a good grade. Her

experience with the discussion forums also indicates a disruption between the rules of the

assignment and the community of students. Carla believed that her interactions with other students would have been more meaningful if her professor had allowed for a more nuanced interpretation of the discussion forum guidelines.

Although the participants developed methods to negotiate the lack of communication with their professors, their shared experience suggested a significant problem with the ways in which online faculty interact with students. Had assignment guidelines been clearer, and avenues of communication more open, the participants' barriers would have been less pronounced, saving them frustration and compromised grades.

Disruption #2: Insubstantial Relationships with Other Students

Similar to the absence of relationships that participants reported with their professors, most participants said that they did not know the other students in their classes. The participants' classmates constituted a community for them, so weak relationships demonstrated a disruption between the subjects and their communities. Despite assignments that required interaction with one another, and opportunities in place for students to introduce themselves and communicate informally, most struggled to connect with their classmates.

Isolation prevents relationships. Amber, Crystal, Megan, and Carla all said that they knew very little about other students in their classes. When asked about her relationship with her classmates, Amber replied, "I don't associate with them." Describing how the disconnection with her classmates made her feel, she said, "Kind of lonely." Although all of her classes included boilerplate discussion forums where students were required to introduce themselves with three facts that described them, she did not feel she learned very much about her classmates. After considering the question further, Amber shared her experience with an online science course, for which she had to travel to campus for the lab. Despite the

inconvenience of travelling an hour to campus, she reported a positive experience with the students in the on-campus lab.

Contrasting the lab experience to the loneliness of learning online, she said, "It was fun, the group I had. I did a lab last semester, and you get to know them and become friends with them." Whereas the three facts in the discussion forum did not provide her with enough information to form a relationship with any of her classmates, the interaction during the lab successfully formed connections between her and the students she worked with in her group. She said, "I felt I got to know them really well because we saw each other once a week for a good two hours. For the lab you had to work together to get this done, and so you grew that relationship." In contrast to her short reply about not associating with other students online, Amber spent time talking about the members of her lab group, and her tone noticeably changed. She appeared to value her interaction with her group, and shared that she stayed connected with some of them using social media. In addition to the relationship that formed between her and her classmates, Amber shared that working with other students allowed the opportunity to ask questions of one another and clarify class content and assignments. In her online classes, she felt, "You don't have anybody to, you know go off of, like in a normal classroom. If you're stuck you don't have someone." Amber reported that working with her classmates in person contributed to the content presented by the instructor, making it easier for her to learn.

Similar to the loneliness that Amber described, Crystal also reported feeling isolated from her online classmates. Describing her reaction to one of her first online classes, she said, "That was kind of different too, not knowing who you are talking to because you don't get to see them face-to-face. I don't know anybody." Like Amber, many of Crystal's online

classes required that students introduce themselves in a discussion forum. Mirroring

Amber's opinion of the ineffectiveness of introductory forums, Crystal said, "You don't

really get a whole lot of the personal side of people in the online classes." Although Crystal

did not share an experience similar to Amber's on-campus lab, she attended a small,

residential college for a year immediately following high school and prior to enrolling in

online classes. Her brief brick and mortar college experience provided her with a

comparison to her online experiences. Crystal spoke fondly of her year at the college, which

used a cohort model that kept students with similar academic interests together. The cohort

allowed her to build relationships with other students and faculty, an experience she never

duplicated online. Crystal negotiated the loneliness of online learning by focusing on the

convenience of not having to travel to a physical campus for classes, a benefit that she

repeated several times through the interviews.

Carla and Megan were not as impacted by the isolation of their online classes as

Crystal and Amber, but each reported that they also never got to know their fellow students.

Carla recognized the limitations of not knowing her classmates, and how it differed from her

previous experiences in face-to-face classes. She said, "I'm not building relationships with

these people online, but I can build a relationship in person." Similar to the responsibility

she took for not getting to know her professors, Carla admitted that she did not make an

effort to get to know her classmates. Megan also acknowledged that she did not make an

effort to get to know her classmates. She admitted, "I always figure I'm never going to meet

them." Megan and Carla acknowledged the barrier that existed between them and their

classmates, and both negotiated it by compromising interaction with the importance of

meeting their object of completing their online classes. Neither expressed that isolation from

their classmates would prevent them from taking online classes in the future, and the ability to complete the classes in the absence of relationships confirmed their preference for "figuring it out" on their own. Carla did, however, say that when she was earning her Bachelor's Degree in a face-to-face program she appreciated the opportunities to work with her fellow students during class time, and had developed relationships with them that lasted for years and into her professional life. Her fond memories of her undergraduate degree suggested that she felt her education was richer when she had the opportunity to build relationships.

In contrast to the experiences of Amber, Crystal, Carla, and Megan, Rick and Penny had a great deal of interaction with their online classmates. Each of their programs began with several days where students met at the brick and mortar campuses of their universities. Each also had synchronous, online class meetings in addition to their asynchronous course work. Despite these opportunities to interact with their fellow students, their relationships with other students were still impacted by the isolation of the online learning experience.

Penny's online program required a "boot camp," which was an intensive introduction to the required technology for her online courses, an opportunity to meet with some of her professors, and a place to begin group assignments with her fellow students. Despite the university's purposeful attempt to have students interact with one another and their professors prior to their online work, Penny reported that she did not get the opportunity to adequately connect with her classmates. She shared:

> When we were up at camp we had roommates, and my roommate didn't show up so I
> was by myself. So I didn't get to really meet anybody that way, and then my room
> wasn't in the same area so I didn't know what was going on, which was kind of a

bummer. So I didn't really get to interact with people, as far as that was, outside of

like if we would go to eat somewhere together, do something for the night.

Penny recalled isolation from her classmates even before she was isolated from them in the

online learning environment, an additional challenge to communicating with some of them

online. Penny's boot camp provided a rare opportunity to develop relationships with her

classmates, but her memory of isolation at the meeting suggests that subsequent detachment

from her classmates undermined the connections she made with them at boot camp.

Continued facilitation of the relationships forged at boot camp would have helped Penny, and

likely other students in her program, avoid the isolation they developed once the online

coursework began.

Rick's online program began with an intensive on-campus meeting that mirrored

some of the components of Penny's boot camp, and was repeated at the beginning of his

second year. The program also required that Rick choose what he referred to as "critical

friends." He described critical friends as people who provided him with feedback on his

writing, served as sounding boards for ideas, and provided him with general support. Of his

critical friends, Rick said:

It's nice to get to know them. When I went down to campus for the second time in

June those are two guys I hung out with the most. We all got hotel rooms in the same

hotel and just kind of hung out too.

The informal time spent with his critical friends provided Rick with the opportunity to

develop relationships with them outside of the formality of their coursework, and helped

develop trust in them as they provided a critical eye to his work.

Despite the relationships that developed between him and his critical friends, Rick reported instances that were made more complicated by their isolation from one another and the university. He recounted a situation that he attributed to misunderstanding department politics among his professors, which he felt was impacting his relationship with one of his critical friends. Rick suspected that there was a dispute between his critical friend's advisor and other professors in the department, but did not feel comfortable talking with his friend about the potential problems it could create. He said, **"**So I just don't say anything about it, and just talk positively about the whole process. I don't want to put my critical friend in an awkward position at all." Although Rick did not lie to his critical friend, he withheld information in order to protect a relationship made complicated and fragile by distance. Fortunately Rick did not feel as though the situation would completely undermine his relationship, but he did acknowledge it changed the dynamic between them, saying, **"**I don't think it's necessarily hurt my trust with the critical friend, but it's kind of required me to decide what to say and what not to say to my critical friend, if that makes sense." Rick directly attributed the confusion with department politics to the online learning environment. He believed, "That's just part of not understanding the local politics, I guess you'd say, in a distance learning environment." Neither Rick nor Penny expressed any ways in which they negotiated their barriers to building or sustaining relationships with their online classmates, but neither indicated that their overall goal of completing their programs was impacted by the barriers.

Interactive assignments do not foster relationships among students. Most of the participants spoke negatively of interaction with other students that was forced by discussion forum and group project assignments. Both types of assignments were routine in most of the

online classes described by the participants, and appeared to undermine rather than encourage relationships.

Discussion forums perceived as ineffective. Every student interviewed was required to participate in discussion forums. Forum posting became routine, and in some cases more closely resembled written assignments than discussions among students. At one extreme, Amber had a class that required discussion forums that were kept private between her and the professor, and which she reported he never replied to. Her assignment exhibited a misunderstanding of the technology on the part of her professor, who should have opted for an assignment submission rather than a discussion forum. Most of the participants' forums were public to all students, and required an original answer to a discussion prompt, followed by an assigned number of responses to other students' original answers.

Mary felt particularly frustrated by her discussion forum assignments. She described how students waited to post to forums until the last minute, which made posting the required replies difficult. She said:

> It takes days for the discussion to actually happen, and if the teacher says, "Answer this question," or, "Make a comment on this and then comment on two others," and then you go back the next day and nobody has commented, and you go back the next day, and still nobody has commented. Then the day before these comments are due, everybody floods and then you don't have time to read it and then comment. The discussion just isn't there, the whole discussion process isn't there. It's not a learning experience, it's an irritant.

Because she felt the forums did not foster discussion, she dismissed them as busy work. Mary, who negotiated communication barriers with her professors by travelling to campus to

see them face-to-face, did not have the same opportunities for more meaningful communication with her classmates in person. However, Mary's experience could have been mitigated by the professor. Had she communicated her frustration to the professor, or had the professor been paying adequate attention to the poorly timed posts, additional requirements about the timing of posts could have been placed on the assignment. As such, Mary's discussion forum experience also demonstrated a barrier between the community of students and the professor.

Penny reported that her classmates' activity in the discussion forums undermined communication among students and with faculty. She indicated that other students' posts sometimes made her uncomfortable and hesitant to participate. Describing her classmates' behavior in forums, she shared:

> Some have very large egos and so they go at each other. When those kinds of people go head to head it's negative talk going back and forth. You don't really want to be a part of that because they're going outside of what we're actually talking about. It's not super helpful in the first place. And then some people type things about the professor.

Penny described occasional comments by students about professors as "vicious." She negotiated the communication barrier created by some of her classmate's forum posts by depending on her professors to step in and moderate. She recalled several occasions where professors deleted comments or posted reminders about behavior expectations in the forums. While this type of moderation is important for keeping forum discussions on track, it is a distraction for students and ultimately can create a barrier between them and the professor.

The disruption between Penny and her classmates became an additional disruption between the community of students and the professor, a necessary tool in their education.

Group assignments frustrate participants. Not all of the participants were required to complete group assignments in their online classes, but those that were reported that the group work was laborious and frustrating. Carla said of her group assignments:

> The group projects. I hated them. It's so hard to get hold of people. When you're actually in a face-to-face class it's hard to get people together, but in an online class it's just ridiculous. I think we did one in my last term and it was awful. It was like pulling teeth to get people to participate.

She recalled how students in her groups made excuses for not contributing to e-mail exchanges and conference calls, and acknowledged that the work distribution was frequently uneven. Ultimately she believed the group projects were unfair because she felt her professors issued grades based on the collective work of the group and not on individual performance. In this sense, a disruption between Carla and the rules of the assignment fueled disruptions between her and the community of students, and between her and the professors.

In addition to blaming her fellow students for the ineffectiveness of group projects, Carla laid blame on her professors' handling of them. She shared:

> The professors just give you these guidelines and say, here go. They set up the room for you and tell you who you're working with, and then they'll answer questions if you ask them, but they don't get involved. I get it, it's a leadership course, they want you to develop your own leadership. Yeah whatever. We still need you to be a leader as well.

Despite Carla's preference for working independently, her admission that she did not get to know her professors, and that she questioned their expertise, she still had the expectation that they would facilitate group projects and keep students on track.

Rick expressed a similar frustration with the lack of communication and uneven work distribution in his group projects. Describing his experience, Rick said:

> When it's been successful has been when everybody abides by the timelines that we set and where it's been frustrating is when all of a sudden we get to meeting number two and someone has not maybe done all the work they need to and so we can't really talk through the issues. Or sometimes when we have not had a middle meeting all of a sudden we get to the end and then we're all figuring out that we went in different directions rather than we going in the same direction.

He placed the responsibility for successful projects on himself and group members. Rick negotiated the barriers caused by group assignments by developing a checklist of steps and responsibilities. He admitted that he did not share the checklist with his group members, but that it served as a reminder to himself of the process required to successfully complete projects. Not sharing the checklist with others suggested that Rick did not feel entirely comfortable putting forward his own expectations of the group, demonstrating a disruption between him and his community of classmates.

Megan had a particularly frustrating experience with a group project during which one group member dominated and made decisions she did not agree with. The project required them to develop a budget proposal, and Megan knew that the amount her group proposed was far higher than it should have been. She tried to express her concern to the rest of her group, but was silenced by the dominant member. After receiving a poor grade

because the budget was, indeed, inappropriately high, Megan said, "I'm like, well, I tried. This is why I don't speak up." In addition to impacting her experience with that particular group project, the barrier Megan experienced with her classmates threatened to impact future projects. She indicated that in future group projects she may consider speaking up more, but likely would not.

Penny also had a negative experience with a dominant member of a group project, and recalled the incident several times throughout her interviews. On two occasions Penny found herself in a group project with the same woman, an international student she described as difficult to work with. Penny said of the woman, "She's just very in your face, and I guess it's a good thing, but it's not when you're trying to work together and do something." The tension between Penny and her classmate arose as they tried to work with the third group member, a woman who struggled with the technology required for the three of them to meet and work together. Penny remembered:

> We saw how the assignment was supposed to be done in different ways, and there was no third person to say this is how I see it. And just not having her to do large portions of that assignment was difficult. I'd have to send her an e-mail saying, this is what we talked about, and this is what we need you to do, and she was clueless because she hadn't been there to be a part of it.

Conflict between Penny and her classmate impacted the relationship with the third group member, and resulted in poor communication and an uneven distribution of work. After discovering she would have to work with the same woman again, Penny said, "This is awful but I'd hoped I would never get her in another group and I did."

Penny's opinion of her dominant classmate was an interesting combination of respect and irritation. Although she dreaded being in another group project with the woman, later she expressed the value of connecting with students from other cultures. She described a time when, during a synchronous online meeting, she could hear unfamiliar birds in the background when her international classmate spoke, and was intrigued by the exoticism of her classmate's country. She also respected the confidence of her classmate, who had been a successful business person prior to enrolling in their online program. Penny negotiated her irritation with respect for her classmate and her culture.

Disruption #3: Unreliable Technology Access and Support

Technology was a tool required for all of the participants to complete their coursework, and included hardware, such as laptops and mobile devices, educational and word processing software, and Internet access. Most participants expressed that they liked technology, and when asked what they liked most, they cited the convenience that allowed them to take classes online, and the ability to connect with others. Despite her skepticism that technology may be negatively impacting society, Crystal admitted there were substantial benefits to it. When asked about how technology benefitted her personally, she said, "Mostly school because I'm able to take classes without having to be gone all the time. So that's very convenient for me." Rick, an experienced technology user, repeated several times that he liked the "connectedness" technology provided. He shared, "I'm aware of social media and how much you should share and all that, but there's also, I think, fun in sharing a bit of my personal life with the world." Rachel appreciated how technology connected her to people outside of her immediate community. She said, "I like that it connects you with other people. Especially with being in a small town."

Despite recognizing the numerous benefits, many participants experienced barriers between themselves and technology while taking their classes online. Access to the Internet and the availability of technology support created the most significant barriers.

Not all rural communities have reliable Internet access. Many of the participants lived in communities without sufficient Internet speeds needed to consistently access the tools they needed for their online courses. Disruptions in Internet access prevented participants from submitting assignments on time and from accessing course materials. In some instances, poor Internet connections undermined the convenience of online learning.

For Amber, an Internet failure happened at her local public library, where she was required to go and have her exams proctored by the librarian. The Internet connection in the library dropped at the end of the exam, as she was ready to submit it in the learning management system. When asked how the incident made her feel, Amber shared:

Frustrated. Because at first I had it all done and I was like OK. When it froze I had a minute left and I was talking to the librarian, and thought maybe I can get home, log on, and hopefully in that minute I can just submit it real fast. But by the time I got home it had timed out.

Her home Internet connection was also unreliable. Amber expressed her preference for doing schoolwork in her bedroom, however she reported, "My room's back there and the modem is downstairs in my dad's room. So sometimes it doesn't reach back there." Her response suggested there may have been an issue with her wireless router, not the Internet connection. Amber did not know what kind of Internet connection she had at home, and appeared confused about the distinction between the available Internet connection and the

modem and router required to access it. Her lack of understanding made her dependent on technology support from her father and the local librarian.

Crystal recalled a time when the inadequate Internet service to her family's farm resulted in losing a paper she had been working on. Although she recognized there were potentially multiple causes of the incident, she ultimately blamed it on slow Internet speeds. She shared:

> I took a long time to write whatever I was writing, and my computer froze up on me, so I had to get out of there and it didn't save it, and I had to re-write it all. I was like, oh no. Just that kind of stuff. It could have been my computer, too, but it's basically just when everything is slow out here.

Crystal shared Amber's lack of understanding about the distinctions between hardware and Internet service. Their shared experience suggested that inadequate digital literacy skills contributed to their disruption with technology. Digital literacy was another technology-related tool with which some participants experienced a disruption. Although Mary was proud of how her digital literacy skills had improved over time, she admitted that she had not purchased a smart phone because she did not understand how they work. Shirley said about her own technology skills, "Shirley is not as technology educated as she should be just because she shies away from it." Mary appeared confident that her digital literacy skills would continue to improve with time and experiences, but Shirley admitted that she was dependent on other employees at her job and on family members for additional support.

Crystal was able to recreate her work and meet her deadline, but Mary missed submitting an assignment on time because of inadequate Internet service. Mary, who did not have Internet access at home, frequently went to her job after hours to use the Internet. On

one of the occasions she was using the computer at her job, the Internet in town stopped

working. She blamed the local telephone and Internet provider for the mishap, saying,

"That's when the Omnitel people decided they were going to do some updates on their

system, so I didn't get my paper submitted on time."

Carla also recounted a story of when poor access to the Internet almost prevented her

from submitting an assignment before the deadline. Because she travelled extensively for her

job, Carla often relied on her mobile phone to serve as a wireless hotspot. She also shared

that she did her work in a variety of settings, including as a car passenger. While trying to

submit an assignment during a drive home with her husband, she said, "There was a

thunderstorm as we were coming back, and I couldn't get my hotspot to work, and it was

deadline time to get homework turned in." Fortunately for Carla, she found a solution by

going to the local public library and using their wireless Internet from the parking lot,

drawing the attention of the local police. She shared:

> Thankfully I could go to the library and get on the wi-fi and turn my homework in.
>
> The cops drove through as I was sitting there. My future daughter-in-law's parents
>
> have a scanner, and they heard that somebody was sitting in the parking lot and they
>
> read the plates. So then my son's like, "Mom, what are you doing in the parking lot
>
> at the library at eleven whatever last night?" I said, "I was turning in my homework."

Because Carla was so closely connected to her community, she knew that the public library

kept the wireless Internet turned on at night and that it extended outside of the building. She

used her community as a resource to overcome the barrier caused by poor Internet access.

Crystal relied on her family to resolve her issues with Internet connectivity. She

shared, "I think they're putting up an Internet tower out here because of the hog barns. We

have solar panels, so now they would run off of…I don't know. Something to do with farming." While she did not fully understand the details, Crystal knew that her family was finding an independent solution to their inadequate Internet service. Rachel also used her family as a resource when she could not access the Internet. Although she never lost any of her work or missed deadlines because of poor service, Rachel did remember an instance when the Internet service in her community was disrupted for a prolonged period of time. She shared, "One it might have been here we were having issues with the Internet about a year ago. Because they were putting in new lines or something, and they cut the whole town off for like two days." Rachel travelled to her parents' home 30 miles away in order to finish her schoolwork during that time.

Similar to how Rachel and Crystal negotiated their Internet issues, Megan used her family as a resource when she did not have access. In addition, she planned ahead when she knew weather conditions would cause problems. Recalling how she coped when the Internet was out of service in Humber, she said:

Just waited. But I worked for my Mom at that time, so it would have been three years ago. So I would just do my homework in there. I try not to wait to the last minute to turn something in so I could always leave when ice was melted and come to a friend's house, I have friends here in town, but they usually fix them pretty quickly.

None of the participants who reported problems caused by unreliable Internet access said that it was a barrier in meeting their object of completing their online classes. Participants with poor Internet access appeared willing to cope with problems in order to continue taking their classes online.

Carla and Mary both complained at length about the quality of access in their rural

towns. Carla recognized, "Oh my gosh it's awful. Broadband around here is horrendous.

Our house, we have satellite. It's good for most of the time, but it's horribly expensive

compared to what you can get in town." Mary also complained of quality and cost.

Describing why she and her husband could not afford Internet service at home, she shared:

> Here in Dunham it's about 100 dollars a month just to have the hookup, just for the
>
> box for wi-fi. Then you have to have a landline phone and cable that goes along with
>
> it. We don't do TV so we didn't want to do that. Now they've got it set up where you
>
> can have cable or Internet, but you still have to have the landline. They won't let any
>
> other Internet company come in. You can get satellite, but that's, again, the cost
>
> because they send advertisements out saying 30 dollars a month and then you call
>
> them and they say, "Oh, not in your area. It's 70 in your area."

In addition to her disappointment in the cost of service, Mary was critical of the quality of the

Internet service in Dunham. She said, "They call it high speed. They hooked us up to that

fiber optic and everything, made a big deal out of it and charged people more for it, and it's

slower than it was before." Megan also recognized the problems with Internet access in her

town, despite it never impacting her ability to complete her work. She shared:

> There's been a couple of times, living in Humber, we have old wires, old
>
> transformers, in the wintertime they collect ice and they go down frequently. This
>
> past year the snow was not that bad, but the year before, maybe it was two years ago,
>
> we had tons of ice up here, from February to April it was an ice storm every week.
>
> There was at least once or twice a week when we did not have Internet, cable,
>
> electricity, nothing.

The aging infrastructure in Megan's community was problematic, but she also cited issues with the local Internet provider. Over a year after signing up for service, she discovered that her home was not getting the Internet speed she thought she had been paying for. She also shared a story about a friend of hers in Humber who lived less than a mile from her and could not get the same Internet service that was offered to the houses across the street from her. Like Mary and Carla, Megan placed some of the blame for poor service on the providers.

Technology support is difficult to access. Because of limited resources in their rural communities, most participants did not have professional, local technology support. Penny remembered a challenging assignment that required more technology expertise than she felt she had. She shared, "It was incredibly difficult and there's nobody around here that I know of who can help me with that. I was kind of trying to figure it out on my own." Although all of the participants indicated that their institutions provided remote technical support, several of them experienced instances when their computers needed service beyond what the remote technical support was capable of providing. When technology issues requiring service arose, participants turned to a variety of resources to negotiate the barriers created by a lack of support.

Mary recalled a time when her computer needed to have viruses cleared from it. She shared:

> That one I took in and had viruses pulled off of it. If I was researching something for one of my business classes, that was back with the business classes I had that one, and if I researched something and went into the wrong thing, I ended up with a virus. I didn't have good protection then.

Mary used Staples for the service, but said of the closest store to Dunham, "They've since shut that down, so now the nearest Staples is in either Canon City or Blue Earth." Both Canon City and Blue Earth were more than an hour's drive from Dunham. Rachel also resolved her computer problems by having it serviced at a retailer. Recalling a time when her laptop crashed, she said:

> I lost a paper once, which was very frustrating. That would be one time when I was frustrated. That was on my end, nothing with the college. The computer, the laptop, crashed and didn't save where I wanted it to save and of course then I lost a lot.

Rachel took her laptop for service at Best Buy, but had to drive 30 minutes to the closest location. Both Mary and Rachel negotiated the barriers created by a lack of technical support by travelling the distance necessary to get their computers repaired, but the travel undermined the convenience of learning online. Despite the inconvenience, neither of them seemed particularly frustrated with travelling for support because they were accustomed to travelling for other services. Mary combined her trips to Staples with other shopping that could only be done in the larger city, and the Best Buy Rachel used for support was in the same city where she travelled occasionally to take her daughter for music lessons. They both assumed personal responsibility for repairing the primary tool they needed to complete their classes.

Carla had a slightly different approach when her computer needed service. When her laptop crashed, she negotiated the problem by seeking her daughter's help and making sure she was better prepared for future incidents. She recalled:

> Laura had to take it to the tech people at her university for me to get it straightened out. So then I don't have any of my stuff for class. Oh my gosh I just about had a

stroke on that one. I have a hard drive, a portable hard drive. So I learned you don't

keep your homework in one spot. You keep it all over the place, and you put it where

you can get to it wherever you are.

Carla's solution for her crashed laptop showed the same self-sufficiency she demonstrated in

other aspects of her online education.

It was unclear whether Carla, Mary, or Rachel's universities would have been able to

assist them with their laptop issues, as they seemed related to hardware and not university-

supplied resources. The limitations of remote support required that they seek assistance with

hardware locally, which is difficult for rural students like them who live in communities with

limited resources. While they were all able to resolve their problems, their common

experience puts into question whether students living in underserved rural areas have

adequate support for the technology tools their need to complete online courses.

Carla did use her university's remote technical support when she experienced issues

with software she needed to complete a class, but reported significant frustration with the

service she received. After trying to fix the problem on her own, Carla telephoned technical

support. When asked to describe her experience, she said:

I called tech support and the kid kept telling me, this is what you need to do. I finally

said, I have already done what you told me to do. I know that's not the problem. I

said, "Are you reading from a script or do you really know what you are talking

about?"

Carla's encounter with remote technical support marred her opinion of the quality of service

available. She continued:

That was probably the most frustrating thing ever. That piece of technology that I knew needed to be taken care of on their end. I couldn't do anything about it, but getting them to realize that they needed to do something different.

Ultimately the technical support person was able to resolve Carla's problem, but only after being pressed by her. The experience undermined her confidence in the service provided by the university, and made her question the expertise of the technology support in the same way she questioned the expertise of her professors. Communication with a remote person she could not interact with face-to-face once again became a problem for Carla, and she negotiated the disruption by turning to her daughter, who she could speak with in person and with whom she had a strong relationship.

Mary discovered during one of her classes that she did not have the correct version of the software necessary to complete her assignments. Because she did not fully understand which version she needed to complete her work, or what she needed to do to make her version work for the assignments, she once again travelled to campus in order to get her problem resolved. She remembered:

There was stuff on there that only the school computers had and I didn't have it. I had an older version and they were all up to the newest version of Microsoft and I still had the older version, so there was some stuff on there you could only do on the school computers, and I didn't know that. There were tricks that you could still do it on the older version, but if you didn't know the tricks…

Mary's barrier with technical support also resulted in a barrier between her and her instructor for the class. Describing another time when she travelled to campus for help, she said:

I went to the school one day when she had office time. She sat me down at the computer and it worked on that computer. I said, "Well, I don't have that on my computer." She said, "Well, that's your problem. You need to come here and do it." I'm, "I don't have that kind of time. If I was going to do that, I'd do a face-to-face class," which is what I did.

Unable to negotiate her technology barrier with help from her instructor, Mary opted to forgo the convenience of taking the classes online by travelling to campus for a face-to-face version of the course. Her solution was consistent with the way she handled other instances of poor communication with faculty, although even face-to-face she was unable to resolve her misunderstanding with the professor. Travelling to campus for the class allowed her to use the computers there, which negotiated the problem of not having the correct version of the software on her personal computer.

Disruption #4: Challenges of Balancing Classes with Work and Family

Most participants reported difficulties balancing their online class responsibilities with work and family. The balance necessary to maintain school, family, and work responsibilities is considered a division of labor, so the challenges experienced by the participants represented a disruption between subjects and their division of labor. Other disruptions, such as miscommunication with professors and problems with technology, only exacerbated the delicate balance maintained by the participants. Shirley, who started her online classes in her fifties, admitted, "It is a lot of work. When you're away from a classroom for as many years as I was, it's an extra amount of work." Meeting the object of completing their online classes required that participants develop a variety of methods to negotiate the barriers between themselves and a balanced division of labor.

Difficulty balancing jobs with academic responsibilities. All of the participants were employed while completing their coursework, and most cited the ability to continue working while attending classes as a reason to enroll in online programs. For the most part, participants chose to keep their jobs and schoolwork separate. When asked whether she was able to complete any work for her online classes at her job, Rachel responded, "I would take stuff I was learning and try it out there, but I didn't do any schoolwork there because I have a 20-minute break during my day. That's normally time to eat and check my e-mail and that's it." Although the majority of students were taking classes related to their jobs, they either could not or would not complete coursework during work time.

Penny, who had two jobs, shared the challenges of working over 40 hours per week while trying to complete her courses. One of her jobs required that she travel to the closest large city, a 45-minute drive from her rural community. When asked to describe how her work schedule made her feel, she said, "I just feel like I'm constantly at work, and that's not enjoyable sometimes, especially if it's been a difficult week." Penny's difficulty balancing her employment and school also reflected disruptions between the rules of her assignments and her job responsibilities. Referring to a particularly challenging class, Penny shared, "We had so much that we had to do on a weekly basis, plus these big projects and they weren't spaced out very far from each other enough to give you time to work on them." When asked whether any of the assignments allowed her to work ahead, she said:

> No you can't work ahead. That's what I would like. There are weeks where I don't have anything going on so I could work ahead, and then there are weeks I have so much going on it's hard to actually get a whole lot done.

Penny, who had always been a good student and was skilled at time management, was able to negotiate the barriers between her work and school responsibilities using her experience. Despite her time management skills, inconveniently timed assignments created stress and prevented her from participating in family activities. Unfortunately her difficult balance between work and school was not something her professors could fix for her, so she negotiated the barrier independently and as best she could.

Unlike Penny, Megan's job was not very far from her home. However, she similarly reported that she struggled to complete assignments because of her work schedule. Referring to a particularly challenging class, she said:

> But I worked every other weekend, so I'm racing to do her stuff, that was the one I'd do on Monday and Tuesday because she doesn't release her stuff until Sunday. So I would have Sunday to do it, but Sunday was sometimes my only day off during the week. The last thing I wanted to do was her class. So Monday I would do a week's worth in one day, and Tuesday I would do a week's worth in one day, because I worked Wednesday night and it was due Thursday. I didn't care for that at all. I needed a little bit more time.

Megan was able to negotiate the disruption between her schedule and the work she needed to do to complete the class, but after the experience she said she would never again take a course with a similar assignment schedule. Like Penny, there was nothing her professors could do to relieve the pressure of balancing work with school, so she had to develop her own schedule to negotiate the barriers created by poorly timed assignments.

Some participants were able to do small amounts of schoolwork during their work days in order to negotiate the disruption in their divisions of labor. Crystal shared:

I read on my lunch breaks. I'll usually eat lunch quick and then go sit up at the park

or read in my car. I do that a lot. Even if it's only for a half hour or 40 minutes it's

that much more time off of doing it here. I try to do it as much as I can.

Penny was also able to do some of her schoolwork at one of her jobs. When asked about

where she completes work for her online classes, she said, "Well in the mornings I have time

sometimes to do readings at my morning job, depending on the workload. So I try to take

advantage of that when I can and do the readings." Among the nine participants, Penny and

Crystal travelled the farthest distances for their work, so their ability to make time during

their work days to complete homework was fortunate for them.

Difficulty balancing family with academic responsibilities. In addition to their

jobs, most participants had family responsibilities that created additional disruptions between

themselves and their coursework. For Megan, the disruption was enough to prompt her to

take semesters off. Before taking time off, Megan went from enrolling as a full time student

to just part time. She said:

I did two semesters of full time and decided that it is difficult to do full time work,

full time school, and then still be able to clean your house and do the laundry, and go

to your kid's sporting events. And then I cut it down.

Although Megan described both her husband and her child as supportive of her taking online

classes, she felt obligated to keep her responsibilities as a wife and mother. Asked to

describe the decision to take time off, she shared:

The time commitment to be a full time student and a full time parent and a full time

wife and a full time worker. It's a lot. So that first semester I took off it was strictly

because I was tired of going to work, and then going home to do work, and then

doing homework, and then doing nothing else.

Megan admitted that with every semester she took off, it became more difficult to return,

suggesting that the barrier between her responsibilities at home and the expectations of her

online classes threatened a disruption between her division of labor and her object to

complete her classes. However, her motivation to complete her degree in order to gain better

employment and potentially help her and her family move from their rural community helped

her negotiate the disruption.

Other participants discussed the challenges they faced balancing the responsibilities

of their online courses and the recreational time they wished to devote to their families.

Although Rick appreciated the ability to go on family vacations without taking time off from

his classes, he did express that he would be glad when he no longer had to make decisions

between completing his work and spending time with his family. Describing an incident

during one vacation, he said:

I was out in our car with my computer on, having a conversation with this professor

and all I could think about was I just want to get this class over with. I was on

vacation and the target had been moving all semester long.

Similar to Megan, Rick's motivation to reach the object of completing his online program

helped him negotiate the barrier between time with his family and time spend completing his

schoolwork. He recognized that the disruption was finite. However, the convenience of

remaining engaged in his coursework came at a price, as it did not allow him to fully take

advantage of his time with family.

Similar to Rick, Rachel shared the difficulty of balancing her schoolwork with the camping trips she and her family enjoyed taking. Describing a time when she and her family were camping and she needed to leave them in order to access the Internet and complete an assignment, she said:

There were times where it was a little frustrating. The one campground we went to, I had to go sit in one of their shelters, way away from where we were camping because through the trees you can't get a connection.

When asked what she was most looking forward after completing her program, she said, "This will be the first year we go camping and I don't have to worry about are we going to a place that has Internet, if not where is the closest hub?" Fortunately for Rachel, her family provided her with the support she needed to negotiate the barrier between her family responsibilities and her classes. Of her husband's support she said, "And my husband was huge. He truly did a lot." Rachel also believed the understanding of her young children helped her negotiate her delicate balance between school and family. When describing the physical spaces where she completed her work, Rachel said:

If they came in they just laid quietly beside me if they needed a little snuggle time, or they knew that Mom just needed the time to be able to type. My oldest is in the second grade, so I would say OK mom's getting out her reading, now you get out your reading so we could work on reading together.

Fortunately Rachel was able to draw on her family as a resource to negotiate the very disruptions that made her struggle with balancing her time between them and her classes. Integrating her children into the time she spent doing her coursework was a negotiation of the disruption it caused in her balance between school and her family.

Carla also expressed her reluctance to be far from her family in order to complete her schoolwork. When asked to describe the space where she did homework, she shared:

Much of the time it was at the dining room table. I could have worked in my office downstairs, but I didn't like to be down there because I'd be separated from the rest of the family. I was separated from the rest of the family enough as it was.

Carla's flexibility with her workspace allowed her to complete her work without sacrificing time with family. Recounting a story about travelling hours to an arts performance in her state's largest city, Carla shared that she asked her daughter to drive so that she could complete her work and still take advantage of the opportunity to spend time with a close friend and family. By taking advantage of the captive time in the car, she was able to complete her work so she could enjoy her time at the performance. She spoke extensively about her large family throughout our interviews, making it clear that time spent with them took precedence over her coursework, and that she would make all accommodations necessary in order to maintain balance between school and family.

Disruption #5: Troubled Educational Histories

When asked about their experiences in school prior to enrolling in online courses, several participants repeatedly referred to themselves as bad students, and expressed a lack of confidence and persistence connected to troubled educational histories. Although the disruption that emerged from their histories was not as clearly defined as the other themes, the stories shared by the participants who identified themselves in this manner were poignant and complex enough to warrant attention. Carla, Megan, and Mary all admitted they got poor grades that threatened their high school graduations, and each recalled school-related incidences that further undermined their confidence. Because confidence and persistence are

tools that online students use to succeed in a learning environment that is often isolated and requires self-discipline, the absence of them demonstrates a disruption between the participants and tools. In Megan's case, the absence of persistence also threatened a disruption between her and the object of completing her online classes.

Mary shared multiple challenges she faced in school, particularly in high school. She admitted she did not speak in classes, and attributed her withdrawal to a strained relationship with her more popular twin sister. Mary remembered, "I didn't do well in school. Well, let's put it this way, I might have said ten words a year from kindergarten to graduation." Her poor school performance and apparent lack of social skills placed her in special education classes. As a result of her negative school experiences, Mary described feeling fear and anxiety during her first courses as an adult student. She said:

> Actually, when I started college in '09, I was scared to death. I didn't know what to expect. I was lucky to graduate high school, I just skated by. Most of it was because I just refused to do the work. When I started college I said, "I'll give it a try." First semester, I got all signed up. Financial aid went through, everything. I start classes, and the teacher gave the first assignment and I am reading every word on the page in every chapter, and I was like, "I am never going to be able to do this."

Mary shared an article that her college newspaper had written about her, which focused on her fear of technology in the context of taking online classes. She offered the article as proof of how unprepared she initially was to take online classes. I received the article months after our interviews because, at the time of our conversations, she was unable to find it at home. Her determination in finding and sharing the article showed her pride in overcoming her hesitation to use technology. Despite her admission of fear, Mary appeared to capitalize on

her ability to negotiate it in order to succeed in online classes. In this sense, the negotiation transformed her negative past education from a barrier into a source of strength.

Carla, who had two siblings close in age, remembered a childhood incident with her mother that followed parent-teacher conferences and wounded her confidence even as an adult student. After her mother yelled at Carla's siblings for their poor grades, the siblings protested and asked why their mother was not mad at Carla for her poor grades. According to Carla, "And my mother said, that's because she's not as smart as you are. And I was standing there." When asked to describe how the incident made her feel, Carla said, "It made me feel like I was an idiot. When I went to go to college myself, I'm like, I'm not smart enough to do this." Carla mentioned in two interviews that her mother was proud when she completed her online degree, and even showed me the beginnings of a scrapbook her mother was making about her graduation. Her mother's words during her childhood still weighed on Carla, however, and it remained important for her to show her mother that she could succeed academically. Like Mary, Carla transformed her insecurities and lack of confidence into a source of strength that helped her negotiate the barrier between her and the tools provided by her educational history. It was the confidence that she drew from her negotiation that made her feel as or more knowledgeable than her online professors and her university's technology support.

Although Shirley never feared she would not graduate from high school, she did relay an incident that undermined her confidence to perform academically. When a new grocery store opened in the town where she grew up, the high school allowed Shirley and several of her friends to leave during the school day in order to interview for jobs. Shirley admitted that she and her friends did not make an effort to return to school as quickly as they should have,

and as a result, the principal called her parents. When she returned to school her parents were waiting for her, but rather than being angry with her for not being in school, they were angry with the principal for disciplining her. According to Shirley:

> It was more important to mom and dad that I had that job and that I was bringing an income. That could be part of their farm culture, too. Dad was born in 1914 and Mom in 1918. Then, kids helped on the farm to help make a living. That could have been a little bit of that culture.

Although she appeared to understand her parents' reaction, Shirley's lack of parental support and her poor performance in school impacted her confidence as an adult student. Prior to enrolling in her online courses, she recalled, "I did not have the confidence in myself to feel like what I had to say was valuable."

Shirley credited her family with helping her negotiate her lack of confidence. Speaking of the support her husband provided, she said, "My husband, God bless him all his life, has said, 'You are an intelligent woman. You need to do more for yourself.'" Shirley's children also played an important role in developing her confidence. Her son initially encouraged her to enroll in online courses and supported her during her first class. Although her daughter lived overseas, Shirley described hours spent using Facetime so that she could get help with her courses. Shirley also found support from her older sister, who enrolled in online classes after retirement. She shared, "For her, and for me, it was something we want is to have that satisfaction that we completed these degrees." Because she and her sister shared the same object, Shirley was able to draw on their common experience to meet the object of completing her classes. The community of her family helped her negotiate the

barrier created by her lack of confidence, despite the reality that her family helped to initially create the same barrier.

Carla also named her husband as a source of support to overcome her lack of confidence as an adult student. She cited instances of his support back to when she first enrolled in community college courses, years before she began her online degree program. Carla recalled a story about how, years ago, her husband tried to ease her anxiety before an exam by taking her to the county fair. When they returned, Carla discovered that an open widow had allowed rain to soak all of her notes and books. Describing how she felt when she made the discovery, Carla said:

> I was in tears. He started getting out the paper towels and putting them between the pages in the book. He stuck it in the oven. I get so mad at him because sometimes I want him to do something and he doesn't do it, but there are times like that when I'm like, oh my gosh, I would never be able to do this without you. That's the kind of thing he does.

Her husband's support continued throughout her education. Recalling his reaction to when she told him she wanted to pursue her online degree, she shared, "I told him, there's something new I want to do, and he's like, 'Oh OK, well yeah, you do that.' That's good. He's extra special even though he drives me crazy." Similar to Shirley, Carla credited a member of her family community as her method of negotiating her barriers to succeeding as a student.

Mary also cited encouragement from her husband, but credited learning better study skills as a way of negotiating the barrier created by her past education and her object of completing her classes. Early in her online education experience she took a short course on

learning how to study. Speaking about what she learned from the class, Mary shared, "That's where everything just fell into the right slots. Then I started getting good grades in all of my classes. I made the Dean's list once, maybe twice."

She also credited life experiences as a way she negotiated her anxiety about being an online student, and said:

> A lot of life experiences helped, and understanding that it's not all about what you want it to be. It just, sometimes you have got to follow along and listen to other people. That helps. Don't listen to the wrong people, that's the big thing.

Mary believed that her life experiences provided her with patience, a tool she needed to adapt to online classes despite her initial fears.

For Megan, it was a meeting with her guidance counselor during her senior year in high school that undermined her confidence in pursuing her education beyond high school. She recalled, "He looked at my grades and he says, 'So you are just going to get a job? Because you're obviously not going to school'." Describing how the incident impacted her, she said, "It made me feel really dumb, which is probably why, you know, I didn't try very hard." Megan also struggled with persistence when facing challenges in her online classes, admitting, "So then I just throw my hands in the air and say, 'I'm done.'" At the time of the interview, her willingness to be "done" threatened her ability to complete her online courses, creating a barrier between her past experiences and her object. Megan was waiting to learn about requirements for graduation, and was frustrated that she had not received an e-mail reply from college advisors. She admitted, "It's just, sometimes it's easier to give up than to fight it for me." As a result of her frustration, Megan had not enrolled in the current semester, and was uncertain about whether or not she would enroll in the next one.

Although lack of confidence threatened Megan's ability to complete her online classes, she was determined enough to finish her degree that she negotiated the barriers by keeping her object in mind. When asked how she coped with her frustration, Megan shared:

> Because I have to finish. I have to finish because I don't want to be in this area the rest of my life, and if I want to get any kind of job like this anywhere else I have to have a degree.

Megan recognized the value of completing her online classes, which helped her negotiate barriers between her confidence and her object. She credited her husband and her daughter with providing the encouragement to persist, and believed that her goal of gaining better employment and moving from her rural community would ultimately benefit all of them.

CHAPTER 6

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

Educational opportunities for rural adult continue to be vital to the health of the communities in which they live, particularly in an era of globalization (Slack, 2014). The most recent edition of the United States Department of Agriculture's *Rural America at a glance 2016* (2016) showed a persistent connection between adult educational attainment, unemployment, and poverty rates. Consistent with the report released the previous year, the latest edition showed that the percentage of college-educated rural adults aged 25-36 continues to fall short of their urban counterparts. Rural economic conditions and employment rates continue to improve with further growth of the U.S. economy, but unemployment remains highest for rural adults with the least education. Georgetown University's Center on Education and the Workforce issued a report in the summer of 2016 that provided further evidence of the importance of a college degree to economic health (Carnevale, Jayasundera, & Gulish, 2016). According the report, of the 11.6 million jobs added after the U.S. economic recovery began in 2010, 73 percent went to people with a Bachelor's degree or higher (p. 3). The data presented in both reports underscores the importance of rural adult education and suggests that college completion is more important than ever, both nationwide and in rural communities.

Rural adults do, however, face challenges to attending college. Geographic isolation requires commuting to physical campuses, which is not always a viable option for individuals maintaining a balance between school, family, and work obligations. The continued growth of online education (Allen & Seaman, 2015) suggests that expanding options for learning

online may address the challenges of attending classes at brick-and-mortar campuses, and allow more rural adults to start and complete college degrees. However, the efficacy of learning online remains questionable (Jaggars, 2014b).

My conversations with rural adult students revealed a variety of motivations to complete their online courses (shared object). The most common motivation was to secure better employment. Consistent with USDA (2014; 2016) data that show connections between rural educational attainment and employment opportunities, the participants in this study recognized that degree completion was a vital component of improved economic condition. Interestingly, only one of the nine participants hoped to move away from her rural community after completing her degree. The other participants expressed that they would, or would at least make a concerted effort to, remain in their communities. The participants did reveal a number of common barriers, or disruptions, to their online education, but none of the barriers had yet undermined any participant's ability to complete classes. In this chapter, I will review the common disruptions, discuss the implications to rural adult online education, and present recommendations for further research.

Conclusions

All of the participants in this study expressed gratitude for the opportunity to take classes online. Convenience, the ability to continue working at their jobs while taking classes, and the flexibility to maintain family obligations were all cited as reasons to enroll in classes online. The participants recounted stories of times when they were able to schedule their student lives to accommodate everything from busy periods at work, to family vacations, to long commutes for goods and services. Consistent with case study research, the stories served as the foundation for analysis (Stake, 1995). Rich stories revealed both the

advantages and challenges of being online adult students in rural communities, and from those stories emerged five themes.

Disruption #1: Disconnection from faculty. Most participants reported that they did not know enough about their professors. Their lack of familiarity ranged from uncertainty about their experience as practitioners in their fields of study, to not even being aware of whether they were male or female. Not knowing faculty prevented participants from developing relationships with them. In the absence of relationships, participants distrusted the expertise of their professors, and experienced communication problems with them that impacted assignment completion.

The disconnection with faculty experienced by the participants reflected previous research (Jaggars, 2014a). Jaggars (2014a) reported that, when surveyed, students who had enrolled in both online and face-to-face courses believed that their interactions with faculty online lacked depth. Other research has suggested that the isolation of the online learning environment may be particularly problematic for rural students. Robeson (2005) found that rural adults viewed learning as highly collaborative, and emphasized how rural residents will opt to learn from people in their own communities, who they know well. Unfamiliarity with their professors prevented the participants in this study from developing relationships that fostered collaborative learning. Most participants who felt their disconnection from faculty impacted their learning experience were able to negotiate the barrier by keeping their object of completing their classes at the forefront. Crystal and Megan were the only participants whose poor communication with faculty threatened to undermine their object. In both cases, a higher, administrative level miscommunication about requirements threatened to prevent them from completing their degrees. For Megan, it was a miscommunication about which

courses she could take online and which would have to be completed in person, and for Crystal it was a misunderstanding about the sequence of courses she needed in order to complete her degree. While Crystal was able to resolve her communication issues by travelling to campus and talking to a counselor, Megan lived thousands of miles from her college's campus, so she continued to try and resolve her problems via e-mail and telephone. At the time of my interviews with her, it was unclear whether Megan would be able to negotiate her communication barrier.

Despite a sense of disappointment in their professors' lack of engagement with them, the participants took responsibility for the negotiation rather than wait for their professors to change. The level of participant responsibility varied. Carla recognized her lack of engagement with the faculty contributed to her absent relationships with them, but made no effort to change and overlooked it in order to complete her degree. Mary was more proactive, and because she had the option of travelling to the brick and mortar campus of her college, opted to take face-to-face versions of courses when she failed to connect with professors online. As she explained, "I like to know who I'm working with." Shirley, the only participant who did not express that she was dissatisfied with her relationships with faculty, attributed her ability to connect with them to advice she had given her children and which they repeated back to her when she started taking online classes. She shared, "I took my kids advice, you're to sit in the front row, get to know your professors and everything, so I've tried to do that, same thing, online." By being "in the front row," Shirley removed the barrier of poor communication with faculty before it was even established.

Disruption #2: Insubstantial relationships with other students. In addition to weak relationships with faculty, participants reported insubstantial relationships with other

students, which prevented them from feeling part of a community. The most pronounced result of the barrier between participants and their classmates was in assignment engagement and completion. Group projects and discussion forums were difficult for the participants to successfully complete when they did not have relationships with one another.

All of the participants were required to complete discussion forum posts that were evaluated by their instructors. Reactions to the forums ranged from acceptance that they were part of the standard work, to irritation and a sense that they were not worth the time spent doing them. Not all of the participants were required to complete group projects, but those who did had a far stronger, negative reaction to them than they did to the forums, and described them as burdensome and ineffective. Carla went so far as to say that she hated group assignments. Megan and Penny both described dominant group members with whom they found it difficult to communicate using distance techniques such as e-mail, online conferencing, and even the telephone. Carla's primary complaint was that not all group members took the same level of responsibility and that communication barriers made it difficult to hold people accountable. Rick recognized early in his online degree that group projects would require an extra amount of organization, so took it upon himself to create communication guidelines. Similar to the issues created by shallow relationships with faculty, insubstantial relationships among students impacted communication.

Prior research on interactivity and online learning confirms the experiences of participants in this study (Carr-Chellman, 2005; de la Varre et al., 2011; Oztok et al., 2013; Peltier et al., 2007; Söderström et al., 2006). Oztok at al. (2013) found that poor interactivity prevents students from connecting beyond the content of their courses. Discussion forum posts and group assignments are interactive tools to reinforce content, but they do not create

opportunities for meaningful connections between students who are already isolated from one another. The participants in this study recognized that weak relationships with their classmates made it difficult to complete assignments. Research has suggested there are additional risks to absent interactivity, including marginalization, attrition, and weakened social capital (de la Varre et al., 2011; Fetter et al., 2010; Peltier et al., 2007; Pigg & Crank, 2004; Soderdtrom et al., 2006; Tichavsky et al., 2015).

Both Rick and Penny's online programs required face-to-face meetings, and as a result, both appeared to know the most about their classmates. Additionally, both of their programs included students who were from all over the country, and in Penny's case, the world. As rural residents, there was an extraordinary opportunity for each of them to build bridging social capital with classmates who had very different experiences from them. Rick recognized the opportunity when he noted, "I am really glad that I decided to enroll in the program to get a broader perspective on the world." However, even with the opportunity to connect face-to-face with people outside of their rural communities, Rick and Penny felt as if the distance learning environment weakened their relationships with other students. Both experienced an increasing amount of isolation the farther they got from their face-to-face meetings, suggesting that the relationships they built with their classmates at those meetings needed nurturing in the online environment. Fetter et al. (2010) found that in order to effectively foster social capital, online students needed to stay connected in a network. The potential for building social capital diminished without opportunities to further grow relationships with their classmates.

Disruption #3: Unreliable technology access and support. All of the participants reported that they had, at one time or another, experienced a barrier between themselves and

the technology necessary to complete their classes. The primary reasons for technology

barriers were inadequate Internet access and insufficient technology support. Although all

participants had technology support available to them from their colleges and universities,

Internet issues and computer hardware repair fell outside of what remote support could

correct. When the Internet failed, or files were lost, or viruses were inadvertently

downloaded, participants needed local support. Most of the rural communities where

participants lived did not have the resources to offer the support they needed, so negotiations

of technology barriers were resourceful and often relied on personal relationships.

     While broadband Internet access continues to grow in rural communities, the higher

costs associated with installing the infrastructure for faster connections in areas with low

population density discourage providers from rapid expansion (Stenberg et al., 2010).

Mary's description of the high cost of Internet access in her community illustrated the higher

cost of access in rural areas, and as Mary explained, higher cost did not equate with higher

quality service. Megan's description of how Internet access in Humber was impacted by bad

weather because of "old wires" suggested that the aging infrastructure prevented residents

from getting optimal network speeds. Carla and her family relied on satellite service, an

often over-priced and unreliable alternative for rural communities. Although she claimed

that the service was acceptable, she did report that it was more expensive.

     Even for the participants who had lost work due to Internet failures, or who had to

come up with inconvenient solutions for hardware problems, the barrier created by

technology did not discourage or prevent them from continuing to participate in online

education. Their acceptance of poor service and support was similar to the ways in which

they accepted not having access to other resources in their rural communities. Rachel did not

appear bothered by the fact that she had to travel a long distance to Best Buy when her computer needed repairs, just as she was not bothered by having to travel the same distance for her daughter's regular music lessons. Carla described having to go to a number of small towns in her county in order to get all of the services she needed or wanted. Just as the participants accepted it was necessary, albeit inconvenient, to travel for goods and services when you live in a rural town, they accepted that finding technology support was a necessary inconvenience of living where they chose. With the exception of Megan, who planned to leave Humber eventually, the other participants indicated that they wanted to continue living in rural areas because of the quiet, the comfort of knowing their neighbors, and the perceived safety.

Disruption #4: Challenges of Balancing classes with work and family. Because all of the participants worked at least part-time while taking their classes, they all experienced challenges balancing work and school schedules, which was consistent with other studies of online students. Hetzel (2012) found that rural women enrolled in online classes reported a constant challenge between their roles as mothers, partners, and employees. The ability to continue working while taking classes was also cited as a benefit of being an online student, which helped participants negotiate the barrier between them and the division of labor necessary to manage school and work responsibilities.

Most participants credited supportive family members and co-workers as resources they used to help maintain balance in their divisions of labor. Carla, Megan, Shirley, Rick, Amber, and Rachel all shared stories about how their supportive spouses, children, and parents positively contributed to their success by taking on more responsibility at home so that they would not need to worry about childcare and chores in addition to their jobs.

Rachel and Crystal cited supportive work environments that helped them balance their jobs and school.

Similarly, participants credited family support as helping them negotiate the barrier of balancing the division of labor between school and family responsibilities. Rachel spoke at length about how helpful her husband and parents had been in taking childcare responsibilities while she completed her degree. She also shared a touching story of how she integrated her children into her school work time by allowing them to snuggle with her as she studied, and encouraging them to read quietly while she did her own reading.

Disruption #5: Troubled educational histories. Carla, Mary, Megan, and Shirley shared powerful stories about how previous, challenging experiences in school impacted them as adult online students. Carla, Megan, and Mary all confessed that they were surprised that they graduated from high school, and Shirley admitted that she underperformed because she was more focused on working and supporting her parents than she was on her studies. As a result of their educational histories, all four participants suffered from a lack of confidence. Megan also lacked persistence as a result of her childhood experiences, which further challenged her ability to complete her online courses.

Lack of confidence is problematic for any student, but it is particularly precarious for online adult students. Prior research demonstrates how the isolation of online learning raises attrition rates and requires a high level of self-motivation (de la Varre et al., 2011; Söderström et al., 2006). Self-motivation can be undermined by a lack confidence. For Carla, Mary, Megan, and Shirley, the lack of confidence had the potential to create a barrier preventing them from reaching their object of completing their courses.

However, Carla, Mary, and Shirley all reported that their online courses increased their confidence. Carla was empowered by her belief that she was as knowledgeable as her professors. Mary was so proud of overcoming her fear of technology that months after our interviews she mailed me a copy of a school newspaper article that highlighted her trepidation when she started taking classes online. Shirley proudly told me of scholarships she had earned and classes she successfully tested out of taking. All of them drew strength from their experiences as online students. Interestingly, Carla, Mary, and Shirley were also all between 50 and 60 years in age, the oldest participants in this study. All three of them experienced a lack of confidence for decades, and for Mary and Shirley, their lack of confidence prevented them from returning to school until middle age. The ways in which all three women used their current, positive experiences as students to negotiate the significant barrier created by their lack of confidence reflected positively on the benefits of online education to non-traditional students.

Megan's progression towards her object was more precarious than any other participants in this study. Her lack of confidence was closely connected with a lack of persistence that had plagued her since she was a high school student. Although she took pride in some of her recent school accomplishments, such as the time her discussion forum post was highlighted by a professor as exemplary, the isolation from professors and school administrators allowed her to avoid negotiating the barrier created by the potential need to take an in-person class at a college almost 2,000 miles away. While there was likely a negotiation for her barrier, at the time of our interviews Megan appeared unwilling to persist in getting more information. Of all of the participants in this study, she was the only one I was concerned may not meet her object.

Implications

This study has implications for online education providers, particularly faculty, instructional designers, and administrators. The majority of disruptions experienced by the students in this study can be prevented through improved pedagogy, more effective use of online learning technology by instructional designers, and higher expectations by administrators for quality and accountability. There are additional implications for policy makers responsible for broadband Internet access to rural areas. More broadly, the study implies that in order for rural adults to use online education for building social capital, there must be improvements to the learning experience.

Online education providers. Faculty are responsible for creating better relationships with students and improving communication in the online environment. Despite generally high levels of self-discipline and motivation, online students benefit from making connections with faculty. Because miscommunication regarding assignment guidelines was a common experience for the participants in this study, improved communication may improve student performance and help prevent attrition. The students in this study were able to negotiate the barrier of weak relationships with their professors by remaining focused on their object, but their experiences would have improved had they been more engaged. Faculty can take simple steps towards strengthening their relationships with their online students. More substantial introductions that include descriptions of both personal and professional details would provide students with the opportunity to understand faculty expertise and make faculty more personable and approachable. Rather than descriptions using static words on a page, faculty can capitalize on technology to provide audio and visual introductions. Crystal shared how she appreciated that one of her professors posted a weekly

video outlining upcoming assignments. She said that it made her professor relatable and approachable. Video and audio recordings can also be used to personalize class content. Faculty can use web conferencing software to meet with students, and for some class meetings. Although scheduling is a challenge for online students who may be in a wide variety of time zones, synchronous class meetings can be made optional, with core class content delivered multiple ways to accommodate students who cannot attend at scheduled times.

Bonvillian and Singer (2013) suggested that a blended learning model in online education is the most effective way for students to learn. Although they focused on the use of local, face-to-face support as a way of blending learning, using synchronous, online educational technology creates blended learning opportunities for students who cannot travel to a physical campus. Not all faculty have the technology skills or the time to independently learn how to use synchronous learning tools, or how to structure online classes. Instructional designers can incorporate more synchronous tools into learning management systems and ensure that faculty is prepared to use the tools in their courses.

To ensure that both faculty and instructional designers have the resources they need, college and university administrators need to show a commitment to their online programs by allocating adequate funding to hire experienced faculty to teach online, purchase high quality technology tools, and provide training opportunities and incentives to continuously improve the quality of online courses at their institutions. Among the participants in this study, there was a significant difference in quality between the online courses offered by community colleges and those offered by four year universities. The affordability of community college made it more accessible for Mary, Megan, Shirley, Crystal, and Amber. However, after each

of them showed me examples of their classes by logging into their learning management systems, and after reviewing examples of syllabi and assignments each of them shared with me, I did not believe the online community college classes were of the same caliber as classes offered by four year institutions. Community colleges have traditionally provided learning opportunities for underserved students like the participants in this study. In order to continue effectively reaching those populations in an online environment, community college administrators in particular must make a bigger commitment to online learning, so community college students can have similar, high quality learning experiences as those of students enrolled in online programs at four year schools.

Rick, whose online classes were among the highest quality in this study, shared that some of his professors earned special certification from his university to teach online. He did not know if his professors received any kind of other incentive for their certification, but he did feel as though those who had earned it were particularly effective. Other institutions may consider offering similar programs for their faculty to ensure they have the technical and pedagogical training to teach online.

Policy makers. The absence of adequate Internet access in the rural communities where the participants of this study lived implies that policy makers need to take more definitive action towards expanding broadband Internet access across the country. Several federal government agencies, including the Department of Agriculture and the Federal Communications Commission, provide grants to Internet service providers for broadband expansion in rural areas. However, the corporations that provide Internet service must cooperate with government initiatives in order for broadband access to be realized. In a Des Moines Register (2017) article lauding the efforts of Mediacom to expand gigabit Internet

service to hundreds of communities in Iowa, the CEO did not take responsibility for rural access. He said rural access was not his "problem," and that "You can't spend $100,000 for one customer. There's no payback" (Hardy, 2017). As Mary and Carla both reported, the cost of Internet access in their rural communities remains high and out of reach for some residents. In addition to providing grants that encourage the expansion of the infrastructure to support broadband through, policy makers need to monitor the cost so that access stays within reach of rural consumers.

Building social capital. Putnam (2000) describes bridging social capital as what connects members of one community to the resources of other, different communities. Globalization is changing rural economies and social characteristics by shifting jobs from manufacturing and agricultural industries to service industries (Flora & Flora, 2008). According to Slack (2014), "Today, the lives and livelihoods of rural Americans are very much embedded in the process of globalization, the dominant force of social change in the current era" (p. 573). In order to compete in a globalized economy, it is increasingly important for rural residents to build bridging social capital and expand their understanding of the world outside of their immediate communities. Online education provides rural residents with opportunities to build bridging social capital with faculty and students from a wide variety of backgrounds, but is only effective in doing so when courses are designed to encourage interaction and relationship-building. Two of the most pronounced disruptions in this study were created by poor interactivity and relationship-building between students and faculty, and between students. Without improved interactivity facilitated and supported by faculty, instructional designers, and administrators, the potential for online education to build social capital is undermined.

In addition to economic changes, globalization brings increasing diversity to rural communities. When asked about changes they have seen in their communities, Megan and Crystal talked about the growth of the Hispanic communities in their rural towns, and recognized the challenges that their Hispanic neighbors faced because of racism and poor working conditions. Shirley told a story of a racist, elderly acquaintance of her husband and joked that his hatefulness would not be missed when he died. Rachel also discussed diversity, and spoke in particular about same-sex couples moving to her small town. Her response to the changes in her community and other rural towns was remarkable in that she was using her online education to effect change. Rachel spoke extensively of the work she was doing with her church's pastor to not only raise awareness and understanding of the increasing diversity in her community, but to also highlight the benefits of that diversity. She directly attributed her efforts to what she learned in her online program, which had an emphasis on diversity, and spoke with excitement about how she believed she could improve her community with the knowledge and tools her program provided her. Rachel exemplified the potential of online education to build the kind of bridging social capital that can improve rural communities.

Results of the 2016 U.S. Presidential election further suggest the importance of bridging social capital for rural adults. Following the election there was recognition in the media and by researchers that rural voters played a significant role in electing Donald Trump (Morin, 2016; Stack, 2016; Tyson and Maniam, 2016). According to the Pew Research Center, Trump was elected with significant support from both rural residents and adults without college degrees (Morin, 2016; Tyson and Maniam, 2016). Trump's campaign rhetoric included accusations that Hillary Clinton was a "globalist" who threatened the

American way of life (Stack, 2016). A globalist is understood as a person who promotes the expansion of an economic and social trend that threatens American jobs, security, and values. The accusation resonated with rural voters because of the changes, often perceived as negative, that globalization has brought to rural communities (Slack, 2014). Rural people and those without college degrees responded positively to Trump's anti-globalist message, suggesting a lack of support for the globalization that rural America should embrace in order to remain economically robust. In this sense, rural Americans voted against their own interests by embracing a leader resistant to the inevitable economic changes created by globalization, which must be negotiated rather than prevented.

The social consequences of anti-globalism to rural communities are of equal concern because globalism requires an expansion of what defines community. According to Goodsell, Flaherty, and Brown (2014), "When community is local, a concept long accepted with axiomatic fervor in rural sociology, people often feel a greater sense of responsibility for and immediately confronted by the consequences of their actions" (p. 626). Globalization challenges the concept of exclusively local community, emphasizing that people taking responsibility for and recognizing the consequences of their actions remains vital to a moral society. Goodsell et al. (2014) explained, "Globalization's effect of connecting people across great physical distances carries significant risk when it is not accompanied by processes that increase familiarity, comprehension, and obligation, and when it provides the means with which to deny commitment" (p. 634). As exemplified by Rachel and the work she was inspired to do in her community as a direct result of her degree, education for rural adults is a process capable of increasing familiarity, comprehension, and obligation in a globalized world. Because online education is able to reach rural adults who do not have the

resources to attend classes at brick-and-mortar campuses, it has the potential to help more rural adults expand their sense of community and act responsibly not only locally, but globally.

Recommendations for Further Research

Considering the implications of this study, I recommend further, corresponding research to explore ways to expand and improve online education opportunities for rural adults. Despite the flaws in their online education, the participants of this study expressed numerous benefits of learning online. The benefits suggest that online education has the potential to provide rural adults with educational opportunities that may otherwise not be available to them. However, further research is necessary to ensure that the quality of the opportunities equal those of students who are able to attend brick and mortar campuses.

Recommendation #1. A multiple case study of online education providers would provide an opportunity to examine, from the institutions' perspective, the efficacy of different pedagogical and instructional design approaches. Data for the case study would include interviews with instructional designers and faculty. Instructional designers would provide insight into which instructional tools are made available to faculty, and the level of training provided for them. Interviews with faculty would reveal which tools they considered most effective for student learning. The findings from such a study would allow for closer evaluation of ways to overcome the absence of relationships and ineffective communication experienced by the participants of my study, and potentially shape future decisions about online instructional design and teaching methods that are more effective in connecting students with one another and with faculty.

Recommendation #2. A case study of online students who live in a specific rural area identified as having limited access to broadband Internet services would provide valuable information to policy makers about the social impact of insufficient access. Federal government agencies have been mapping broadband access across the country, which would help identify particularly underserved areas. The challenge would be finding students living in those underserved areas. Identifying participants for my study was a challenge, principally because I am not affiliated with an institution providing formal education online. When I approached administrators from online programs, they could not provide information that specifically isolated which of their students lived in rural areas. Identifying participants for such a study would require identifying a partner at an institution providing online education who would be willing to help identify students from rural communities.

Recommendation #3. An ethnography of rural adult students would be the most effective way to examine the role of online education in building social capital. By allowing the researcher to observe, first hand, the impact of the participants' education on their communities, such a study would provide insight into the broader potential of online education in improving rural communities. Although the CHAT framework allowed for analysis of the social and historical context of the online learning experiences of participants in this case study, an ethnography would allow the experiences of the participants to reveal the connections between education and community development. In this study, Rachel provided the most insight into how her education impacted her community. The information she shared about her work with her church demonstrated how she believed the community could benefit from what she learned. Rachel's passion for her community and for what she learned prompted her to discuss the potential impact she could have, but soliciting similar

information from other participants would require more thoughtful questioning by the researcher. Because of the challenges in finding participants and the importance of building rapport, a phenomenology would require spending time in rural communities to earn trust and legitimacy.

Recommendation #4. The participants in this study were motivated by the object of completing their online courses, and the benefits they believed would follow. With the exception of Mary and Shirley, the participants enrolled in their courses to either secure new employment or advance in their current jobs. Employment advantages served as extrinsic motivation to negotiate the barriers they encountered. A phenomenological study of rural adult students that explored their intrinsic motivation to complete courses of study could benefit online education providers by improving completion rates. For adult learners in particular, intrinsic motivation is a powerful way to keep students engaged (Knowles, Holton, & Swanson, 2015). If faculty and administrators capitalized on the intrinsic motivation of their students, they could see a drop in attrition. Such a study could also benefit online providers of professional development and non-formal education.

Final Reflection

As a result this study, I strongly believe that the benefits of online education for rural adults outweigh the inconveniences of negotiating the barriers. Considering the social and economic importance of degree completion, the ability of online education to expand access to higher education alone confirms its value. Several of the participants I interviewed expressed that they would not have been able to pursue higher education without the option of taking classes online.

The participants revealed numerous flaws in online education, some of which I recognized prior to this study. They were not satisfied with their relationships with other students and with faculty, and often felt isolated from the learning experience. In the past I perceived these flaws as diminishing the benefits of learning online, and believed that brick-and-mortar learning experiences remained superior to those online. However, recognizing how rural adults benefit from the ability to earn higher education while remaining in the communities they love has made me rethink the value of learning online versus face-to-face. Although the learning environments will always be different, I believe that with more research, evaluation, and allocation of resources, the flaws of online education can be addressed and the quality improved. The benefits of earning a degree are clear (Carnevale et al., 2016), and rural adults deserve the opportunity to capitalize on the advantages of higher education.

Unexpectedly, I also learned to appreciate the value of living in rural communities. Only two of the nine participants expressed any desire to live any place else. The fondness with which the majority of them described the qualities of their communities challenged my own perceptions of rural life. I began this study with both objective and anecdotal knowledge of rural communities and the resources available to them. Conversations about Internet access with the librarians I interact with at my job, and with my own family members who live in rural areas, confirms Federal Communications Commission (2016) data demonstrating inadequate rural broadband access. For me, who grew up in a suburb of a large city and currently lives in the largest city of a state with extensive rural areas, functioning without reliable Internet access is as unimaginable as having to drive 30 or more minutes to a grocery store. However, my participants showed me that the benefits of living

in their communities far outweighed the inconveniences of not only travelling distances for goods and services, but also of poor technology access. For them, knowing and trusting their neighbors, quiet, expansive space, and safety were all reasons to remain in their communities despite the challenges they identified.

Although I have more appreciation and respect for choosing to remain in rural communities, I am increasingly concerned about the ability of rural residents to keep pace with the rest of the nation and the world. I have been disheartened by the tone of opinions following the 2016 election that suggest rural voters are ignorant and self-destructive (Leonard, 2017). My reaction to these opinions is, however, influenced by my recognition that rural Americans may have looked towards the past rather than the future when they cast their votes. A component of my belief that online education is an effective, valuable way to reach rural adults is my hope that, by expanding their education, rural adults will act to position themselves and their communities to thrive economically and socially in a globalizing world.

APPENDIX A

SAMPLE E-MAIL TO SOLICITING PARTICIPANTS THROUGH THIRD PARTIES

Dear _____,

I am conducting a dissertation study on rural adult online students negotiate the barriers to learning online. This study seeks to explore the barriers to and benefits of taking courses online, primarily using interviews with rural adult online students. I am e-mailing you because you shared with me some of your own experiences learning online. Unfortunately, because you participate in the Public Library Director Certification Program, and your participation in that program is connected to Direct State Aid, I am unable to interview you because of a potential conflict of interest.

However, I would like to request your help in recruiting potential participants. If you have any classmates, friends, or family members that meet the following criteria, would you share the topic with my study with them and ask them if they would be interested in participating?

Criterion for the participants include:

1. Male or female adult.
2. Currently or within the past 12 months enrolled in an online course at a community college, college, or university.
3. Resident of a Midwestern state.
4. Resident of a rural community with a population of 2,500 or less.

If you do identify people and they show interest, please send me their names and contact information, including an e-mail address and/or phone number.

Thank you in advance for your help, and please contact me if you have questions or need additional details.

Sincerely,
Alysia Peich
Continuing Education Consultant
State Library of Iowa
alysia.peich@lib.state.ia.us
800-248-4483 or 515-281-6788

APPENDIX B

CALL FOR PARTICIPANTS FOR DISTRICT NEWSLETTERS

Are you interested in being a participant in an important research study about online education?

Iowa Library Services' Continuing Education Consultant, Alysia Peich, is a doctoral student in the School of Education at Drake University. She is looking for people to participate in her dissertation study: An Case Study in How Rural Adult Online Students Negotiate Barriers to Learning Online.

The study seeks to explore what influences the experiences of rural adult online students, and the benefits and barriers they encounter when learning online. While there is literature about rural adult students, and literature about online education, there is little that specifically addresses the experiences of rural adults enrolled in online courses.

Alysia is seeking male and female adults who are: currently enrolled in online courses, or have been enrolled within the past 12 months, at community colleges, colleges, and universities. She is specifically looking for participants who live in a Midwestern state, in communities with populations of fewer than 2,500 people.

Participation in the study consists of three interviews, each of which will last approximately 90 minutes. Interviews will be conducted in person, at the convenience and a location of the participants' choice.

Participation in this study is voluntary, and participants may withdraw at any time. Additionally, if any questions make participants uncomfortable or they wish not to answer, they will not be required to do so.

If the study sounds interesting and you fall in this category, or have friends or family members that do, please contact Alysia at alysia.peich@drake.edu or by phone at 515-360-4949.

Unfortunately, if you are a director who participates in the Director Certification Program you are ineligible to participate in the study. Because Director Certification is connected to Direct State Aid, there is a potential conflict of interest.

APPENDIX C

RECRUITMENT E-MAIL

Dear _____,

My name is Alysia Peich. I am a doctoral student in the School of Education at Drake University, and the Continuing Education Consultant at the State Library of Iowa. I am seeking participants for my dissertation study, and you were referred to me by _____. My study is entitled: An Case Study in How Rural Adult Online Students Negotiate Barriers to Learning Online.

This study seeks to explore what influences the experiences of rural adult online students, and the benefits and barriers they encounter when learning online. While there is literature about rural adult students, and literature about online education, there is little that specifically addresses the experiences of rural adults enrolled in online courses.

To collect data for the study, I am seeking male and female adults who are currently enrolled in online courses, or have been enrolled within the past 12 months, at community colleges, colleges, and universities. I am specifically looking for participants who live in a Midwestern state, in communities with populations of fewer than 2,500 people. If you fall in this category and are interested in participating please contact me using the information below.

Your participation would consist of three interviews, each of which will last approximately 90 minutes. Interviews will be conducted in person, at your convenience and a location of your choice.

I have extended family that live in rural Iowa, and my mother grew up in a rural Iowa community with a population of around 1,000. My personal connection to aspects of the study and my experience providing online education to rural adults makes this topic particularly relevant and interesting to me. I would greatly appreciate your participation in this study. While participating will require your valuable time, the information you provide will be important to influencing the future of online education for rural adults.

Please know that your participation in this study is voluntary, and you may withdraw at any time. Additionally, if any questions make you uncomfortable or you wish not to answer, you will not be required to do so. If you are interested in participating, please contact me via e-mail at alysia.peich@drake.edu or by phone at 515-360-4949

Thank you for your time and consideration.

Sincerely,
Alysia Peich

APPENDIX D

TELEPHONE SCRIPT FOR INTITIAL CONTACT WITH POTENTIAL

PARTICIPANTS

Hello _____. This is Alysia Peich from Drake University. Thank you for your interest in my dissertation study about rural adult online students.

As I mentioned in my e-mail, you were referred to me by _____ as a potential participant in my study. The study will explore how rural adult online students negotiate barriers to learning online.

To confirm whether or not you qualify for participation, are you currently enrolled in online classes at a community college, college or university, or have been enrolled within the last 12 months? Do you live in a community with a population of 2,500 or under in Midwestern state?

If you are still interested in participating, there will be three interviews over the course of three to six weeks. Each interview will last approximately 90 minutes. Interviews will be conducted in person, at your convenience and a location of your choice. Participation is voluntary, and you may withdraw at any time. Additionally, if any questions make you uncomfortable or you wish not to answer, you will not be required to do so.

If possible, I would like to schedule our first interview today. Are you available to meet on any of the following dates: _____, _____, _____? If none of those dates work for you, are there others around that time that would be more convenient for you?

Is there a specific time of day that works best for you?

Where would you like to meet?

Prior to our meeting I will e-mail you a copy of an informed consent. Please review it before we meet, and I will collect a signed copy from you before we start the interview.

Thank you. I look forward to seeing you on _____ at _____ o'clock. Please contact me at 515-360-4949 if you have any last minute schedule changes or questions.

APPENDIX E

DATA COLLECTION PROTOCOLS

Title of Study: A Case Study in How Rural Adult Online Students Negotiate Barriers to Learning Online

Investigator: Alysia Peich

Interview Protocols

There will be three interviews, each 90 minutes in length, which will follow Seidman's (2013) semi-structured, three interview approach:

1) An in-person, life history interview that explores the participants' educational background, their motives for enrolling in online programs, and the communities in which they live.
2) An in-person, contemporary experiences interview that specifically explores the how the participants access their online courses, their experiences with their online courses, the barriers they experience in their online education, the support systems they have in place for online learning, and the benefits of learning online.
3) An in-person, open-ended reflection on meaning interview that encourages participants to consider the meaning of their experiences learning online, and whether their online programs have helped them reach their goals.

Participation will include at least five points of contact:
1) Initial contact, which will include a description of the project and informed consent;
2) The first 90 minute semi-structured life history interview;
3) The second 90 minute semi-structured contemporary experience interview;
4) The final 90 minute open-ended reflection on meaning interview;
5) A member check review of the findings and discussion.

In addition to contacting several third parties who may know of potential participants, I will recruit participants through newsletters. After initial contact with potential participants, I will e-mail them with details about the project and include the informed consent form for their review.

I will meet with all participants in person, at a location that is convenient for them. At the beginning of each interview I will turn on a digital audio-recorder.

Document Review, Audiovisual Materials, and Observation Protocols

In addition to the interviews, I will review documents to help me gain an understanding of the participants' communities and their online learning experiences. To better understand their communities, I will analyze local news sources and public documents such as city council meeting minutes. To better understand their online courses I will request that

participants share syllabi with me. At the conclusion of the second interview I will ask participants to show me how they access and navigate their online courses.

APPENDIX F

INTERVIEWER SCRIPT AND QUESTIONS

Semi-Structured Life History Interview

Thank you for agreeing to participate in this study and talking with me today. The purpose of this first interview is for me to get to know more about you, your education before enrolling in your online program, and the community where you live. The goal of my study is to understand how people living in rural areas experiences learning online. The interview will last approximately 90 minutes, and you can end the interview at any time, and withdraw from the study at any point. Do you have any questions for me before we begin?

Semi-Structured Contemporary Experience Interview

Thank you meeting me again. Before we begin with this second interview, do you have any questions for me? Today we will talk more about your online program. The interview will last approximately 90 minutes.

Open-Ended Reflection on Meaning Interview

Thank you for meeting with me again. This will be our last interview, and I would like to review some of the things you told me in our previous interviews and see if there is anything you would like to add. I would also like to see if you have reflected on any of the things we have discussed and had any thoughts about your online education. The interview will last approximately 90 minutes. Do you have any questions before we begin?

INTERVIEW QUESTIONS

Semi-Structured Life History Interview

1) Tell me about yourself.
   a. Describe yourself.
   b. Tell me about your family.
   c. Where did you grow up?

2) Tell me about where you currently live.
   a. Describe your community.
   b. Describe your neighbors.
   c. What do you like about living in your community?
   d. What are the things you would like to change about your community?
   e. What are the changes you've seen in your community?
   f. Where do you see your community headed in the future?

3) Tell me about what you do for work.
   a. Describe your work.

      b. How long have you been in your job?
      c. What do you like about your job?
      d. What would you change about your job?
      e. What is your dream job?

4) Tell me about your experiences with school before you enrolled in your online program.
      a. Describe the schools that you attended (elementary, middle, high).
      b. Describe the other students you went to school with.
      c. Describe your teachers.
      d. What were the things you liked about school?
      e. What were the things you disliked about school?

5) Tell me about what motivates you to complete your online courses.
      a. What were the reasons you enrolled in your online program?
      b. What do you hope to do with your degree when you finish your program?

6) Describe your experience with technology
      a. What kind of technology do you use (desktop or laptop computer, smartphone, tablet, etc.)
      b. How much time to you spend with technology on a daily basis?
      c. What do you like about using technology?
      d. What do you dislike about using technology?

7) Tell me about how you like to learn new things.

8) Tell me about how you like to communicate with friends, family, or other people in your community.

Semi-Structured Contemporary Experience Interview

1) Describe your online program.
      a. What college or university sponsors your program?
      b. What degree will you earn at the end of the program?
      c. Which classes have you liked most?
      d. Which classes have you disliked?

2) Tell me about your fellow students.
      a. Where do your fellow students live?
      b. How frequently do you interact with the other students?
      c. How well do you think you know your fellow students?
      d. How comfortable do you feel asking your fellow students questions?

3) Tell me about your professors/instructors.
      a. How frequently do you interact with your professor/instructors?
      b. How well do you think you know your professors/instructors?

      c.   How comfortable are you asking your professors/instructors questions?

4) Tell me about the technology you use to access and participate in your online courses.
      a.   What types of technology do you use to take your courses?
      b.   What did you have to learn about technology when you started taking online courses?
      c.   What kind of technology support does your college/university provide?

5) Describe the work you do for your online courses.
      a.   What types of assignments must you complete?
      b.   How much time do you spend every week to complete your course work?
      c.   What kind of feedback do you get after submitting assignments?

6) Tell me about a time you felt frustrated with your online courses.
      a.   What happened to make you feel frustrated?
      b.   What did you do to overcome the frustration?

7) Describe the physical environment where you do your coursework.

8) Tell me about what you've learned as a result of taking your online courses.

9) Describe the benefits of taking your courses online.

10) Describe the things you wish you could change about your online program.

Open-Ended Reflection Interview

1) Thinking about the things we talked about during our previous interviews, is there anything you would like to add about your online learning experiences?

Additional questions will develop out of the responses given by participants in the first two interviews.

APPENDIX G

INFORMED CONSENT DOCUMENT

Title of Study: A Case Study in How Rural Adult Online Students Negotiate Barriers to Learning Online

Investigators: Alysia Peich

This is a research study about rural adult online students. Please take your time in deciding if you would like to participate, and feel free to ask questions at any time.

Introduction

The purpose of this research study is to understand how rural adult online students negotiate barriers to learning online. You are being invited to participate because you are currently or have been recently enrolled in online classes at a community college, college, or university, and are an adult living in a Midwestern community with a population of less than 2,500.

Procedures

If you agree to participate, there will be three interviews, all of which will be audio-recorded as a part of collecting the data necessary for a research study:

1) An interview that will explore your rural community, your educational history, and your process of deciding to enroll in online courses.
   a. This interview will happen in person, at your convenience and a location of your choice. It will last for approximately 90 minutes.
2) An interview that will explore your experiences with your online courses, and the barriers and benefits you have encountered.
   a. This interview will happen in person, at your convenience and a location of your choice. It will last for approximately 90 minutes.
3) An interview where you will be asked to reflect on the first two interviews, and have the opportunity to add or clarify any information you provided in those interviews.
   a. This interview will happen in person, at your convenience and a location of your choice. It will last for approximately 90 minutes.

In addition to interviews, I may ask you to share documents related to your online learning, including course syllabi. I may also ask to observe you while you access your online courses.

Your participation will last for three weeks and will include at least five points of contact:
1) Initial contact/introduction of the project and informed consent document;
2) The first 90-minute interview (in person, at your convenience and a location of your choice);
3) The second 90 minute interview (in person, at your convenience and a location of your choice);

4) The third 90 minute interview (in person, at your convenience and a location of your choice);
5) I will e-mail you a transcript of your interviews, which you will be able to check for accuracy and clarity.

Risks

There are minimal risks from participating in this study. Risks may include potential inconvenience created by the three, 90 minute interviews, emotional discomfort discussing barriers you've experience in your online courses, and emotional discomfort discussing your past educational history or other life experiences. If you are negatively impacted at any time during or after this study, please contact Drake IRB at irb@drake.edu or 515-271-3472.

Benefits

If you decide to participate in this study, there may be no direct benefit to you. It is hoped that the information gained in this study will provide greater insight into what influences the experiences of rural adult online students, and the benefits and barriers of learning online. The results of this study may help online instructors, providers of online education, and other stakeholders identify ways to improve online education for rural adults.

Compensation

You will not be compensated for participating in this study.

Participant Rights

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. If you decide to not participate in the study or leave the study early, it will not result in any penalty or loss of benefits to which you are otherwise entitled. You can skip any questions that you do not wish to answer in the interviews, decline requests for documents, and refuse observation.

Confidentiality

Any information obtained in connection with this research study that can be identified with you will be disclosed only with your permission; your results will be kept confidential. In any written reports or publications, no one will be identified or identifiable and only group data will be presented. However, federal government regulatory agencies, auditing departments of Drake University, and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken: your identity will be kept confidential and any identifiers (such as your name, any names noted during the interview, your community name, and the college, university, or community college that you attend) will be replaced with pseudonyms in the interview transcripts. All documentation of the interviews, included digitally recordings and their

transcripts, will be stored on a password protected computer. All documents and observation notes will also be kept on a password protected computer.

Parties likely to view the data include Dr. Thomas Buckmiller, my Drake University dissertation committee chair, and other members of my dissertation committee. The data collected will be retained until it is no longer useful for research purposes. If the results are published, your identity will remain confidential.

Contacts and Questions
You are encouraged to ask questions at any time during this study.
- For further information about the study contact:

    Alysia Peich (Researcher)   Dr. Thomas Buckmiller (Advisor)
    alysia.peich@drake.edu   thomas.buckmiller@drake.edu
    515-360-4949   (515) 271-4989
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 271-3472, irb@drake.edu.

You may keep a copy of this form for your records

****

Statement of Consent:

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document, and that your questions have been satisfactorily answered. You may keep a copy of this form for your records. Even after signing this form, please know that you may withdraw from the study at any time.

I consent to participate in the study and I agree to be audiotaped.

Participant's Name (printed) _____

_____   _____
(Participant's Signature)   (Date)

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