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How can obstacles to adult English Language Learners with low levels of English proficiency participating in distance learning be reduced?

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HOW CAN OBSTACLES TO ADULT ENGLISH LANGUAGE LEARNERS WITH

LOW LEVELS OF ENGLISH LANGUAGE PROFICIENCY PARTICIPATING IN

DISTANCE LEARNING BE REDUCED?

by

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To Pete, Betty, & Linden

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CHAPTER ONE

Introduction

Capstone Question

As technology becomes increasingly integrated into every level of education in the United States, some learners are unquestionably better positioned to benefit from this transition than others. Internet based distance learning takes instruction outside of the classroom and allows students flexibility with time, location, and focus of study. Many English language learners (ELLs) enrolled in Adult Basic Education (ABE) programs, particularly those with low levels of English language literacy, do not participate in distance learning. The purpose of this capstone is to examine the distance learning experiences of beginning level adult ELLs. The question I have attempted to answer is: *How can obstacles to adult ELLs with low levels of English proficiency participating in distance learning be reduced?* This chapter will offer background into my personal experiences with technology and distance learning as a teacher of adult ELLS, as well as provide basic background information about distance learning in the context of Minnesota ABE.

My Experiences with Technology in Adult Basic Education

At my first job teaching adult ELLs there was no access to computers. My students had no opportunity to learn basic computer skills or to study English online.

Even as the teacher, I did not have access to a computer at school; instead, I created and printed all my materials at home and brought them to school to copy. As a newly licensed teacher, I was very focused on learning to be successful at my new job. Aside from the fact that it was very inconvenient for me, I did not pause to consider the lack of computers at the school, and I gave no thought to the lack of computer experience or instruction for my students.

A few years later I was still teaching adult ELLs, but this time with a different program. I was excited to have access to laptops for use in the classroom and I had many ideas about how to use them. My class consisted of twelve to fifteen students from many different countries ranging from Beginning Literacy English as a Second Language (ESL) to Low Intermediate ESL (National Reporting System for Adult Education [NRS], 2015). Not only did I have access to computers, but I also had access to the Internet, Rosetta Stone discs, and a typing program. I expected that laptop use would enhance and complement what students learned in class.

My enthusiasm abated somewhat after my first few experiences with students using computers in the classroom. The levels of technological savvy varied considerably in my classroom. On one end of the spectrum were students with college degrees from their countries of origin and digital literacy skills equal to my own. On the other end were students with no idea how to open a laptop, turn on a computer, or use a mouse or track-pad. Because I grew up using computers, I had never before considered the complexity of basic computing tasks. Things that I did without a thought were major hurdles to some of my students. Printing a file, opening a webpage, or adjusting

computer volume were completely new skills for more than half my class. At the same time, other students found these tasks to be very simple.

While I was struggling to integrate computers into my classroom, my colleagues teaching students at the High Intermediate ESL, Advanced ESL, and ABE Intermediate and Adult Secondary levels had successful distance learning programs in place with their students (NRS, 2015). These students had the opportunity to extend and reinforce what they learned in the classroom by studying English and other subjects on computers outside of class. My students, on the other hand, used computers in class but lacked options for teacher monitored distance learning. Very few Internet based distance learning programs existed for students with low levels of English literacy.

Distance Learning in Minnesota Adult Basic Education

In 2016, anyone without computer skills is seriously disadvantaged in regard to accessing information, resources, and opportunities. Many companies accept job applications and resumes exclusively online. E-mail is the standard form of communication for many schools and businesses. A wealth of resources and information is exclusively or primarily available online. A person in the United States who lacks digital literacy misses out on beneficial chances to connect, conduct relevant research, or study. Basic computer skills are now a part of basic literacy, and the ability to participate online has become an equity issue in the United States. As the emphasis on workplace and higher education skills grows in ABE, it is increasingly the mandate of the teacher to ensure that students gain digital literacy in their classrooms.

ABE programs in Minnesota, like the one where I work, receive much of their funding from the state. The Minnesota Department of Education uses a formula for

calculating funding for ABE programs. One element of this formula is student hours. In part, ABE programs are funded based on the number of hours students spend studying with them. Minnesota has several approved distance learning platforms for ABE students. Some of the state-approved platforms are freely available, while others are provided to ABE students through state or program funding. ABE programs instruct and support students in the use of these platforms, monitor student progress, and administer standardized assessments. The ABE programs are then able to count a specified number of proxy hours for these students in their total for state funding (Minnesota Department of Education, 2013). When students do not participate in distance learning, ABE programs miss out on additional funding from the state, as well as additional opportunities for students to improve their English skills.

Distance learning is a powerful tool for teachers and learners alike. Students are able to study at their own pace and receive immediate feedback. Computers make this type of learning interactive and dynamic in a way that studying books and notes could never be. Distance learning allows students to study whenever they have time, which makes it an especially good fit for students with work and family obligations. Adult learners without work or family obligations are a small minority in ABE.

While distance learning provides students with flexibility and the chance to improve their English, many students do not use it. In particular, most students with low levels of English proficiency do not engage in distance learning. In the program where I work, it is typical in a beginning level ESL class that only one or two students will log the vast majority of the class's distance learning hours. A handful of other students in the class might participate in distance learning intermittently, and the vast majority not at all.

Historically, there have been more opportunities in Minnesota for ELLs with higher levels of English proficiency to participate in distance learning. Any teacher of adult ESL can attest that in the classroom, students in advanced or intermediate ESL classes are able to complete tasks more independently than their peers in beginning level classes. This should come as no surprise, as these students are better able to understand both written and verbal instructions. Beginning level students in particular require a great deal of modeling and monitoring for understanding. When I have asked my Level 1 or 2 classes to open a book to a certain page, not only do I show students the page, but I also physically walk around the classroom to verify that everyone is in the correct place. It is no surprise, then, that most distance learning platforms are most appropriate for intermediate and advanced ELLs, and are simply not a realistic choice for beginning level students.

My Experiences with Distance Learning in Adult Basic Education

I first attempted distance learning with my students in 2010. The only state-approved option appropriate for my students at that time was a free website, usalearns.org. On this website, students watched videos and answered multiple choice questions. While the website has a lot of good content appropriate for my students, it is somewhat cumbersome in design. The registration and login process proved confusing to students, and they struggled to understand how to navigate the website. While we used this program in class, registering students and helping them manage their usernames and passwords was an unwieldy task, and eventually we used the program less and less often. The content of the program did not seem to justify the class time spent dealing with its pitfalls. Very few of my students participated in this distance learning opportunity.

In 2012, Minnesota approved the Rosetta Stone online platform for distance learning and the ABE program where I work elected to purchase licenses for students in the Beginning Literacy, Low Beginning, High Beginning, and Low Intermediate levels of ESL. Rosetta Stone is a much more comprehensive program than usalearns.org. Students now have the opportunity to practice reading, writing, speaking and listening at their own pace and receive specific feedback. While not entirely intuitive in its design, students are able to navigate this program with much more ease than usalearns.org. The student response to Rosetta Stone has been very positive and distance learning hours have increased.

The impact of distance learning for beginning level students in the ABE program where I teach has also been very encouraging. Student progress is largely measured based on students completing level gains according to criteria set up by the NRS (2015). In the 2015-2016 school year, 42.1% of students at all levels with 12 or more hours of instruction completed level gains. Among students with 12 or more hours of distance learning, level gain completion was at 58.9%. Among all students, the average number of attendance hours per student was 116, compared to 167 among distance learning students. Obviously the increase in level gains and attendance hours associated with distance learning are tremendously desirable outcomes for teachers and learners alike. Our program is evaluated largely on the basis of student hours and level gains, so we hope to see this type of result every year.

Despite the positive outcomes, there are still many challenges to implementing distance learning and much room for progress. Every Beginning Literacy, Low Beginning, High Beginning, and Low Intermediate ESL student in our program has

access to Rosetta Stone and the opportunity to practice using it and receive instruction in its use during class each week. For me, it was a core goal for students to become familiar and comfortable with the login process. Some students achieved this very quickly, while for others it took months. Despite the fact that students became familiar with the program's procedures, many students have never used it outside of class. Even students who feel it is greatly beneficial often do not or are unable to take advantage of the opportunity to study on their own.

Conclusion

Adult students attend class by choice. They choose to spend time at school in order to improve their English skills and work toward their goals of employment, education, or greater participation in society. Students taking part in distance learning have a greater percentage of level gains. Making a level gain usually means advancing to a more difficult class and making progress toward their goals. The fact that the majority of beginning level ELLs are not engaging in distance learning gives rise to the question: Why not? How can obstacles to adult ELLs with low levels of English proficiency participating in distance learning be reduced?

Chapter One presented my capstone question and the teaching journey that gave rise to my interest in distance learning adult ELLs with low levels of English proficiency. It described my experiences implementing technology with students and gave a basic overview of ABE distance learning in Minnesota. I then detailed the experiences I have had with my students participating in distance learning with specific websites.

Chapter Two explores literature by experts that offers insight into distance learning for ABE students, including the history of the field, the demographics of adult

ELLs in Minnesota, reasons for distance learning, obstacles to distance learning, and

possible interventions to address these challenges. Chapter Three presents a model for

research that examined distance learning experiences and challenges for adult ELLs with

low levels of English proficiency. Chapter Four publishes the results of this study.

Chapter Five discusses limitations of this study and offers suggestions for future research.

CHAPTER TWO

Literature Review

Introduction

The question addressed in this study is: How can obstacles to adult ELLs with low levels of English proficiency participating in distance learning be reduced? Experts in the fields of distance learning, second language acquisition, and ABE offer many perspectives and insights. This chapter will examine literature on the history of distance learning in the United States, the prospective clientele for ABE distance learning, the reasons that distance learning is an attractive option for ABE programs and learners, the digital divide and other challenges that students participating in distance learning programs face, and interventions that may help to address some distance learning issues.

Distance Learning History

The impact of distance learning can be seen at every level of education in the United States. While this model for offering instruction is increasingly popular, the term itself lacks specificity. Distance learning implies physical distance from a school, but this is not always the case. Distance learners can study from a school computer lab, or they might be separated from their school by international borders. Petty and Johnston (2008) identified distance learning as "non classroom-based learning" (p. 1). The terms distance learning and distance education are used interchangeably.

The idea of study outside of a formal classroom setting occurred long before the rise of computer technology. In the United States, the origins of formal distance learning can be traced to the end of the 19th century (Saba, 2003). Individual tutors offering distance learning to students dates back even further to the 1700s (Bower & Hardy, 2004). These early distance learning courses were aimed at reaching residents of rural areas, women, and those unable to attend classes because of work commitments (Simonson, Smaldino, Albright, & Zvacek, 2000). Issues of time, money, geography, and expense have made distance learning an attractive educational option for more than a century.

Before the 20th century, all distance learning was conducted by necessity via print correspondence. This era of correspondence education is referred to as the first generation of distance learning (Anderson & Dron, 2012). Instructors and students mailed course documents to each other, a process that sometimes took weeks or months. In this type of distance learning, the instructor usually knew very little about the student, and course content was not individualized to meet the learners' needs (Boyle, 1995). In the late 1800s, some American universities began offering extension courses using the correspondence format. This educational model appealed to universities because it enabled them to reach a wider audience in terms of geography and age (Larreamendy-Joerns & Leinhardt, 2006).

Technological advancements ushered in a new era of distance learning with the advent of audio recordings. Radio became an avenue for learning, and at the height of its popularity in the 1920s, more than 150 institutions had created radio stations aimed at providing distance learning opportunities (Simonson et al., 2000). During World War II,

the military discovered the superior German recording technology that made possible automated radio stations. These improvements in recording and broadcast technology made radio a more attractive distance learning medium and eventually led to the creation of audiocassettes, which also served as a medium for distance education. Another format for distance learning emerged with the rise of the ability to record videos. In the 1950s, some institutions offered college credit for courses broadcast on television (Simonson et al., 2000). Distance learning offered via mass media such as radio and television is known as second-generation distance learning (Anderson & Dron, 2012).

Computer technology, however, has resulted in revolutionary change to distance education. Internet technology, in particular, provides a variety of formats, opportunities for interaction, and instant feedback that other distance learning mediums have lacked (Bower & Hardy, 2004). The transactional distance between instructor and student has decreased from weeks or months in correspondence education to the possibility of instantaneous feedback using online learning (Boyle, 1995). Distance learning that is facilitated by interactive technology such as the Internet is known as third generation distance learning (Anderson & Dron, 2012).

Internet-based distance learning varies widely between programs and teachers. It can involve using language-learning software, posting with teachers and students on a class forum, or using software developed specifically for online courses, such as Moodle or Google Classroom (Coryell & Chlup, 2007). Online learning opportunities may be synchronous, requiring students to be engaged and interacting at the same time. Alternatively, they can be asynchronous, allowing students to access content anytime of the day or night (Gregory, 2003). Some distance-learning programs for language

learning consist of students using Computer-Assisted Language Learning (CALL) programs independently (Young, 2005).

Even the extent to which students are classified as distance learners can vary. Some students study exclusively online, without ever setting foot in a school. Other students study primarily in traditional classrooms, but use distance education programs to supplement their study. In between these two models are hybrid students who study largely independently, but who meet regularly with a teacher or other students (Petty, Shafer, & Johnston, 2004). Programs choose which model or models of distance learning to offer in order to meet their organizational goals and satisfy student needs.

Distance learning is a rapidly expanding educational field. Students from Early Childhood Family Education, K-12 schools, ABE, higher education, professionals, and individuals in their free time are taking classes and studying online. In 2010, distance learning grew by 21% in higher education, while the overall student population grew by only two percent (Allen & Seaman, 2010). Data from the U.S. Department of Education (2014) reveals that in 2011-2012, 32% of undergraduate students took at least one distance learning course, and 6.7% were exclusively taking distance learning courses. On the K-12 front, more than half of all public school districts reported that they had students engaged in distance learning in 2009-2010 (U.S. Department of Education, 2011). Brown & Lease (2009) found competition for student enrollments to be a driving force in the expansion of distance learning in higher education. Saba (2011) speculated that it is possible that distance learning could become the leading form of education in the not-too-distant future.

The expansion of distance learning has not been without controversy. As the correspondence form of education grew in popularity in the early 20th century, some schools were awarding doctorate degrees by correspondence and the reputation of distance learning suffered (Sumner, 2000). Concerns about the quality of distance courses gave rise to several accrediting organizations (Brown & Lease, 2009). After an examination of the history of distance learning, Larreamendy-Joerns and Leinhardt (2006) concluded

> For some, online education constitutes an unprecedented opportunity to overcome the limitations of traditional classroom instruction. For others, online education threatens the very essence of quality education…these reactions are not unique to online education. They occur whenever pedagogical innovations challenge the classroom as the privileged scenario for learning and instruction, and the teacher as the ultimate source of knowledge and control (p. 572).

From its earliest days, distance learning has been a disruptor in the field of education.

Perhaps the best evidence of the disruptor status of distance learning is the current discussion surrounding massive open online courses (MOOCs). As the movement emerged during the economic downturn in 2008, proponents said it could democratize higher education by providing increased access to high quality course content at low cost. In 2013, Thomas Friedman said of MOOCs, "Nothing has more potential to lift more people out of poverty… And nothing has more potential to enable us to reimagine higher education." Altbach (2013) disputed this rosy view of MOOCs, referring to them as "neocolonial" due to their perpetuation of Western academic culture and values in developing countries. With the changes MOOCs bring to the delivery and audience of

academic content, these courses even have profound implications for the labor market. A format where possibly thousands of students receive course content online from a single instructor could result in a decreased number of instructors needed to teach classes and greater competition for teaching positions (Rhoads, Camacho, Toven-Lindsey, & Lozano, 2015).

Distance education is a field with roots in the American Colonial Era that has recently taken on a new form due to advancements in technology and the availability of technology. The structure of online learning differs significantly between courses. Whatever the chosen format, distance learning meets the educational needs of many adult students while satisfying ABE program objectives. ABE programs provide learning opportunities to adult students who are below 12th grade level in basic academic areas, including the English language. This includes students who are working toward their State of Minnesota General Educational Development (GED) diploma as well speakers of other languages who are studying only English. This study will focus on adult ELLs currently enrolled in ABE classes.

Adult Basic Education English Language Learners

The adult ELLs who are the subject of this study are underrepresented in the scholarly research about distance learning. This is particularly true of ABE students with low levels of English language proficiency. Before investigating the practices and challenges of distance learning, it is desirable to examine the students at the heart of this study and the place they occupy in American society.

In 2010, more than 800,000 students were enrolled in ABE across the United States for English literacy classes. However, an estimated four percent of adults in the

United States, or more than 12 million people, do not speak English well or at all (Office of Career, Technical, & Adult Education, n.d.). In 2014, Minnesota ABE provided ESL instruction to more than 26,000 students out of an estimated 250,000 who would qualify for ESL services (Wagner, 2014). Greenberg, Macias, Rhodes, and Chan (2001) reported that people with low levels of education who immigrated to the United States after age twelve had low levels of participation in ABE classes. It is indisputable that ABE in the United States reaches only a small fraction of those eligible to receive instruction.

The languages spoken and countries of origin of the Limited English Proficient (LEP) immigrant population in the United States vary between states. Overall, when compared to the population who are English proficient in the United States, LEP individuals are more likely to be Latino or Asian, as well as older than school age (Zong & Batalova, 2015). In Minnesota, the three largest language groups of LEP immigrants or refugees speak Spanish, African languages, or Hmong (Migration Policy Institute, n.d.).

In addition to participating in English language classes at lower rates than their higher English proficiency peers, Ramírez-Esparza, Harris, Hellermann, Richard, Kuhl, & Reder (2012) noted that adult learners with low levels of education take longer to progress through ABE programs than their more educated peers. They found learners with low levels of education to be less likely to ask for help, less likely to initiate interactions with peers, and more likely to undertake the novice role in classroom interactions. According to Ramírez-Esparza et al., "Low-education learners need to learn the socio-interactive practices of how to participate and what to attend to in the classroom, including understanding literacy and literacy practices" (p. 562). When adults

with low levels of education attend ABE classes, they advance more slowly because they must acclimate to the school setting in addition to the new language.

If LEP students are underrepresented in ABE ESL classrooms, this is not the case in the labor force. LEP individuals are employed at nearly the same rate as those who are English proficient (Zong & Batalova, 2015). However, the nature of the work immigrants find differs greatly according to their level of English proficiency. Batalova and Fix (2010) noted that the most common fields for LEP immigrants included construction, transportation, service industries, and food production. Jobs in these fields tend to offer low wages with limited opportunities for advancement. On the other end of the spectrum, English proficient immigrants are more likely to work in management or professional fields. Immigrants who are LEP are also more likely to live in poverty and receive government food assistance than their more English proficient peers.

In the United States, ABE reaches only a small portion of its potential audience, particularly among LEP adults (Office of Career, Technical, & Adult Education, n.d.). These adults are likely to work in low-paying jobs and progress more slowly if enrolled in English language classes (Batalova & Fix, 2010; Ramírez-Esparza et al., 2012). Given the greater job opportunities and upward employment mobility available to English proficient immigrants, improving English either through classroom or distance learning can greatly impact the lives of LEP students.

Reasons for Distance Learning

While the structure of distance learning can vary, it is an attractive option to ABE programs because it accommodates the frequently hectic schedules of adult learners. Factors such as work schedules, childcare responsibilities, and lack of a reliable

vehicle or alternative transportation may make it difficult for adults to attend classes (Askov, Johnston, Petty, & Young, 2003). The ability to study from a distance appeals both to students who live in remote locations and students who live in urban areas with heavy traffic (Brown & Lease, 2009). Distance learning has the potential to reach many students who are not able to physically be present in class (Askov et al., 2003).

Furthermore, adult language learners often go through periods of studying English at school interspersed with periods away from school. During these away times, students may study at home but not attend formal classes. As Comings and Soricone (2007) stated, "services might be more effective if they supported connected episodes of program participation and self-study" (p. 14). Effective distance learning can be a tool to increase both student persistence and student retention with adult learners (Bartlett, Norton, D. Porter, P. Porter, Powers, Rogers, Stiles, & Wolley, 2005).

Distance learning via computer necessitates that students either already possess or will acquire some level of ability to use a computer, tablet, or smartphone to carry out course activities. This possibility of acquiring or enhancing computer skills is itself a powerful argument in favor of distance learning. The National Telecommunications and Information Association's (NTIA) 2013 report claimed that Internet use "increases employment and income, enhances consumer welfare, and promotes civic engagement" (p. 4). The nature of the U.S. economy has changed and continues to evolve from its historical roots. By 2010, 62% of all jobs required at least intermediate-level computer skills (Carnevale, Smith, & Strohl, 2013). Students possessing digital skills may also have an advantage in the workplace during economic downturns and be less likely to lose their jobs than workers without such skills (Reder & Brynner, 2009). The computer skills

that are an integral feature of online distance learning may provide students with an advantage in the job market.

Distance learning also has implications for adult students interested in higher education. In 2009, nearly 30% of college students took one or more classes online, a significant increase over the previous year (Saba, 2011). Gaining the skills and knowledge to study independently online prepares students to access higher education distance learning or even online professional development in the workplace. Online learning is a skill that students can transfer to other situations to help them meet their educational and employment goals.

The development of students' digital literacy is not the only potential positive result of distance learning. In a study of university-level language students, Hurd (2006) found that after taking a distance course, students reported "increased confidence and greater awareness of strengths and weaknesses" (p. 315). White (1995) found that distance learning students used more metacognitive strategies than their classroom peers, stating that "The wider and increased use of metacognitive control by distance learners…can be seen as a response to the demands placed on those learners by the distance learning context" (p. 216). The solitary nature of distance learning may result in a greater use of metacognitive strategies by learners (White, 1999). Higher levels of confidence and knowledge about learning practices and preferences may help students in their future studies.

One positive feature of distance learning is that it can engage students in language learning in a way that traditional classrooms often do not. In online distance learning, students are actively engaged while they are working and are self-directed in their

studies. Distance learning programs can situate language in context and provide opportunities for meaningful practice (Burrus, 2009). In traditional teacher led language classes, students often take a passive role and the instructor generally determines the topics and pace of study.

Some forms of distance learning can provide increased opportunities for students to interact with course content, as well as the possibility for individualized content that meets the needs of diverse learners (Larreamendy-Joerns and Leinhardt, 2006). Bartlett et al. (2005) note that distance learners may also receive more individual communication from their instructors. These interactions can result in students feeling personal responsibility to complete course work. More communication also means that the instructor is more likely to reach out to students when their participation lapses and may increase student retention.

For beginning language learners in particular, distance learning may provide students with comprehensible input without raising the affective filter (Boyle, 1995). For example, students could watch a video online and answer questions in a comfortable setting, without the pressure of face-to-face conversation. However, Xiao (2012) found that for some learners, distance learning can increase the affective filter. When embarking on a course of distance study, the language learners in White's (1995) study described "initial feelings of lack of preparedness and lack of confidence and a sense of inadequacy" (p. 208). Learners may feel anxiety because of isolation from the teacher and other students, or even from uncertainties about the experience of distance learning itself.

While distance learning has certain advantages for students, it also has a potentially positive impact on educators and the field of pedagogy. Teachers are often somewhat isolated in their classrooms, both in the solitary way they plan lessons and in the fact that they are seldom afforded the opportunity to observe the pedagogy of their peers. According to Larreamendy-Joerns and Leinhardt (2006), online distance learning is different in both of these regards. Teachers working in teams are often tasked with creating online courses, making the lesson planning process more collaborative. Online courses are also available for other teachers to view, providing educators with the ability to observe the work of their colleagues. Creating and sharing distance courses changes the dynamic of teaching for many instructors.

Distance learning has much to offer adult learners. With it, they gain the unique ability to control their time, place, and pace of study (Askov et al., 2003; Brown & Lease, 2009). As reported by Reder and Brynner (2009) and the NTIA (2013), Internet skills and usage correlate with positive employment outcomes. Distance learning is an increasingly large part of higher education, and students have reported increased confidence after completing online courses (Hurd, 2006; Saba, 2011). While the impact of students' affective filters is unclear, distance learning may increase student metacognition and instructor collaboration (Boyle, 1995; Larreamendy-Joerns & Leinhardt, 2006; White, 1995; Xiao, 2012). Distance learning has become an increasingly popular option for students, but it is not without its disadvantages.

The Digital Divide

Despite its potential for offering on-demand, student-centered education, distance learning is fraught with challenges. One of the greatest obstacles is the access of ABE students to the required technology.

Askov et al. (2003) argued the following:

Those who are not educated to their potential tend not to have access to technology and do not hold jobs that form a meaningful career path. Without access to … online learning, low-literate adults have little chance to successfully bridge the divide. Thus, while using the Web for instruction may help, computer access creates a challenge for implementing online distance education programs for adult learners. (p 7)

This opportunity gap that exists between those with access to computers and the Internet and those without is known as the digital divide (Sánchez & Salazar, 2012).

In the United States, there is a marked digital divide surrounding demographic categories of age, race, income, education, and community (rural vs. urban). In 2013, 74.4% of all households in the United States reported Internet use in the home. For those over 65 years of age, reported Internet use was only 58.3%. For residents without a high school diploma or those earning less than $25,000 per year, Internet use was less than 50%. While White households reported 77.4% Internet use, Hispanic and Black households had only 66.7% and 61.3% usage, respectively (File & Ryan, 2014). Among residents identifying as Hispanic, those who were born in the United States and who speak English as their dominant language are more likely to use the Internet than Hispanics born in other countries and those who are Spanish-dominant (Lopez, Gonzalez-

Barrera, & Patten, 2013). These populations who are adversely impacted by the digital

divide represent a significant portion of ABE students.

If Internet participation does result in positive employment, consumer welfare and

civic engagement outcomes, why are some groups slower to begin using it? Among

those who did not use broadband Internet, the NTIA found several primary reasons in its

2013 report: a lack of interest or perceived lack of need to access the Internet, the

expense of broadband Internet, and not having a computer or having an outdated

computer. Latinos participating in a Pew Hispanic Center report also cited difficulty,

feelings of frustration, and lack of time as reasons they did not use the Internet (Fox &

Livingston, 2007). Based on the findings of these reports, it is likely that ABE students

who do not access the Internet have a variety of reasons.

Even among Internet users, the depth and quality of access remains uneven.

Users with poor Internet service or outdated technology are unable to use the Internet to

its fullest potential. Other Internet users do not have the digital literacy skills to fully

participate on the Internet (Wetenkamp-Brandt, 2013). Benítez (2006) found that "the

digital divide is not only a problem of Internet connection but also of the knowledge

skills about Internet applications" (p. 187). According to a Pew Research Center study in

2015, 19% of Americans depend heavily or exclusively on their smart phones for Internet

access. Internet users who are smart phone dependent for the Internet are

disproportionately non-White, have low levels of education, have low levels of income,

and/or are younger adults. Many of these demographic categories align closely with the

ABE ELL population. Quality of access is a significant issue for smart phone users, who

may struggle to complete job applications or complete online courses on their mobile devices (Wetenkamp-Brandt, 2013).

With segments of the American population underserved in the areas of computer and Internet technology and use, what is the role of schools in addressing this deficit? Sánchez and Salazar (2012) highlighted that for children of parents who are immigrants, and/or who have low levels of education and income, public school might be their first encounter with computers and the Internet. In addition to their lack of computer access at home, these students may also have sub-par access at school. Schools with majority populations of students of color have fewer computers with Internet in the classroom and provide less technology training for instructors (Sánchez and Salazar, 2012). The inequalities in American society and its public school system must be addressed if students are to have equal access to opportunities. According to Clarke and Zagarell (2012), "The only way to give our students a successful opportunity in the world is to bridge the *technological divide* that exists in our schools" (p. 136).

In the United States, age, race, income, education, location, language and place of birth play a role in determining whether a person has Internet access and/or the knowledge and skills to fully utilize the Internet. The digital divide represents a significant challenge to successful distance learning for populations with limited Internet access. However, the inequalities associated with the digital divide are also a powerful reason for schools to play a role in confronting this opportunity gap. Sánchez & Salazar (2012) stated that schools "are an important stakeholder in closing the digital divide" (p. 97). While access to and knowledge of technology is fundamental to online distance

learning, these are only some of the challenges that ABE programs, instructors, and students face in their distance learning endeavors.

Distance Learning Challenges

Technology adoption is only one potential obstacle to distance learning. Even for students with access to technology and the Internet, distance learning may remain inaccessible. Many distance learning websites and programs require a level of literacy that excludes a significant portion of adult learners (Burrus, 2009). Locating online resources that are at the appropriate level for ELLs with low levels of English literacy and that align with the interests and goals of these adult students presents a substantial challenge. In fact, most of the Internet's low-literacy content is designed for children and often does not meet the needs of adults with emerging literacy skills. (Stites, 2004). Many ELLs are overwhelmed by the vast amount of print online, and have not yet developed the ability to skim English texts for information. Students may also lack understanding of Internet text conventions and experience difficulty differentiating between reliable information and that with a commercial impetus (Silver-Pacuilla & Reder, 2008). A significant portion of online content is either inaccurate or misleading, and some of it would be considered offensive to most adult learners (Stites, 2004). Few distance learning platforms are appropriate for beginning level ELLs. The greater availability of distance learning options for intermediate and advanced ELLs creates an inequality of opportunity based on literacy level.

It is also possible that the very programs or classes designed to engage learners in distance learning frustrate and discourage them instead. Ideally, distance learning platforms, software, and websites would be simple to understand and navigate,

aesthetically pleasing, and engaging to learners. These websites should operate smoothly with little effort on the part of the student. Unfortunately, rigorous program or system operating requirements, long wait times, software crashes, or poorly designed interfaces can frustrate students and make them less likely to use a program (Young, 2005). There is also the issue of learner preference to consider. While younger students tend to navigate websites more assertively, older users often prefer a more linear presentation. The design of a learning website can impact student engagement and levels of frustration (Silver-Pacuilla & Reder, 2008). It is a challenge for a distance learning website to meet the needs of the ABE student population, which varies so greatly in age, English literacy level, computing experience, and previous level of education.

Lasagabaster and Sierra (2003) found a different culprit for student complaints about Computer-Assisted Language Learning (CALL). Participants in this study were frustrated with, among other things, computer methods of error correction. Often, CALL programs identify incorrect answers, but give no information about the reasons for the errors. Students also complained about the absence of variety in the CALL program. The fact that the program lacked a true interactive component was disappointing for some students. These students wanted the opportunity to make connections with other people instead of solely interacting with a computer.

The social component of language learning can be very valuable to students. Petty and Johnston (2008) found a compelling reason why students might miss the interactions of traditional language classes. They reported that distance learning, "frequently removes many of the social supports that a classroom teacher and other students provide" (p. 33). The social aspect of language class is more highly valued by

some students than others. Teachers may also hesitate to move away from in-person interactions with students, which can be fulfilling for instructors (Peerani, 2013). However, some distance learning websites do offer the opportunity for synchronous learning and social interaction between peers and teachers.

Learner characteristics or preferences are sometimes a major obstacle to successful distance learning. Not every individual is happy or comfortable studying or taking a class online, regardless of previous computer experience or literacy level. Askov et al. (2003) identified several characteristics of successful distance learning students. These learners are intrinsically motivated, content to study independently, and are good organizers with solid study skills. Many ABE students do not possess these characteristics. Salinas (2002) argued that a student's affinity toward distance learning is impacted by his/her age, gender, and learning style. Student differences might mean that some students are better suited for distance learning than others.

Just as some learners can lack desirable characteristics for distance learning, teachers can also be an impediment to the process. Distance learning requires teachers to understand and be able to instruct students on the use of the technology and the specific website(s) being used. Some distance learning formats require teachers to create entire classes online, while other programs only require teachers to monitor student progress. Teachers vary in their comfort and level of experience with technology and their ability to assist and instruct students in its use. Effective distance instruction requires different skills than traditional classroom instruction, and even after these skills are acquired, the technology of distance learning is constantly evolving. As Smith (2003) stated, "Distance instructors have to be learning constantly." In her 2003 study, Reynard studied

the implementation of a distance learning program and found that teachers struggled to adjust their methods to the new program. Reynard found that "teacher intervention was random and ineffective. Challenging the existing approach and mindset of teachers was difficult" (p. 123). Embarrassment about lack of technical knowledge or frustration with the process of acquiring such knowledge are frequent barriers to teachers using technology to engage ABE students (Gopalakrishnan, 2006).

For a teacher to acquire the necessary expertise to teach a distance course necessitates training in the areas of technology and pedagogy. This professional development can be costly and difficult to absorb for teachers or the programs that employ them. Planning lessons using technology can also require more of the instructor's time. Teachers who are not compensated their efforts may be disinclined to spend their time this way. Another potential expense in the implementation of distance learning is technical support. This type of assistance is important to teachers using technology, but it can be costly to provide (Clarke & Zagarell, 2012).

An additional concern to instructors and ABE programs instructing students who are not physically present is academic dishonesty. Is the student registered for the class the one who is completing assigned coursework and assessments? In a study of university students, Lanier (2006) found a higher rate of cheating in online courses than in courses that were in-person only. Results from a study by Grijalva, Nowell, and Kerkvliet (2006), however, showed cheating in online classes to be no higher than in traditional classrooms. The authors suggested that because online courses remove the dynamics that often cause panic cheating in traditional classrooms, students in online courses might even be less likely to cheat.

In Minnesota, ABE programs must periodically administer proctored exams to all students. Most programs test students initially when they sign up for classes or attend a distance learning orientation. Many programs struggle, however, to get distance learning students to return to school for testing (Petty et al., 2004). Without continued testing, ABE programs cannot measure student progress or collect distance learning hours.

ABE programs implementing distance learning face a multitude of challenges, and even research does not always point to a solution. Much of the research in the field examines distance learning in higher education. The area of distance learning with adult students with low levels of English proficiency is largely undeveloped. Where research has been conducted, however, there is the issue of diversity within the adult ELL population. Comings and Soricone (2007) stated that successful strategies with one population of students might be ineffective with other groups. Even research that focuses on a specific group might not hold the answers. Literacy experience in a student's native language is an important variable that can impact experience with distance learning. Students with and without native language literacy experience frequently coexist in the same class, and successful instructional strategies for one group may fail with the other (Comings & Soricone, 2007).

One final hurdle to distance learning is the fact that some instructors, students, and administrators are philosophically opposed to it. Verene (2013) asserted that "an image of a person is not a person. A video lecture is not a lecture. Passing responses back and forth in electronic media is not a conversation or a dialogue" (p. 296). Some stakeholders in education do not see value in distance learning and are likely to oppose its implementation. Larreamendy-Joerns and Leinhardt (2006) worried that distance

learning is not fulfilling its potential for democratization. The authors say that giving

students access to information is not sufficient to bring about change. Rather,

democratization requires institutions of learning to open themselves up to a dialogue and

exchange of ideas that goes in both directions.

ABE distance learning programs may be ineffective for many reasons. To offer

distance learning in ABE is to attempt to serve a population impacted by the digital

divide via technology (Askov et al., 2003). Some ABE students do not have access to or

are not interested in the technology that facilitates distance learning (NTIA, 2013). The

curriculum or programs used for this type of learning can frustrate students with technical

or design issues, or frequently they are simply too difficult for many ABE students to

read (Burrus, 2009; Stites, 2004; Young, 2005). Some learners lack the characteristics of

successful distance learners, while some ABE teachers are uncomfortable using and

instructing students in technology (Askov et al., 2003; Reynard, 2003). Often, distance

learning lacks a social component that many students value (Petty & Johnston, 2008).

Implementing distance learning can be costly for schools (Clarke & Zagarell, 2012), and

some stakeholders may have concerns about academic integrity (Lanier, 2006) or remain

philosophically opposed to distance learning (Verene, 2013). While the obstacles to

distance learning are plentiful, the literature in the field offers an array of possible

solutions.

Distance Learning Solutions

Distance learning can be challenging for ABE programs and students on many

fronts, yet it continues to grow as a field. Programs that offer distance learning options to

students must identify strategies and practices that minimize potential problems while

providing support to learners. Although many of the difficulties presented by distance learning do not have simple solutions, the literature provides several approaches that, if implemented, could benefit ABE programs, students, and the field of distance education.

Students must have sufficient computer skills in order to begin computer based distance learning. Askov et al. (2003) suggested that programs should assess all students' relevant technology skills prior to distance learning. Students without the requisite knowledge could be given some basic skills instruction. This would ensure that students have the tools to succeed in their chosen course of study. Even students with computer skills may encounter technical difficulties in online study. For successful online distance learning, some form of technical support should be available to students (Silver-Pacuilla & Reder, 2008).

In addition to technological skills, students are likely to be more successful if they employ learning strategies. Students who have a clear goal to motivate their study are likely to be more successful distance language learners than their peers (Silver-Pacuilla & Reder, 2008; Xiao, 2012). Metacognitive skills such as identifying strengths and weaknesses, using self-motivation strategies, building self-efficacy through progress toward goals, and reflection about learning are also associated with positive distance learning outcomes. Students not already employing these metacognitive practices can be instructed in their use and benefits (Xiao, 2014).

Petty and Johnston (2008) reported orientation sessions provided an opportunity for teachers to assess student skills, administer tests, and determine if distance learning is a good fit for the student. Basic computer training could then be offered to students who need it, and not to those who are already proficient. Orientation also creates an opening

to introduce students to distance learning in general and the specific curriculum or program. According to Petty and Johnston (2008), "This is particularly important because, although students have an idea of what is likely to happen when they step into a classroom, they do not bring a similar history to distance education" (p. 17).

Of the utmost importance is the match between the student and the distance-learning program. The distance learning curriculum or program must be at the correct literacy and technology level for students. The content of online learning should be relevant and interesting to students (Dillon-Marable & Valentine, 2006). If the mode of learning is not aligned with the students' abilities and goals, there is little chance of a successful distance learning program.

There is some research to support the effectiveness of specific models of distance learning. In a meta-analytical study of distance education research, Zhao, Lei, Yan, Lai, and Tan (2005), found that distance learning programs with both synchronous and asynchronous interactions had higher levels of positive outcomes than programs only using one type of interaction. Their analysis also revealed the hybrid model in which distance learning is mixed with face-to-face instruction to be the most successful. Petty et al. (2004) examined ABE distance learning programs in six states and reported that some states found the hybrid model to be a good fit for students needing additional support and for ELLs.

Providing teachers with training and support is an important component of successful distance learning programs. Effective educators in the field get to know their students and learn appropriate pacing for online instruction. Providing feedback to students in a timely manner is essential, as is planning interactive learning activities that

decrease learners' sense of isolation (Smith, 2003). Student engagement in communication with the instructor and peers supports positive distance learning outcomes (Zhao, et al., 2005). Professional development for distance learning instructors should be ongoing, and include not only technology topics, but also encompass communication skills and pedagogy. Some states with ABE distance learning programs suggest that allowing teachers to volunteer for distance learning teaching results in a better fit than administrators assigning the duty (Petty et al., 2004). Instructional mentoring may be useful in helping teachers to develop skills for teaching distance learning (Gopalakrishnan, 2006).

One important avenue to address the challenges of distance learning lies in the mindset of educators and administrators. Distance education outcomes are frequently compared with outcomes for students in traditional classrooms, with the goal of having equally positive outcomes. Larreamendy-Joerns and Leinhardt (2006) asserted that distance learning programs must set loftier goals, "so that the relevant issue becomes not 'what is as good as' but 'what is better'" (p. 595). To truly achieve excellence in distance education, the individuals involved may need to examine their thinking about distance learning and adjust their goals and expectations.

One final approach to improving distance education is to expand the theoretical framework upon which it operates. Chappelle (2007) called for a new view of Second Language Acquisition (SLA) theory and research that takes into account the input and practice that students receive via computer. Researchers already know a great deal about how adults learn languages. Enhancing understanding of how computers affect language learning could result in new best practices for computer use in and out of second

language classrooms. As technology has shifted the avenues people use to communicate with each other, Chappelle argued that the concept of communicative competence should include technology based forms of communication (2009). She concluded that the technology available to teachers and students is far ahead of the pedagogy that should guide its use. Vanek (2014) noted that simply including new technology in traditional teaching models is ineffective for adult ELLs, and that ABE programs might best serve learners by reassessing their beliefs regarding technology in education. New research in the fields of SLA and distance learning could give rise to new approaches to some of the obstacles inherent in distance education.

Although there are a multitude of challenges facing distance learners, teachers, and administrators, there are measures that can be taken to increase the chances for success. Assessing and supporting students in their use of technology and metacognitive skills can lead to better learning outcomes (Askov et al., 2003; Xiao, 2014). Matching students with appropriate distance learning programs also increases the likelihood of successful learning (Dillon-Marable & Valentine, 2006). Like students, instructors also need support and training to be effective distance educators (Smith, 2003). If distance learning programs employ best practices in instruction and endeavor to facilitate the highest level of student learning, then successful online distance learning is possible (Smith, 2003).

Conclusion

Distance learning has been around for centuries, but never before has it been such a pervasive part of education at every level. Technological advancements have created an environment in which distance learning can be responsive to the needs of individual

students. Distance learning is an avenue for ABE programs to reach students who are unable to come to class or to enrich the learning of students who also attend classes. For LEP ELLs, many of whom work low-wage jobs, distance learning provides opportunities to acquire knowledge and skills necessary for career advancement or higher education. The rationale for distance learning as a positive tool for ABE programs and students is offset with a list of reasons it is challenging to implement successfully, including issues of access. Researchers, administrators, and practitioners in distance education and ABE offer ideas on how to mitigate the difficulties inherent in distance learning.

While there is substantial research in the field of distance education, little of it focuses on adult ELLs with low levels of English proficiency. These students are among the most difficult to reach via distance learning because their literacy levels preclude them from using many distance learning programs. There is a need, then, to explore the distance learning implications, opportunities, and challenges for this particular group of ABE students. Chapter Three will detail the research methods used to examine the distance learning experiences of adult ELLs with low levels of English proficiency.

CHAPTER THREE

Methods

Introduction

The purpose of this case study is to explore the web based distance learning experiences of Beginning Literacy to Low Intermediate ESL students enrolled in ABE classes (NRS, 2015). The research question is: How can obstacles to adult ELLs with low levels of English proficiency participating in distance learning be reduced? At this stage in the research, distance learning will be generally defined as web based independent study that occurs outside of formal classroom instruction. This chapter will describe the setting, research methods, data analysis, participants, ethical considerations, and possible benefits of the study.

Setting

This study was conducted at a school located in an outer-ring suburb of Minneapolis and St. Paul, Minnesota. This school houses ABE programs for GED and ESL classes from beginning to advanced. The students served at this site are over 16 years old and have tested below a 12th grade level in core academic subjects, including but not limited to, the English language.

Research

The distance learning experiences of beginning level adult students with low levels of English proficiency are largely underrepresented in the literature. Qualitative methods lend themselves to exploring concepts that have not been widely researched. This type of design accommodates research being collected on site through researcher-conducted interviews. It allows for a nuanced picture of the issue to emerge through "reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges." (Creswell, 2014, Chapter 9, The Characteristics of Qualitative Research section, para.12). Using a case study design provided the opportunity to examine in detail individual learner experiences with distance learning.

Focus groups were selected as the data collection method for this study. Qualitative interviews in general, and focus groups in particular, allow for participants to provide information about past experiences and opinions, while the researcher controls the line of questioning (Creswell, 2014, Chapter 9, Data Collection Procedures, para.6). This format provided an opportunity to collect data about past distance learning experiences of participants, as well as their opinions on the topic.

Human subjects in this study participated in a single focus group meeting with the researcher in a private classroom. The researcher held two focus groups, each lasting less than one hour. An interpreter was present for the focus group meetings to ensure that students could understand the questions and fully communicate their answers. The focus groups were audio recorded. The researcher used a list of five predetermined questions relating to distance learning and students' experiences and attitudes toward technology.

These questions were also translated into the students' native languages. The following questions were used in both focus groups:

1. How often do you use the Internet and what type of device do you use?

2. Please list some activities that you use the Internet for.

3. How much do you feel studying English on the Internet helps improve your English skills?

4. What are some problems you have experienced studying English on the Internet?

5. How can teachers or schools help students to study English on the Internet outside of school?

While both focus groups were conducted with the same list of questions, the researcher asked additional or follow-up questions in order to more fully understand students' responses. Twenty students meeting the research criteria participated in the focus groups on one April morning in 2016.

Data Analysis

The researcher analyzed both audio recordings of the focus groups as well as notes taken during the focus groups. Information from the recordings and the notes was compiled into a spreadsheet. The heading of each column in the spreadsheet corresponded to a question posed by the researcher during the focus group, and the student responses were listed below. Recurring themes in the data were noted and coded by color. Some codes were determined before collecting the data based on information from the literature review and the researcher's experience, while some arose from unexpected patterns in the data.

Participants

The researcher recruited focus group participants with the cooperation of ABE ESL teachers. Teachers were informed that to meet the criteria for study participation, students needed to be (a) classified at the Beginning Literacy, Low Beginning, High Beginning, or Low Intermediate level of ESL according to NRS (2015) benchmarks; and (b) between the ages of 18 and 65 years of age. The first criterion was put in place to ensure that study participants had low levels of English language proficiency, pursuant to the line of inquiry of this study. The second criterion was created to ensure that participants were adults of working age for whom digital literacy skills could have employment implications.

Locating a sufficient number of students who spoke the same native language to populate a focus group was a primary concern. Teachers were asked to provide information regarding how many students were attending their classes who spoke Vietnamese, Somali, Spanish, or Cambodian. These languages were selected because they represent the largest language groups of students at the school where research was conducted. Teachers were also asked if they had other language groups in their classes that might be large enough for a focus group. The researcher's original intent was to conduct three focus groups, consisting of students who spoke Vietnamese, Somali, and Spanish. Through polling of teachers, the researcher determined that morning classes had the largest numbers of students eligible for study participation. While there were sufficient numbers of students to conduct focus groups in Somali and Vietnamese, it was determined that the student population of Spanish speakers was inadequate to fill a focus group. No other language group provided enough students for an additional focus group.

On the morning that focus groups were held, all students who met the study criteria, who spoke Vietnamese or Somali, and who were present in class were invited by their teachers to participate in the focus groups.

For this study, the researcher conducted one focus group with nine Vietnamese students and one focus group with eleven Somali students. The Vietnamese focus group consisted of five female students and four male students. The Somali focus group was entirely female students. All of the study participants were adult ELLs enrolled in ABE courses held in the morning. As part of their ABE classes, these students spent time weekly in a school computer lab. All of the students had received instruction on Rosetta Stone, which is a state-approved distance learning website in Minnesota (Minnesota Department of Education, 2013). Student participants had a variety of educational backgrounds, as well as length of involvement with this ABE program. Participants in this study had no known disabilities that would affect their study of the English language or participation in distance learning.

Ethical Considerations

This study was highly unlikely to pose any risk to participants. Students involved in the study shared their experiences with distance learning with the researcher, interpreter, and fellow participants. Deception was not a part of this study. The researcher made audio recordings of the focus groups. After the findings of this study have been reported, audio recordings will be deleted and notes will be deleted and shredded.

Informed consent was obtained from all study participants prior to the focus groups. All participants were adults who signed their own consent forms. These forms

used straightforward language and were translated into Vietnamese and Somali to ensure students truly understood the risks and what they were agreeing to.

The largest risk to study participants was the loss of privacy or anonymity. The privacy of study participants was protected by conducting the focus groups in a private classroom with the door closed. Names were not used in the focus groups or on written documents. The researcher referred to students in written materials by case study number. The names of participants were not used in the written study. Any identifying information was removed from the finished study. In the course of this research, no situation arose where confidentiality was broken by law.

One additional risk to the study was the concern that candid participation in the study would result in repercussions in the student's English class or future classes at their school.   Because the researcher works as an ABE teacher at the school where the focus groups were held, there was an unequal distribution of power between the researcher and the proposed study participants. The risk of consequences resulting from this imbalance was addressed by including information about the voluntary nature of the study and the lack of negative consequences for non-participation in the informed consent form that students reviewed and signed. As a precaution, students in classes taught by the researcher were not asked to participate in the study.

Potential Benefits

This study could result in more effective distance learning practices that might benefit study participants or other students. It provides information about beginning level adult ELLs and their distance learning experiences. Because of their low levels of English proficiency, this group of students often has little voice in the policies and

practices that govern their ESL classes. If nothing else, this study gives a voice to some of those students, and allows them to be better known by their instructors and administrators. Information contained in this study could benefit future students in ABE programs that offer distance learning opportunities to this population. The potential benefits to this study outweighed the very minimal risks to participants.

Conclusion

This qualitative study examined the web based distance learning experiences and perspectives of adult students with low levels of English proficiency. Participants in this study took part in focus groups to explore their perspectives and experiences regarding distance learning. Precautions were taken to ensure that participants understood the reason for the study and that their privacy and well-being were protected. Findings from this research could benefit adult ESL students and teachers with an interest in web-based distance learning. Chapter 4 will detail the findings from this study.

CHAPTER FOUR

Results

Introduction

This study addresses the question: How can obstacles to adult ELLs with low levels of English proficiency participating in distance learning be reduced? The researcher conducted one focus group with Vietnamese students and one with Somali students, all with low levels of English language proficiency. The researcher asked students questions about their use of technology, difficulties they encountered participating in distance learning, and actions that ABE programs and teachers could take to better support them in distance learning.

Many of the participants reported using the Internet to study English, and almost all students said that online study helped them with all areas of English proficiency. While all students used the Internet, some students had limited access and many students lacked the knowledge to fully participate online. Students also spoke of problems they had encountered in online English study, including boredom, difficulty with navigation, lack of support, and learning programs that did not meet their needs. Study participants offered several suggestions for how schools could better assist them. The researcher used the results of the study to compile several considerations for teachers of distance learning students with low levels of English proficiency.

Results

Participants' Perceptions and Attitudes

Overwhelmingly, students in both the Somali and Vietnamese focus groups were either currently using the Internet to study English, and/or expressed a desire to improve their capacity to do so. In the Vietnamese group, only one participant had little interest in online study. This student reported feeling that the Internet was a more effective educational tool for younger people. In the Somali focus group, the single student who was uninterested in online study cited lack of time as the reason. These participant responses correlate with the NTIA (2013) report of the adults not using broadband, one major reason was a lack of interest or lack or perceived need.

With the exception of these two participants, all the students said that online study helped to improve their English. When asked if online study helped more with listening, speaking, reading, or writing, most students felt that it helped with all four areas. Students also reported that online learning helped them with retention, grammar, sentence structure, and pronunciation.

The Digital Divide

In both focus groups, all participants reported that they used the Internet. There was a wide variety in frequency of Internet use, type of device used, and purpose of Internet use. Participant responses to questions about Internet use revealed inconsistency in the quality of Internet access among these students. In both groups, one third or more of students reported that their phone was the only device they used to access the Internet.

As reported by Wetenkamp-Brandt (2013), mobile Internet access is not the same as full computer access and some functions are extremely difficult on these devices. While the entire Vietnamese group said that their Internet access was fast and reliable, more than one third of the Somali participants had unreliable Internet connections. As reported by the NTIA (2013), the expense of a high speed Internet connect and inadequate hardware are common reasons for not using the Internet. Relying solely on mobile devices or a suboptimal Internet connection are significant barriers to distance learning and full online participation.

While the hardware and connection aspect of the digital divide is significant, the divide has a knowledge and experience component as well. The lack of skills required to access online content was evident in many of the participants' comments. In both focus groups, almost all students said they used online resources to study English, but very few students were able to identify the specific websites. In the Somali focus group, half of all students said that they had significant difficulty performing some tasks online. These students discussed how accessing video content or the Qur'an was easy for them, but conducting searches or finding/accessing appropriate materials to study English was very challenging. In the Vietnamese group, students cited not knowing how to create accounts to login to websites and not knowing how to download apps onto devices as major obstacles to online study. These comments reveal that for study participants, a lack of digital literacy skills was a significant barrier to distance learning. Indeed, both Benítez (2006) and Wetenkamp-Brandt (2013) wrote of the knowledge and skills component of the digital divide.

The knowledge gap that prevents students from full Internet participation is also an obstacle to students seeking and receiving assistance with computer questions at school. As one Vietnamese student expressed when asked about how teachers could help students study English on computers, "We don't know what help we need." A Somali student echoed this sentiment when she said, "If I'm using the computer and I come up with obstacles, I will ask questions. But to begin with, I don't know how to use it, so I don't have any questions to ask."

Participants' Frustrations with Distance Learning

Students in both focus groups expressed frustrations with distance learning programs. Several Somali and Vietnamese students spoke of their desire for variety and related that they often became bored with repeated use of a single website. One Somali student said of a program that students learn at school and can use at home, "[It] just repeats itself. I see the same pictures over and over." A Vietnamese student echoed this frustration and told of how he addressed the problem of boredom by rotating the websites that he used. Another Vietnamese student discussed studying English on websites that offer beginning levels of study for free, but charge for more advanced levels. These statements reflect what many of the students reported: that they use a variety of websites to study English, only some of which they learn about in ABE classes, and many of which are not eligible to be counted as distance learning hours in the state of Minnesota. Only a few state-approved programs are eligible for the collection of student hours.

Beyond the monotony students sometimes experience with distance learning, students also had challenges related to the design of distance learning programs and/or an understanding of how to navigate them. These student complaints corresponded with

Young's (2005) assessment that the design of distance learning programs is often a large source of difficulty for students. One Somali student spoke with great frustration about a navigation problem she had encountered. On one program that she used, if students did not choose the correct option when exiting the program or continuing to another unit, then the students' work would not be saved. Speaking of this experience, she said, "When I put the effort in and it gets erased, I hate going back to do it again!" Another Somali student revealed a different sticking point in distance learning. She said that logging in was not difficult, but that when a command pops up in English (either from the program or the computer), that students do not know what to do. She reported feeling stuck and frustrated when this happened to her.

Students in the Vietnamese focus group communicated a strong preference for being able to have distance learning questions answered right away. At their school, each English class had one day per week where they spent time in the computer lab with the program's technology coordinator. She helped them with whatever tasks their teacher had designated for the lab time and could also direct them to other online resources and assist them with accessing distance learning programs. Students reported that on their computer lab days, it was easy to get the help they needed with distance learning; however, on other days, which were the majority, help was much less readily available. The students' comments about distance learning support echo Silver-Pacuilla's and Reder's (2008) assertion that students need technical support in order to be successful at distance learning.

Other students spoke of frustrations that may reflect a poor fit between students' needs and the websites being used. Their comments seemed to confirm that many

distance learning websites require a level of English language literacy that is beyond the abilities of many students, as reported by Burrus (2009). One Vietnamese student was irritated by different accents in online listening activities, which made it very difficult for him to understand and did not help his American English pronunciation. Several Somali students cited reading comprehension as a major obstacle to online study. They spoke of being able to read the words, but not understand the meaning or what they were supposed to do. While these websites might offer excellent content, they seemed to be a poor fit with the needs and abilities of these particular students.

Participants' Suggestions

While study participants faced challenges to distance learning participation, both focus groups provided suggestions for how teachers and schools could help them succeed. In the Vietnamese focus group, the ideas for improvement focused on translation and support. Students suggested that during computer instruction, the computer teacher could sometimes use an online translator, or even have an interpreter present to assist students. The other suggestion that was echoed by many of the Vietnamese participants was the desire to be able to ask questions and receive answers in a timely manner. One student in particular advised teachers to take a more active role in checking in with Vietnamese students. He said, "Vietnamese in general don't raise hands, ask questions, share." When asked if they wanted teachers to check with them individually about questions or concerns, all Vietnamese participants answered affirmatively. One final suggestion from this group was for teachers to focus on depth instead of breadth, so that students really understand what they are learning before the class moves on.

The Somali participants offered suggestions that focused on repetition and increased instruction. One student said, "Computer is only one time a week so it's hard for the beginner to keep up with that and remember." Other students spoke of needing instruction multiple times about how to login and complete other computer tasks in order to master these skills to the extent that they could be applied at home. Students said that using programs at school was easy, but home use proved more challenging.

Participants in the Somali focus group made the case for more computer instruction. They related that they were interested in having more computer time at school to have their questions answered and learn more about Internet use and online study, but they did not want this instruction to take time out of their traditional English classes. Students proposed computer instruction be offered either on Fridays, when English classes are not held, or after English class. One student proposed that they could receive computer homework and then come back to school the next day and have their questions answered or receive help with any obstacles they had encountered.

Considerations for Teaching

The insights I gained from the students who participated in my focus groups have already begun to impact my pedagogy. While most of the students' ideas would require implementation at the program level, there are several practical measures that teachers could take based on the results of this study. These suggestions for improving instruction for distance learners with low levels of English proficiency might also be applicable for classroom technology integration with this student population.

Students in the focus groups reported needing assistance with technology or distance learning platforms, but not knowing what or how to ask. This suggests that the

challenges students experience are underreported to their instructors. With my own students, I am becoming more proactive in seeking out these obstacles. This means checking in with students individually and explicitly asking about problems. Perhaps the best format for these conversations is face-to-face in a location with a computer. This allows the student to demonstrate or more easily describe any issues.

I was struck by how few of the study participants were able to identify by name the websites they used to study English. I also noted comments about how downloading apps or signing up for accounts was a major stumbling block for some students. I have observed students enter a computer lab and be completely disoriented if the web browser was not already open, or if the previous student had left an unfamiliar website on the screen. If students cannot locate and navigate websites at school with support, it is extremely unlikely that they will be able to do so successfully at home. As a teacher, I recognize that it is often expedient to make tasks simpler for students. I know how long it can take students just to log in to the website, and I understand that instructional time is a precious commodity. However, if the goal is for students to be able to fully participate on the Internet, students must be given the impetus and the opportunity to navigate on their own as much as possible, and the instruction to acquire and master these skills. I will no longer be using web browser bookmarks or other technology short cuts with my students.

Participants spoke of challenges or frustrations specific to particular distance learning platforms. These problems included overly repetitive content and work not being saved upon exit. Unquestionably, every distance learning platform has its disadvantages. How can teachers help students to persist in the face of these obstacles? I

think the answer can be found in part in instructors becoming thoroughly familiar with the platform they use. Teachers who are well-acquainted with their distance learning platform and who have observed students using it are likely able to identify several areas that are particularly problematic for students. If teachers address these stumbling blocks before they become major, recurring obstacles for students, it seems likely to minimize student frustration. Instructors could provide additional, pre-emptive instruction focused on specific problem areas in the platform, as well as providing students with opportunities to practice with support. Checking in with students after they have used the platform for a short period of time to inquire about difficulties in specific areas could also be useful. I plan to make a checklist of potential distance learning problem areas within my platform to ensure that I have verified that each of my students is able to navigate these impediments.

While state policy makers and ABE managers make most of the logistical decisions about distance learning in Minnesota, individual teachers can take measures to help ensure that their students are successful. Instructors of distance learners with low levels of English language proficiency may find it useful to reach out to students to discuss any difficulties, prioritize student independence in computer navigation, and anticipate specific areas of difficulty with distance learning platforms. These actions could help to decrease learner frustration with distance learning and ensure that all students have the opportunity to receive the assistance they need.

Summary

Participants in this study overwhelmingly expressed interest in improving their English skills through online study. The majority of the students reported using the

Internet for this purpose; however, many students were using websites unaffiliated with their ABE program, and most students encountered significant challenges in their online studies. Some students lacked a device or connection that would provide them with full access to the Internet. Most students lacked the knowledge to seek out much online content or use it successfully. For these students, online learning was often monotonous and frustrating. Navigating websites, being unable to ask for and receive assistance, and websites that did not meet their needs were all sources of aggravation. Participants cited increased opportunity to practice online skills, computer content translated into their native language, and additional computer lab time as strategies for ABE programs to support students in distance learning. Teachers of distance learning students with low levels of English proficiency may find it helpful to be more proactive in discussing challenges with students, ensure that students have the skills to navigate to and in platforms independently, and to anticipate aspects of specific distance learning platforms likely to pose difficulties to learners. Chapter Five will offer a reflection on the research study, as well as a discussion about its implications, limitations, and avenues for future research.

CHAPTER FIVE

Conclusions

Introduction

I embarked on this study with the following question: How can obstacles to adult

ELLs with low levels of English proficiency participating in distance learning be

reduced? After examining the literature and conducting two focus groups, I have

increased my understanding of the benefits and drawbacks of distance learning; however,

more questions remain to be answered. The information that participants shared in the

focus groups was invaluable to me as a teacher. I heard in students' own words about the

difficulties of studying online and asking for assistance, as well as their perceptions of

what would help them succeed in distance learning. While changing distance learning

policies and practices to addess the difficulties students encounter could potentially

improve distance learning outcomes with beginning level ELLs, any adjustments would

likely have staffing and budgetary implications for ABE programs. Finally, the data

collected in the current study gives rise to further questions about distance learning for

ELLs with low levels of English proficiency and possible avenues for future study.

Learnings and Plans for the Future

Many of the responses that I received from students during the focus groups

reflected the literature about distance learning. Mirroring data reported by the NTIA

(2013), a sigificant portion of students lacked the ability to reliably connect to the Internet. Some partipants described using the Internet solely on smartphones and lacking the skills to access many online opportunities for learning, which corresponds with Wetenkamp-Brandt's 2013 presentation about the digital divide in Minnesota. Young's (2005) contention that the designs of distance learning websites frequently frustrate students was supported by the data. According to most study participants, Burrus (2009) was absolutely correct that the level of English literacy required for most distance learning websites is too high for many ELLs. After years in the classroom with beginning level ELLs and reviewing distance learning literature, I fully anticipated these connections between my data and the sources that informed my research.

That is not to say that the data from the focus groups was without surprises. In fact, some of the responses from participants were entirely unexpected. One of my major takeaways from this research was the resourcefulness of the participants. Obstacles to online study for students in this demographic are plentiful and include issues of access, requisite skills, and English language literacy, to name a few. In the ABE program that provided a setting for this study, most ELLs with low levels of English proficiency do not participate in state-approved distance learning outside of class. Before the focus groups, I had wrongly assumed that this fact indicated that these students were not studying English online. Wrong! Many were studying English online, only not on state-approved websites. They were mitigating issues of technical difficulty and boredom by seeking English language content from a variety of other online sources.

In the course of data collection, one Vietnamese student made a simple statement that I found to also be quite profound. He said, "We don't know what help we need."

When they heard this, the other students all nodded in agreement. After the focus group, this one sentence continued to echo in my head. When a similar sentiment of not knowing what help to ask for was repeated in the Somali focus group, this issue solidified for me as *the* major challenge for teachers and programs supporting these students in distance learning. Many have Internet access, many have a desire to improve their English through online study, but few have the essential digital literacy or English language literacy to easily access that content or to seek and receive the assistance that would allow them to do so. As I continue my work with ELLs, I intend to use these statements about not knowing what help to ask for as a lens through which I can reflect upon and improve my instruction. While the participants' comments will alter the way I view my own pedagogy, their ideas present opportunities as well as challenges for schools offering distance learning to beginning level ELLs.

I plan to communicate the results of this study in the ABE program where I work. My research and analysis will be shared with my manager, fellow teachers, and technology coordinator. It is my hope that my research might prove useful in helping increase understanding of the challenges distance learners with low levels of English proficiency face and how ABE programs can best serve them. I may also share my research with colleagues in other ABE programs or state policy makers.

Implications

Participants in the study discussed ther online learning and offered suggestions for how ABE programs and teachers could better facilitate their distance learning. Most of the participants reported they studied English on the Internet; however, most were not using state-approved distance learning websites. Their proposals included more repetition

of skills and content, translation of computer instruction, and increased opportunities to receive computer instruction and assistance. How students are studying English online and the ways in which they would like to be supported carry possible implications for ABE programs.

In Minnesota, ABE programs are partly funded according to the number of contact hours they have with eligible students. Programs accrue hours through traditional ESL classes, but also through distance learning. To count distance learning hours, students must use one of several state-approved websites (Minnesota Department of Education, 2013). Most of the participants spoke of studying English online on websites not eligible for official distance learning. Greater student contact hours means greater funding for ABE programs and increased capability to offer classes. Students studying English on non-state-approved websites may represent a missed opportunity for ABE programs.   Teachers and programs may wish to consider whether there are steps they could take to encourage and facilitate students to use state-approved distance learning websites instead of non-state-approved options. Minnesota ABE distance learning policy makers might consider the possibility of expanding state approval to include a greater number of platforms that appeal to ELLs with low levels of English proficiency. Greater choice among distance learning platforms might better fit the needs of Minnesota's diverse ABE ELL population.

Some participants responded postively to computer instruction focused on depth, not breadth. Covering fewer topics more thoroughly provides a greater opportunity for student mastery. Without mastery of the necessary skills, such as logging in and navigating a website, distance learning is essentially impossible. ELLs with low levels of

English proficiency might benefit from teachers identifying the few most crucial skills for distance learning success and creating repeated opportunities for practice. While this increased repetition is something that ABE programs and teachers could likely implement without additional resources or great difficulty, the other suggestions are not so simple.

Translating computer instruction would logistically be very difficult in programs with students who speak many different languages. Ensuring that the translation is valid presents another obstacle. While online translators help in some situations, they are not always reliable and incorrect translations may confuse both teachers and students. Perhaps one step in this direction is to have any information sheets with basic distance learning instructions (how to reach the website, log in, etc.) offered several languages. If the information were sufficiently simple, perhaps online translators would be an acceptable option for translation. ABE programs with advanced level ELLs or interpreter classes could also have students with higher levels of English proficiency translate the documents into their native languages as a class project. Rather than having individual ABE programs create native language distance learning instructions, it might be more efficient if the Minnesota Department of Education were able to create and provide this type of resource for state-approved distance learning platforms appropriate for LEP students.

Increased computer instruction would most likely require an investment of additional resources. Someone would need to be present to instruct and assist students, and unless that person were a volunteer, expenses would be incurred. Planning lessons for supplementary computer instruction would also mean added costs for ABE programs. With finite resources and a clientele with diverse backgrounds and instructional needs,

ABE programs must make difficult decisions about how to allocate resources. Given that successful distance learning in the absence of basic digital literacy skills is extremely unlikely, policymakers might consider creating guidelines to help ABE programs identify students who are prepared with the skills for distance learning and those who might need more support before embarking on distance leanring. The Northstar Digital Literacy Project offers free online assessments of computer skills and knowledge and is already in use in Minnesota ABE. Policymakers could perhaps create distance learning recommendations that correspond with the Northstar Digital Literacy assessments.

Study Limitations and Future Research

Although this study offers insights into the distance learning experiences and opinions of adult students with low levels of English proficiency, it has several significant limitations. I held only two focus groups with twenty total participants who attended a single school. Only students who spoke Vietnamese or Somali took part in the study. Because of the small sample size, this was not a representative study. The participants all lived in suburbs, and perhaps the experiences of students living in major cities could be quite different. The students I spoke with also were attendees of daytime English classes. Students who work during the day and attend classes in the evenings might also have very different experiences and opinions about distance learning.

In pursuing the goal of more positive distance learning outcomes for students with low levels of English proficiency, future research could measure the impacts of specific distance learning interventions. Would translation of computer resources or instruction result in more students participating in distance learning? To what extent could offering extra computer-specific instruction help to increase distance learning hours? Are there

interventions that ABE programs can take to increase state-approved distance learning with this student population? Conducting larger, more representative focus groups with students from other language backgrounds in other geographic areas could offer valuable perspectives.

Summary

Conducting this research study was an instructive experience for me as an educator. After years of working with ELLs with low levels of English proficiency, these focus groups afforded me the opportunity to hear students' own accounts of distance learning, unfiltered through the difficulties of communicating in a language they were just beginning to learn. Many of their narratives coincided with literature in the field of distance learning, while others were more surprising. Even when students spoke of difficulties well documented in previous scholarly studies, hearing their stories rendered the challenges more immediate and personal.

This study highlights the fact that many ELLs may be choosing non-state-approved websites for their online English study, possibly to the detriment of ABE programs. The recommendations that participants offered for improving distance learning experiences could be logistically or fiscally difficult for ABE programs to implement; nevertheless, they provide insight into students' opinions about the greatest obstacles they face to distance learning. The Somali and Vietnamese focus groups presented very different ideas about what schools could do to support their online learning. This gives rise to the question: Were the differences in their proposals attributable to the very small sample size of the study, or is there a cultural component? The small sample size and homogenous nature of the students within each group

represents a major limitation to the current study. Possible next steps in this vein of investigation could be a study with a larger and more diverse sample of ELLs, or an examination of the effectiveness of specific distance learning interventions.

In my ELL classroom, I have often been amazed at how a language barrier can simultaneously seem so large and yet quite small. I have had countless experiences of listening to students have great difficulty conveying information in English. I know that there are many more things students do not even attempt to communicate because of the gulf between what they think and understand and what they are able to express in English. In contrast, I am frequently amazed at how students with very limited English are able to make jokes that work across cultures and find ways to express themselves even when they do not know the words. As a teacher of ELLs with low levels of English proficiency, I have always known that my conversations with students barely scratched the surface of their experiences, lives, and aspirations. Conducting this research has allowed me to ask students some things that I have wondered about for a long time. More significantly to me on a professional level, it allowed me to deepen my understanding of who these students are and how they experience our education system.

REFERENCES

Allen, E., & Seaman, J. (2010). *Class differences: Online education in the United States, 2010*. Babson Survey Group & The Sloan Consortium. Retrieved from http://olc.onlinelearningconsortium.org/publications/survey/class_differences

Altbach, P. (December 4, 2013). MOOCs as neocolonialism: Who controls knowledge? *The Chronicle of Higher Education.* Retrieved from http://chronicle.com/blogs/worldwise/moocs-as-neocolonialism-who-controls-knowledge/33431

Anderson, T. & Dron, J. (2012). Learning technology through three generations of technology enhanced distance education pedagogy. *European Journal of Open, Distance & E-learning*, 2. Retrieved from http://www.eurodl.org/?p=archives&year=2012&halfyear=2

Askov, E. N., Johnston, J., Petty, L. I., & Young, S. J. (2003). *Expanding access to adult literacy with online distance education*. Boston, MA: National Center for the Study of Adult Language and Learning. Retrieved from http://ideal.worlded.org/publications_resources/resources.html

Bartlett, L. P., Norton, K., Porter, D., Porter, P., Powers, S., Rogers, M., Stiles, R., & Wolley, V. (2005). *Distance learning for the adult learner: Improving*

persistence and effectiveness. California Distance Learning Project. Retrieved

    from www.cdlponline.org/pdf/AdultLearner.doc

Batalova, J. & Fix, M. (2010). A profile of limited English proficient adult immigrants.

    Peabody Journal of Education. doi: 10.1080/0161956X.2010.518050

Benítez, J. L. (2006). Transnational dimensions of the digital divide among Salvadoran

    immigrants in the Washington DC metropolitan area. *Global Networks, 6*(2),

    181-199. doi: 10.1111/j.1471-0374.2006.00140.x

Bower, B. L. & Hardy, K. P. (2004). From correspondence to cyberspace: Changes and

    challenges in distance education. *New Directions for Community Colleges,* (128),

    5-12. doi: 10.1002/cc.169

Boyle, R. (1995). Language teaching at a distance: From the first generation model to the

    third. *System, 23*(3), 283-94. Retrieved from ERIC

Brown, T. A. & Lease, A. J. (2009). Distance learning past, present and future.

    International Journal of Instructional Media, 36(4), 415-427. Retrieved from

    http://go.galegroup.com/ps/i.do?id=GALE|A273280251&v=2.1&u=clic_ham

    line&it=r&p=PROF&sw=w&asid=1dff85e39d6ff85dc83db3e3e05aee69

Burrus, J. (2009). Adult ESL student perceptions on computer assisted language

    learning. (M.S., University of Nevada, Las Vegas). *ProQuest Dissertations and*

    Theses. Retrieved from http://search.proquest.com/docview/305090052

Carnavale, A. P., Smith, N., & Strohl, J. (2013) *Recovery: Job growth and requirements*

    through 2020. Georgetown Public Policy Institute. Retrieved from

http://scs.georgetown.edu/departments/5/center-for-continuing-and-professional-education/news/1052/report-recovery-2020-job-growth-and-education-requirements-through-2020

Chapelle, C. A. (2007). Technology and second language acquisition. *Annual Review of Applied Linguistics*, 27, 98-114. doi:10.1017/S0267190508070050

Chapelle, C. A. (2009). The relationship between second language acquisition theory and computer-assisted language learning. *The Modern Language Journal*, *93*(Focus Issue), 741-753. doi: 10.1111/j.1540-4781.2009.00970.x

Clarke, G., Sr. & Zagarell, J. (2012). Technology in the classroom: Teachers and technology: A technological divide. *Childhood Education, 88*(2), 136-139. doi:10.1080/00094056.2012.662140

Comings, J. & Soricone, L. (2007). *Adult literacy research : Opportunities and challenges*. Cambridge, MA: National Center for the Study of Adult Learning and Literacy. Retrieved from http://www.ncsall.net/index.html@id=652.html

Coryell, J. E. & Chlup, D. T. (2007). Implementing e-learning components with adult English language learners: Vital factors and lessons learned. *Computer Assisted Language Learning*, 20(3), 263-278. doi: 10.1080/09588220701489333

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.) (Kindle Version). Retrieved from amazon.com

Dillon-Marable, E. & Valentine, T. (2006). Optimizing computer technology integration. *Adult Basic Education: An Interdisciplinary Journal for Adult Literacy Educational Planning, 16*(2), 99-117. Retrieved from ERIC

File, T. & Ryan, C. (2014). *Computer use in the United States: 2013.* United States

Census Bureau. Retrieved from http://www.census.gov/hhes/computer/

Fox, S., & Livingston, G. (2007). *Latinos online: Hispanics with lower levels of education and English proficiency remain largely disconnected from the Internet* [Electronic Version]. The Pew Internet and American Life Project. Retrieved from http://www.pewInternet.org/Reports/2007/Latinos-Online.aspx

Friedman, T. (2013, January 26). Revolution hits the universities. *The New York Times*, pp. SR1. Retrieved from http://www.nytimes.com/2013/01/27/opinion/sunday/friedman-revolution-hits-the-universities.html?_r=0

Gopalakrishnan, A. (2006). Supporting technology integration in adult education: Critical issues and models. *Adult Basic Education, 16*(1), 39-56. Retrieved from ERIC

Greenberg, E., Macias, R. F., Rhodes, D., & Chan, T. (2001). English literacy and language minorities in the United States. *Education Statistics Quarterly, 3*(4), 73-75. Retrieved from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2001464

Gregory, V. L. (2003). Student perceptions of the effectiveness of web-based distance education. *New Library World, 104*(10), 426-431. doi: 10.1108/03074800310504366

Grijalva, J. C., Nowell, C., & Kerkvliet, J. (2006). Academic honesty and online courses. *College Student Journal, 40*(1), 180-185. Retrieved from ERIC

Hurd, S. (2006). Towards a better understanding of the dynamic role of the distance language learner: Learner perceptions of personality, motivation, roles, and approaches. *Distance Education, 27*(3), 303-329. doi:

10.1080/01587910600940406

Lanier, M. (2006). Academic integrity and distance learning. *Journal of Criminal Justice Education, 17*(2), 244-261. doi: 10.1080/10511250600866166

Larreamendy-Joerns, J. & Leinhardt, G. (2006). Going the distance with online education. *Review of Educational Research, 76*(4), 567-605. doi: 10.3102/00346543076004567

Lasagabaster, D. & Sierra, J. M. (2003). Students' evaluation of CALL software programs. *Educational Media International, 40*(3), 293-304. Retrieved from ERIC

Lopez, M. H., Gonzalez-Barrera, A., & Patten, E. (2013). *Closing the digital divide: Latinos and technology adoption.* Pew Hispanic Center. Retrieved from http://www.pewhispanic.org/2013/03/07/closing-the-digital-divide-latinos-and-technology-adoption/

Migration Policy Institute (n.d.). *Top 10 languages spoken by limited English proficient U.S. residents and LEP share*. Retrieved from: http://www.migrationpolicy.org/programs/data-hub/charts/top-10-languages-spoken-limited-english-proficient-us-residents-and-lep

Minnesota Department of Education. (2013, August 29). *Minnesota Adult Basic Education distance learning policy*. Retrieved from http://mnabe-distancelearning.org/resources/state-policies-procedures-information

National Reporting System for Adult Education. (2015). *NRS test benchmarks for educational functioning levels*. Retrieved from http://www.nrsweb.org/pubs/

National Telecommunications and Information Administration & Economics and

Statistics Administration. (2013). *Exploring the digital nation: America's emerging online experience.* Washington, DC: National Telecommunications and Information Administration & Economics & Statistics Administration, U.S. Department of Commerce. Retrieved from https://www.ntia.doc.gov/report/2013/exploring-digital-nation-americas-emerging-online-experience

Office of Career, Technical, & Adult Education (n.d.). *Tapping the Potential: United States Profile of Adult Education Target Population.* Retrieved from: http://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/facts-figures.html

Peerani, N. (2013). Barriers to distance learning: The educator's viewpoint. *Distance Learning, 10*(2), 29-33.

Petty, L. I., Johnston, J., & Shafer, D. (2004). *Beyond the classroom: Six states develop distance programs for adult learners (Working Paper 6).* Retrieved from http://ideal.worlded.org//publications_resources/working_papers.html

Petty, L. I. & Johnston, J. (2008). *Handbook of distance education for adult learners* (4th ed.). Retrieved from http://ideal.worlded.org//publications_resources/handbook.html

Pew Research Center. (2015). *U.S. smartphone use in 2015.* Retrieved from http://www.pewInternet.org/2015/04/01/us-smartphone-use-in-2015/

Ramírez-Esparza, N., Harris, K., Hellermann, J., Richard, C., Kuhl, P. K., & Reder, S. (2012). Socio-interactive practices and personality in adult learners of English with little formal education. *Language Learning, 62*(2), 541-570. doi: 10.1111/j.1467-9922.2011.00631.x

Reder, S. M. & Bynner, J. M. (2009). *Tracking adult literacy and numeracy skills: Findings from longitudinal research.* New York: Routledge.

Reynard, R. (2003). Internet-based ESL for distance adult students: A framework for dynamic language learning. *Canadian Modern Language Review, 60*(2), 123-142. Retrieved from ERIC

Rhoads, R. A., Camacho, M. S., Toven-Lindsey, B., & Lozano, J. B. (2015). The massive open online course movement, xMOOCs, and faculty labor. *The Review of Higher Education, 38*(3), 397-424. Retrieved from ERIC

Saba, F. (2003). Distance education theory, methodology, and epistemology: A pragmatic paradigm. In M. G. Moore & W. G. Anderson (Eds.), *Handbook of distance education* (pp. 3-20). Mahwah, NJ: L. Erlbaum Associates.

Saba, F. (2011). Distance education in the United States: Past, present, future. *Educational Technology, 51*(6), 11-18. Retrieved from ERIC

Salinas, A. Y. (2002). An analysis of the learning style preferences of adult students taking web-based distance education courses. (Ph.D., University of South Alabama). *ProQuest Dissertations and Theses,* Retrieved from http://search.proquest.com/docview/305448658

Sánchez, P., & Salazar, M. (2012). Transnational computer use in urban Latino immigrant communities: Implications for schooling. *Urban Education, 47(1),* 90-116. doi: 10.1177/0042085911427740

Silver-Pacuilla, H. (author) and Reder, S. (original analysis) (2008). *Investigating the language and literacy skills required for independent online learning.* Washington, D.C.: National Institute for Literacy. Retrieved from

https://lincs.ed.gov/professional-development/resource-collections/profile-338

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2000). *Teaching and learning at a distance: Foundations of distance education*. Upper Saddle River, N.J.: Prentice Hall.

Smith, N. N. (2003). Characteristics of successful adult distance instructors for adult learners. *Inquiry, 8*(1). Retrieved from ERIC

Stites, R. (2004). Implications of new learning technologies for adult literacy and learning. *Review of Adult Learning and Literacy, 4*, 109-155. Retrieved from http://www.ncsall.net/index.php@id=497.html

Sumner, J. (2000). Serving the System: A critical history of distance education. *Open Learning: The Journal of Open, Distance, and e-Learning, 15*(3), 267-285. doi: 10.1080/713688409

U.S. Department of Education. (2011). *Distance education courses for public elementary and secondary school students: 2009-10*. (NCES Publication No. 2012-008). Retrieved from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012008

U.S. Department of Education. (2014). *Web tables: Profile of undergraduate students 2011-2012*. (NCES Publication No. 2015-167). Retrieved from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2015167

Vanek, J. B. (2014, Fall). Open educational resources: New technologies and new ways of learning. *MinneTESOL Journal*. Retrieved from http://minnetesoljournal.org/fall-2014/open-educational-resources-new-technologies-and-new-ways-of-learning

Verene, D. P. (2013). Does online education rest on a mistake? *Academic Questions,*
26(3), 296-307. Retrieved from ERIC

Wagner, T. (2014). *Overview of Adult Basic Education in Minnesota: 2013-14 program*
year. Retrieved from http://mnabe.org/

Wetenkamp-Brandt, S. (2013). *Exploring Minnesota's digital divide.* Retrieved from
lecture slides on website: http://www.slideshare.net/mlcvista/exploring-
minnesotas-digital-divide

White, C.J. (1995). Autonomy and strategy use in distance foreign language learning:
Research findings. *System, 23*(2), 207-221. doi: 10.1016/0346-251X(95)00009-
9

White, C. J. (1999). The metacognitive knowledge of distance learners. *Open Learning,*
14(3), 37-46. doi: 10.1080/0268051990140306

Xiao, J. (2012). Successful and unsuccessful distance language learners: An 'affective'
perspective. *Open Learning, 27*(2), 121-136. doi:
10.1080/02680513.2012.678611

Xiao, J. (2014). Learner agency in language learning: The story of a distance learner of
EFL in China. *Distance Education, 35*(1), 4-17. doi:
10.1080/01587919.2014.891429

Young, S. J. (2005). *Exploring distance education curricula for adult learners (Working*
paper 8). Retrieved from
http://ideal.worlded.org//publications_resources/working_papers.html

Zhao, Y., Lei, J., Yan, B., Lai, C., & Tan, S. (2005). What makes the difference? A
practical analysis of research on the effectiveness of distance education. *Teachers*

College Record, 107(8), 1836-1884. doi: 10.1111/j.1467-9620.2005.00544.x

Zong, J. & Batalova, J. (2015). *The limited English proficient population in the United States*. Migration Policy Institute. Retrieved from:

http://www.migrationpolicy.org/article/limited-english-proficient-population-united-states