Home Schooling and Technology: What is the Connection?

A Collective Case Study in Southeast Ohio

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Kerry K. Bullock
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This dissertation titled
Home Schooling and Technology: What Is the Connection?
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by

KERRY K. BULLOCK

has been approved for
the Department of Educational Studies
and The Gladys W. and David H. Patton College of Education and Human Services

by

Teresa J. Franklin
Professor of Educational Studies

Renée A. Middleton
Dean, The Gladys W. and David H. Patton College of Education and Human Services
ABSTRACT

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The purpose of the research was to determine the influence of technology in home schooling environments in Southeast Ohio. Four home schooling families within one school district and one family residing within a neighboring district volunteered to participate in one-on-one interviews. Seven administrators and counselors from the primary district were interviewed to provide a different perspective of the influence of technology on home schooling environments. Questionnaires completed by parents and interview data were collected, coded and analyzed.

Each of the families utilizes technology in one form or another. One family relies on technology to provide the entire curriculum in an online format while another family uses DVDs for the student’s curriculum. The administrators and counselors agree that the resources technology seems to provide influences parents to home school.

Results indicate that technology is present in home schooling families in varying degrees of influence and types being utilized within the home schooling curriculum format. All families in the study stated they used the Internet for various resources. Several families utilize DVDs and computer software as their forms of technology.
Future studies should consider investigating students who are home schooled part time and attend public school part time. Researchers should continue to investigate home schooling families in rural environments in order to compare the data with studies that have been conducted in urban or suburban environments.

Approved: 

Teresa J. Franklin

Professor of Educational Studies
To Jeff
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CHAPTER 1: INTRODUCTION

The term technology can take on differing definitions across different groups of people. Engineers believe there is much more to technology than the physical parts. On their website, the National Academy of Engineering (2010) defines technology as “the process by which humans modify their needs and wants” (para. 1). The definition further explains that most people consider technology as the physical aspects such as software, hardware, the computers themselves along with other types of examples. Communication technology can be defined as the hardware, system of organization, and social values by which people gather, manage and exchange information with others (Rogers, 1986). Educational technology, as defined by the Center for Applied Research in Educational Technology, is anything from hardware to software used to reinforce teaching and learning within content areas. Examples include desktop and laptop computers and their applications as well as digital media in the form of cameras and scanners. Filmstrips, video cassette recorders, and overhead projectors are rarely considered in this definition (Center for Applied Research in Educational Technology, 2010). A combination of the definitions from communication and educational technology apply to this study. Home schoolers might use a variety of technologies within their program. What one family chooses or is able to use may differ significantly with another family. This study will explore how technology affects the home school environment and the types of technologies preferred in individual home schooling programs in Southeast Ohio as will be described later on, this region is rural and is believed on an a priori basis characteristics of the area may influence technology use.
Teenagers and Communication Technology

A study conducted by the Pew Research Center in 2006 showed that 89% of teenagers use their cell phones, the Internet and other forms of technology (Macgill, 2007). The Pew Internet and American Life Project (Lenhart, Ling, Campbell, & Purcell, 2010) published in 2010 discusses results from a study of teenagers and their use of cell phones as a communication tool. These results showed that 75% of teens, ages 12-17, own cell phones and 87% of them send text messages (p. 2). Teens use their cell phones for more than just speaking with others. Aside from sending text messages, teens use their phones as cameras, to share pictures, play music, and even record videos (Lenhart, et al, 2010). It is evident from this study that teens are using technology on a regular basis for numerous tasks.

Other studies yield similar findings. A recent study from the U.S. Census Bureau in 2007 shows that 58.8 % (Table 4) of those studied who were fifteen years old or older use a computer at home and 61.7% (Table 1) of them have either a dial-up or a broadband internet connection (United States Census Bureau, 2007). The National Education Technology Plan 2004 states that 90% of students in grades K-12 use computers, including 94% of teenagers using the Internet for school-related research (United States Department of Education, 2004).

Increased use of technology in education could change policy and practice in all aspects of education which includes the schooling environment. Parents have home schooled their children for many years and there are empirical investigations of the effects of home schooling, both nationally and internationally, and reasons for pursuing it
Home school environments are, of course, not excluded from the world of technology, and are often dependent upon it. A study conducted by Ray (2009) showed that 98.3% of home school families reported owning a computer (p. 5). Meanwhile, the number of home schooled students has been increasing over the years; recent studies have shown 1.5 million students were home schooled in 2007 (Bielick, 2008). Based on the numbers from these studies, technology seems to be a logical connection to home schooling.

In 2001, the United States Department of Education established a policy to assist states as they seek an overall improvement in education by including technology (United States Department of Education, 2004). School districts across the country search for ways to implement technology within content, assessments, and other areas in education. Departments of education are seeing the need to use technology in different aspects of education and are encouraging the use of technology whenever possible.

Administrators in traditional school districts are becoming aware of the fact that the number of home schoolers is on the rise. Some districts are choosing to work in partnership with home schooling families. A recent study by Huerta, González and D’Entremont (2006) concluded that many school districts are embracing home schooling by actually creating their own home school charter. According to Manno, Finn and Vanourek (2000) and Wells, Grutzik, Carnochan, Slayton and Vasudeva (1999), charter schools function independently from local and state mandates and at the same time can receive funding from the state level. Home school charters, therefore, specifically serve home schooling families. Apple (2006) contends home school charters connect home
schooling families via the Internet and the World Wide Web. These charters are established by groups of individuals who have agreed to provide educational experiences which replace the traditional classroom environment (Huerta, et al., 2006). This study presents home schooling families who are not affiliated with home school charters.

Technology and home schooling are becoming more connected than ever before. Virtual charter schools are becoming popular (Klein & Poplin, 2008). Marsh, Carr-Chellman, & Sockman (2009) state that “fully on-line schooling, also known as virtual school or cyber school” (p. 32), offer curriculum entirely online and can provide educational experiences to students in any location, provided there is an internet connection. According to Marsh’s study, parents cited several reasons for choosing a cyber school as their home schooling program. Included in the list are customization, the absence of cost and a wider range of educational opportunities available for their children offered provided in online programs.

The Center for Education Reform reports that twelve states operated thirty cyber charter schools as of Fall, 2009 (Center for Educational Reform, 2010). Pennsylvania offers eleven cyber charter schools, one of which is the Pennsylvania Virtual Charter School or PAVCS. More than 3,500 students were enrolled in PAVCS during the 2008-2009 school year (Pennsylvania Department of Education, 2010). This particular program targets home schooling families who are residents of Pennsylvania and its charter has been renewed for five more years (PAVCS, 2010). Marsh and colleagues’ study states that students who participate in PAVCS are automatically enrolled in a specific curricular program (Marsh, et al., 2009). Marsh and colleagues state that all parents receive a new
computer along with a printer with the agreement the online curriculum is followed at home. Despite the pre-chosen content, most parents seem pleased with the curriculum choice. Through state taxes, these home schooling parents receive curriculum materials plus a stipend to guarantee an internet connection in the house. Parents are held accountable for their child’s education through the program’s expectations and content standards (Marsh, et al., 2009).

Purpose

As established above, technology appears to be playing an increasing role in home school educational experiences. This study focuses on the connection technology has with home schooling environments and the influence of technology in the decision to home school. A general interest in technology, its application in educational settings as well as the concept of home schooling motivated me to investigate the relationships between and among each of these issues. Throughout my experience as a middle school educator in a rural district in Southeast Ohio, several students in my classes were previously home schooled before enrolling in the public schools. I am interested as to what type of home schooling program several of them used and if technology was an important component of this program. The purpose of this research is to initiate an exploratory study of the influence of technology in a home schooling environment.

Little research covers the connection between home schooling and technology from the perspective of how much technology influences parents’ choice to home school and in what capacity technology is used in the home schooling environment. After conducting searches for home schooling and technology using numerous search engines, only two
articles are listed. One article is written in 1996 and the other in 2007. Literature discusses technology as being integrated in K-12 content areas in traditional school environments (Barron, Kemker, Harmes, & Kalaydjian, 2003; Baugh, 2002; Boon, Burke, Fore, & Hagen-Burke, 2006; Kwon & Cifuentes, 2009) and part of teacher education courses in higher education (Mason, Berson, Diem, Hicks, Lee, & Dralle, 2000; VAnnatta & Beyerbach, 2000).

Literature exists that investigates home schooling from many different angles. An article by Sanborn, Santos, Montgomery & Caruthers (2005) suggests possible scenarios in education in the future. One scenario predicts that by 2014, parents of home schoolers will be envied by many, as home schooling will become a symbol of status. Computers will become the virtual classroom for home schooled children while software will manage grades and other necessary records. This literature suggests that home schooling is here to stay with the numbers of home schooled students showing steady increases. It seems inevitable that technology will further increase the numbers of home schoolers. This study will contribute to the research and literature of home schooling and its relationship to technology.

Research Questions

The goal of this research is to investigate the role of technology in home school environments in Southeast Ohio. The primary questions for the study are:

1. To what extent does technology appear to influence the decision of parents and guardians in rural areas to home school their children?
2. What role does technology play in the curriculum development in home school environments?

3. In what other ways does technology influence home school environments?

Parents’ knowledge of technology as well as their comfort level when using it will also be explored in this study. Familiarity with technology and confidence while using it may contribute to the reasons some parents choose to home school their children with technology as a central component.

This study focuses on how parents from a small, rural community incorporate technology into their home schooling program. Using a small number of participants is reflective of the population of the locality used in the study. According to the U.S. Census Bureau, the population of the small town where the study takes place is 808 (United States Census Bureau, 2010a). With a small number of participants, the researcher is able to engage in more in-depth discussions during the one-on-one interviews. Replicating the study in a larger region could indicate that parents share similar thoughts and concerns about using technology in their home schooling program.

Significance of the Study

As previously mentioned, more and more students are using various forms of technology to communicate. Some students rely on the Internet to connect them to educational opportunities, often referred to as distance education. One study reported 41%, or 451,000 home schooled students, participated in a distance learning program which included media such as electronic mail, the Internet, television, or video (Princiotta & Bielick, 2006). If the number of home schoolers continues to grow, K-12 school
administrators and teachers will need to determine the best ways to facilitate these students within their districts (Anderson, 2006). Similarly, higher education must also be prepared as the home schooling population applies for college (Ray, 2004; Zehr, 2006).

This study will illustrate the degree to which technology influences parents” or guardians” decision to home school and will explore the relationship between home schooling and technology in Southeast Ohio. The findings could encourage others to study this connection in other localities. Few studies exist that investigate this relationship. This topic is viable and is worth further exploration. Technology is becoming an integral part of society and culture. Studying to what extent technology influences aspects of society and culture could explain its widespread affects.

Theoretical Framework

A learning theory that guides this study is self-regulated learning. As explained by Zimmerman (2002), students who regulate, or control, their learning do so by choice in order to reach personal goals. These students monitor their own learning and use strategies as necessary to maximize their learning experiences, which, in turn, increase their motivation to learn. In order for self-regulated learners to be successful, the learners use numerous processes which enable them to adapt to the task at hand. Examples of such processes include, but are not limited to, setting appropriate personal goals, self-monitoring progress, using time wisely, and evaluating strategies used during specific tasks (Zimmerman, 2002). Even though self-regulated learning is primarily concerned with adult learners (Zimmerman, 2002), it applies here because children who use technology in their home schooling environment may be left to themselves to work
independently on a computer. Whether there is one child or more than one child in the family being home schooled, each child might have to be self-reliant when interacting with the computer and their school-related tasks.

Students who are self-motivated tend to have beliefs about their own learning capacity (Bandura, 1997; Zimmerman, 2002). The amount of self-satisfaction plays an important role for self-regulated learners. The more the student is satisfied with the learning outcomes, the more likely she/he is to continue in the learning process. Conversely, the less satisfied, the less likely the learning experience will continue (Schunk, 2001). What distinguishes self-regulated learners from other learners is their ability to adapt to different learning situations, persevere, and to internally motivate themselves (Zimmerman, 2002; 1990). Students who are home schooled may often be in a situation where they are responsible for their own learning, where they must be on task a certain time of the day to interact with lessons independently because parents may be involved with other things. In this case, home schooled students may exhibit strategies of self-regulated learners in order to be academically successful. Aasen (2010) states that home schooled students display qualities of individuals who are confident and capable of being flexible in many situations and are able to take initiative.

Limitations

This study may be limited due to the small number of families who home school in two school districts. It was challenging to locate willing volunteers to participate in the study. Lines (2000b) discusses the reason for this difficulty is because parents who home school may be less willing to complete a survey from the government but more likely to
complete one from a home schooling organization. Because this is a research study being conducted by an educator from a local school district, some parents may choose to participate. The researcher obtained a list of 35 families who home school within the local school district. The strategies chosen to recruit participants will be discussed in chapter three.

Delimitations

The primary goal of this study is to examine the relationship between technology and home schooling with a small group of home schooling families. Since the nature of this study is exploratory and is not designed to generalize beyond participating districts, it is not necessary to recruit participants further than the particular local school district. The findings of the study are specific to the local, rural community and not necessarily conducive to a larger home schooling population in an urban area. This study is not intending to continue research on demographics or characteristics of home schooling families.

Definition of Terms

According to the National Center for Education Statistics (Princiotta & Bielick, 2006), students are identified as home schooled if they meet three criteria: 1) they are between the ages of 5-17 and working at grade levels from kindergarten to 12th grade; 2) their parents have reported that they are instructing them in their home rather than attending a private or public school for a portion of their education; and 3) their enrollment at a private or public school part-time is less than 25 hours a week (Bielick, 2008; Zajano & Cogswell, 1995).
Technology use within home schooling environments is the primary focus of this study. Some home schoolers use technology on a regular basis, some use it for references while others rely on technology to deliver the entire curriculum. Distance education, the original form of virtual schooling, was the answer to offering education to those separated from traditional schools because of geography or belief system (Schrum, 2004). Revenaugh (2006) describes virtual public schools as situations in which students and teachers are in separate locations and are available at no cost to parents. The curriculum must follow standards and students must take state-standardized tests. Mishra (2001) defines online learning as a teaching and learning system designed for distribution over the internet with no face-to-face contact between teachers and learners. E-learning and cyber schools could also use this definition, according to Mishra (2001).

In a cyber school environment students receive instruction in two ways, synchronously or asynchronously (Huerta, Gonzalez, & d’Entremont, 2006). Synchronous instruction involves being part of the classroom learning experience as it is happening in real-time, provided through the internet. Most often, students are able to communicate directly with the instructor and other students and participate as if he or she was actually sitting a classroom. This method is costly because of necessary technology and teacher resources (Huerta, et al., 2006). Asynchronous instruction is another method for delivering instruction using technology. Lessons are prerecorded and the curriculum is often designed by a separate resource. Software packages contain the lessons and activities which allow students to work at their own pace in their own flexible schedules. Resource centers are for students to interact with teacher-led lessons and then return to
the assigned task to work independently. These centers also provide proctored testing, curriculum assistance, and conferences with teachers (Huerta, et al., 2006). This method may be more common for home schooling families simply because of the cost.

For the purposes of this study, technology is defined as pieces of equipment such as personal computers, laptops, computer software in the forms of CDs or DVDs or any other digital device to deliver or enhance the home schooling curriculum.

School administrators and counselors were interviewed for this study to provide a different perspective of home schooling and the perceived impact technology had on the families who choose to home school. Administrators are the principals and superintendent of the district in this study. They have management roles within the K-12 public school. School counselors perform many duties and have many obligations within a K-12 public school setting. The roles of the administrators and counselors regarding home schooled families are discussed later in chapter four.

**Audience**

This research was intended for a range of audiences including parents, educators, scholars, and legislators. Legislators must be aware of the influence home schooling parents can have on political issues. Home schooling parents, even though they may be a minority in traditional school environments, can have a huge impact on legislation (Lines, 2000b; Stevens, 2001). Their voice is heard throughout the country and legislators must listen to them because of the ever-growing population of home schoolers. All stakeholders must be considered when legislation causes changes in education regarding the relationship between traditional and nontraditional environments.
Overview of the Study

This study is presented in five chapters, each with a specific purpose. Chapter one provides background information on the study including the purpose and the significance. Chapter two presents a review of the research literature regarding home schooling and several aspects significant to my study including rural education with its challenges and connections to technology, benefits of conducting qualitative research, and case study research and its advantages. Chapter three presents the research methodology used in the study including the form of data collection, how the data is analyzed, strategies used to increase the trustworthiness and reliability of the study, and the role and background of the researcher. Chapter four describes the results and findings of the study and explains the themes discovered in the transcriptions. Chapter five discusses the findings and the implications they have in the literature and theory. Suggestions for future research will be included in this chapter.
CHAPTER 2: LITERATURE REVIEW

Overview

The purpose of this study was to determine what role technology plays in home schooling environments. According to Lines (2000a), home schooling parents are often reluctant to complete government surveys, thus obtaining accurate data on the number of children in the United States who are home schooled can be difficult. It is even more difficult to find literature determining the amount and form of technology being used by home schooling families.

Recent History of Home Schooling

Home schooling is not a new concept. The 1960s and 1970s in the U.S. brought the beginnings of a modern movement of educating children at home (Gaither, 2009; Lines 2000a). John Locke and John Dewey both shared their feelings of home schooling (Lines, 2000a). Locke believed teaching within the home was the most favorable environment to teach virtue, which he felt was the goal of education. Dewey believed schools separated themselves from society and thought schools should somehow imitate the home environment to be effective (Lines, 2000a).

Duffey (1998) states that homeschooling before the 1970’s was most common for students who lived too far away from the school or they had a serious medical condition and could not attend school regularly. Parents cited religious beliefs as a reason to educate their children at home. As primary educators, parents could provide religious instruction along with the regular school-taught subjects. The early 1960’s to the mid-1970’s, educators were outwardly communicating their frustration with the system of
education within the public schools. According to Kantor (1991), the Elementary and Secondary Education Act of 1965 allowed the federal government to exert more control over deciding what is important in education nationwide, especially toward equity for underprivileged students. Parents then became dissatisfied with the public school system and by the mid-1980s, many students were being schooled at home (Duffey, 1998). In the 1980s, religion became the rationale for many more parents to home school (Gaither, 2009; Lines 2000a). Despite the challenge to obtain an accurate count of the number of home schooled students in the United States, recent data from the National Center for Education Statistics shows an increase in home schoolers. From 1999 to 2003, the estimated number of home schooled students rose from 850,000 to 1.1 million home schoolers, which is about a 29% increase over a four-year period (National Center for Education Statistics, 2010).

Home schooling parents have fought an uphill battle in many states in order to have their programs accepted by departments of education. The Home School Legal Defense Association website, http://www.hslda.org, provides information on active as well as archived cases for each of the fifty states.

One example hails from Virginia. In 2001, a grandmother, who was the legal guardian of her two grandchildren, found herself in court. She home schooled them both primarily because she had experienced many problems with the local school district over a period of time. Months after informing the superintendent of her decision to home school the children, criminal charges were filed against her by school officials. The Home School Legal Defense Association represented the grandmother at the trial and
stated that she was indeed teaching her grandchildren and the school they were enrolled in was a national, private establishment. In this case, for this particular home schooling program, Virginia residents can cite religious reasons for not complying with mandatory attendance laws. The judge was content with this and the fact that the children’s mother was aware of the home schooling of her children (Home School Legal Defense Association, 2010g).

Parents who chose to home school in the state of South Carolina experienced difficulties of their own in the early 1980s (Tyler & Carper, 2000). Parents who wanted to home school often had to do it secretly, partly because of the legal ramifications. Others were able to work along with school districts with few difficulties. Districts could determine which home schooling programs were permitted and which were deemed unequal to traditional school curriculum (Tyler & Carper, 2000). A South Carolina newspaper reported the number of home schooled children ranged between 500-600 students. Parents still continued to plead their cases to home school to the state board of education. Tyler, the author of the article and the founder and president of South Carolina Association of Independent Home Schools, had her appeal overturned when State Senator Strom Thurmond stepped in on her behalf for her own personal request to home school. As a high school senior, she worked for the Senator and her father was also a lawyer. The author had the connections to support her efforts but not many parents are as fortunate (Tyler & Carper, 2000).
Decision to Home School

Parents make choices every day, what to fix for dinner, which bills to pay, or which gas station to stop at for a fill-up. Many other decisions involve their children and their family. The decision regarding their child’s education is one which requires more than just a little thought. A variety of factors can influence parents to choose one type of schooling over another. Geography, or the distance from the home to the school buildings, could be a factor when choosing school districts. In a study by Green (2006) conducted in Australia, one family lived on a remote property over 150 kilometers to the nearest elementary school so they chose to home school via a satellite dish and a computer. Examples of home schooled students living in rural areas in Ohio, relevant to this study, will be discussed in another section.

Parents gave several reasons for home schooling on a recent survey conducted by the National Household Education Survey. Seventeen percent of the parents claimed the quality of instruction in the local traditional schools was a concern and 31% claimed the school environment convinced them to home school. Religious beliefs were a concern for around 30% of the parents (National Center for Education Statistics, 2010).

Kunzman (2009) states that Christian families who home school feel it is more than just academic achievement as their choice in educating their children. These parents feel it is a natural right and duty as parents to educate their children. By taking on the roles as home educators, parents can build their children’s characters within their religious beliefs.
According to Ray (1989) home schooling can be defined as educating children in a home environment rather than in a classroom in a traditional school building. In her article, Lyman (1998) discusses the beginnings of home school in the United States as an answer to government policies for public schools during the 1960’s and 1970’s. In the 1980’s, many parents wanted to integrate their religious beliefs within their children’s academic curriculum (Lines, 2000a; VanGalen, 1987). Concern about their children’s safety within the traditional school environment and being dissatisfied with academia were cited as the two main reasons for home schooling (Collom, 2005; Princiotta & Bielick, 2006). With a myriad of reasons why parents make the decision to home school their children, this non-traditional education option has grown over the past several decades. A modest 850,000 students were being home schooled in 1999 (Bielick, 2008). This number increased to 1,096,000, or around 2% of the total population of students in the United States, in 2003 (National Center for Education Statistics, 2010) and to 1.5 million students in 2007 (Bielick, 2008).

The investment of time is another important factor to consider when choosing a schooling environment. In a traditional environment, most students attend school during the day and return home mid-afternoon, oftentimes with homework. Many parents attempt to assist their children with their assignments, spending time in the evenings on schoolwork. When considering a home school environment, often more time is needed than just assisting with the completion of assignments. Parents who juggle different work schedules but are committed to a home schooling environment as opposed to a traditional
one may turn to online schooling (Zehr, 1999). Some students take advantage of an entire curriculum online while others just take a course or two (Zehr, 1999).

Serving students with special needs is a concern for some parents. These students may experience difficulties in a regular school system. Because of socializing concerns or the number of medications their child needs, parents may feel home schooling is a better option (Zehr, 1999). Some states offer assistance with the curriculum, materials, and other aspects of education necessary for a successful experience (Duffey, 1999). A special education consultant, as defined by Duffey (1999) is someone who is either an educator or a parent with home schooling experience. These consultants offer advice and support regarding rights and planning appropriate lessons for children with special needs. Each of the fifty states has laws regarding home schooling. Some states have strict specifications for home schooling students with special needs. HSLDA provides information to parents who have children with special needs and choose to home school them (Duffey, 1999).

The cost of education is a concern for parents despite their choice of schooling for their children. For home schooling parents, it’s a matter of conducting research for prices of materials or entire online programs. Some online schools are free to in-state residents (Zehr, 1999). The Electronic Classroom of Tomorrow, or ECOT, is free, but is available only to residents of Ohio (Electronic Classroom of Tomorrow, 2009). Other online schools, like Connections Academy are free to anyone in any state (Connections Academy, 2009). Still others have fees and tuition. One example is The Morning Star
Academy, which was charging $1699 for a mid-season tuition discount in 2009 (Morning Star Academy, 2009).

Depending on the method of home schooling parents decide upon, the costs for materials and programs will vary (Home School Legal Defense Association, 2010a). Home schooling websites and other online sources such as Amazon and Learning Things offer home schooling materials such as textbooks, pre-packaged curriculum, and software parents may purchase for their own programs (Amazon, 2010; Learning Things, 2010). Educating one’s child has some cost, whether it is time or money. Regardless of the financial status of a family, most parents will do whatever it takes to educate their children. Many parents would like their children to engage in better educational experiences than they did when they were younger.

Demographics of Home Schooling Families

The president of the National Home Education Research Institute, Brian Ray, conducted a nationwide study in 2008 on home schooling families. The study examined a variety of aspects of home schooling families including demographics. Home schooled students and their families represented each of the 50 states as well as Guam and Puerto Rico and were from grades K-12. According to this study, the average household income for home schooling families was between $75,000 and $79,999. This was comparable to the national average income of families who do not home school, which was approximately $78,500 in 2008 (Ray, 2009). Results showed that more than 60% of the parents who home school had earned some type of degree in higher education. Almost 98% of home schooling parents are married couples with 81% of the mothers staying at
home with the children (Ray, 2009). The study also revealed that parents spent between $400 and $600 on average for educational materials for each of their children they home school.

Rural Environments

A national report published every two years examines the significance of rural education. Statistics are available for the number of rural schools in each state. According to Johnson & Strange (2007), Ohio has the fifth largest population of students enrolled in rural schools in the country with almost 440,000 students. With nearly one-fourth of the total number of students in Ohio, 24.7%, located in rural schools, only 25.2% of the state’s budget is allotted to fund rural school districts. The average household income for families in rural areas as shown in this study is around $50,000 and 23.3% of the students are eligible for free or reduced lunches. Money spent per student in rural areas in Ohio is around $4,300. The state of West Virginia spends just above $5,200 per rural student (Johnson & Strange, 2007).

Home Schooling in Rural Environments

Little research exists on home schooling in rural environments. After conducting searches for home schooling and rural environments using numerous academic databases, Academic Search Complete, Education Research Complete, and Educational Resources Information Center (ERIC), only 17 articles are listed. Pitman (1987) studied parents in a rural location. Results of this study showed one primary reason for choosing to home school is concern with the traditional schooling environment. Parents wish to teach their children in their homes where they can provide values and security at their discretion. In
an article about rural home schooling, Jaycox (2001) noted the number of students home schooled in 1999 was approximately 850,000, according to the National Center for Education Statistics. This number represented 1.7% of the school-age population across the country. The percentage of students who lived in rural areas and were home schooled in 1999 was 2.2%, a little higher than the national average (Bielick, Chandler, & Broughman, 2001).

Students living in rural areas and attending traditional brick-and-mortar schools experience different daily routines than their counterparts in urban settings. Howley & Howley (2001) conducted a study focusing on the bus rides rural students take to school every day. Results showed that these students were on buses at least 30 minutes longer, on average, than students in urban schools. Besides the time element, the road conditions play a part in the whole busing experience. In a separate study by Howley (2001) road conditions in rural school districts were described as 36% of the bus routes travel along paved main roads, 43% paved side, or minor, roads, and 20% unpaved side roads. The author mentions that these conditions vary from state to state and that these percentages represent average conditions. A study by Fox (1996) showed that rural school students experienced a reduction in time in many activities due to the long bus rides. Sleep, recreation, household activities, and alertness in the classroom were all affected in the daily routines of these students. Technology could affect the lives of these students, replacing the long bus drives with more time on task in a home schooling environment.
Internet Connections in Rural Environments

Home schooling families living in rural areas with Internet access have the option of providing an entire curriculum in an online environment to their children. Many parents choose to enroll their children in virtual schools which supply lessons and tests so parents do not have to prepare anything. Some virtual schools even offer extra-curricular activities such as language clubs and creating newspapers (Electronic Classroom of Tomorrow, 2009). Children in this situation are similar to children who attend traditional school environments.

Hannum, Irvin, Banks, & Farmer (2009) conducted a study on distance education in rural schools. The results presented data worthy of further investigation. Sixty-nine percent of the public schools in the study said they used a form of distance education, keeping in mind these schools belonged to REAP, the Rural Education Achievement Program. Schools that belong to this program are enrolled based on the school’s financial circumstances. Teachers have a high turnover rate and the schools often have to hire teachers who are not certified in a content area or just drop the course from the curriculum because they can’t find a replacement. Courses offered through distance education serve to fill the voids in the content in the local, traditional school system. Several concerns the schools did report in the study were scheduling conflicts between the regular school’s schedule and the synchronous distance education courses. This was especially difficult if more than one school in the district was using the same course. All schools involved had to share the same exact schedule in order for students to receive the lessons. It was impossible for schools with different start times and end times to take
advantage of some distance education courses. In these cases, the schools declined participation in the distance education programs. Some schools in the study had financial concerns with the technology necessary to provide distance education. The financial aspect of managing technology in rural areas is a concern for families, especially those have an interest in home schooling their children.

Rural areas comprise 90% of the United States, which includes farmland and recreational space (Drabenstott, 2001). Twenty-one percent of the national population, or 55 million people, live in 2,300 counties in the country that are considered rural (Drabenstott, 2001). A digital divide, or disparity, exists between rural and urban communities among those with access to the Internet and those without it (Sylvester & McGlynn, 2010). According to Whitacre (2010), supply and demand could be a factor contributing to the digital divide. Those who subscribe to this thought believe that those who live in rural communities may not have had the same educational opportunities as their urban counterparts and therefore might not fully appreciate the Internet as a resource.

Researchers have studied the availability of technology in rural communities. A recent study by Whitacre (2010) examines the rate of internet access in Oklahoma over a three-year period. The researcher states that the digital divide is still present which creates challenges when attempting to connect rural communities to the Internet. The results of this study led the researcher to suggest future attempts to create an infrastructure in rural areas should concentrate their efforts on educating as many of the varied groups, such as the elderly, within the population on the advantages of the Internet.
(Whitacre, 2010). This could encourage future use of the technology after the initial meetings with installers, instructors, and customer service representatives have left the area (Whitacre, 2010).

Wireless technologies may be the answer to connecting rural America with the rest of the nation as well as countries across the world (Drabenstott, 2001). A pilot study in Greece experimented with hybrid wireless broadband connections over power lines (Sarafi, Tsiropoulos, & Cottis, 2009). This could be more cost effective particularly in the last mile of connection (Sarafi, Tsiropoulos, & Cottis, 2009). By using the existing network of power lines and combining it with wireless internet capabilities, the connection is provided at a lower cost to the rural families in the area (Sarafi, Tsiropoulos, & Cottis, 2009). This relatively new option for providing broadband to rural areas may be worth considering and viable in the United States.

Wood (2008) conducted a study of cable providers who service rural areas. This study was conducted in Pennsylvania and results showed Pennsylvania is representative of the rest of the country regarding cable and telephone providers in which one major, national company typically has the majority of subscribers and other companies share the rest of the customers. In larger urban areas, several cable companies compete for customers and provide a variety of service packages (Wood, 2008). Rural areas that only have one provider to choose from typically have fewer packages available to them (Wood, 2008).

In early 2000, the Pew Internet & American Life Project began studying the number of people using the Internet (Rainie, Bell, & Reddy, 2004). Data was collected
from February 2001 until August, 2003. The data revealed 67% of those living in urban areas used the Internet as compared to 66% of those on the suburbs and only 52% of those living in rural areas (Rainie, et al., 2004). The statistical data showed that locality does not directly relate to the use of the Internet. It did show that low-income families who live in rural areas are less likely to connect with the Internet than middle- and upper class families in urban or suburban areas. According to the data collected through the Project, the disparity between rural and non-rural communities equates more with demographics such as the age and education level of the population in a certain area than with the type of community. Many people living in rural areas may not have the educational opportunities or attainment as those living within a city or in the outskirts of a city (Rainie, et al., 2004). The study revealed that 22% of rural populations are age 65 and over. This group of people is less likely to connect with the Internet than are younger groups, who are more inclined to go online (Rainie, et al., 2004). The report states household income impacts whether or not the Internet is used by household members. Forty-seven percent of those living in rural areas report household incomes of $30,000 or less per year (Rainie, et al., 2004). Over the 3-year period of the study, even though the use of broadband in the homes of rural areas had the smallest amount of growth with 16%, it was an increase nonetheless (Rainie, et al., 2004).

Stern, Adams, & Elsasser, (2009) conducted a study to examine the existence of digital inequality between urban, suburban, and rural areas. Data from this study showed that rural communities often are using slower internet connections than urban and suburban communities. Results showed that people living in rural communities may not
take advantage of economic services such as online banking because of the slow internet connection (Stern, et al., 2009).

A very recent news release from the Federal Communications Commission (2010) approved two major national internet providers to expand their service area to rural areas in Southern, Midwestern, and Western states. This action could possibly affect the home schooling population in rural areas. With an increase in coverage areas and connections, more rural families would have the option of home schooling using technology.

Technology and Home Schooling

The mid-1990s experienced a surge in the number of students who were home schooled due in part to parents having a legal right to home school in many states and the growth of the Internet. Not only were parents able to acquire resources for home schooling through the Internet but they were able to literally connect with other home schooling families (Stevens, 2001). Both of these events contributed to the beginning of a shift in how home schoolers engaged in academics. According to a study reported by Princiotta & Bielick (2006), 41% or 451,000 students who were home schooled participated in a distance learning program which included the use of media such as e-mail, the Internet, television, or video. Several computers in the household are ideal, especially if more than one child is being homeschooled (Somerville, 1998). When teaching several children, especially if technology is essential to the home schooling program, more than one computer allows the parent to coordinate lessons simultaneously (Somerville, 1998).
Since home schooling programs can be tailored specifically to the children’s needs as well as the type of technology available in the home, parents can choose materials and resources to suit the individual needs of their children. Parents can use websites to access various resources such as CDs and videos (Grace Academy, 2009), software (Homeschool Central, 2010; HomeSchool Minder, 2010), or entire online programs (Global Student Network, 2009) to use in their own unique home schooling program. In a home schooling environment, parents may have an advantage over teachers in traditional schools with the amount of freedom to choose how to instruct their children and what resources to use for the lessons. Classroom teachers are often limited by the few resources, technological or otherwise, and struggle to engage students in content material.

A study by Clements (2002) involved three home schooling families, each using different methods for presenting curriculum. Two methods included technology in the form of a computer-based curriculum and video school. The computer-based curriculum was organized to allow the students to progress at his or her pace using a computer. It enabled the students to take a quiz only after the content was completed. Video school was comprised of videos of lessons taped from classrooms. The mother who uses videos stated that she like the videos because they kept the interest of her child and reviewed the material on a regular basis, something she found to be redundant, but necessary. Parents commented that the technology based methods were suitable for independent studies for their children (Clements, 2002). The form of technology used by each home schooling family varies and is determined by the type of accessibility for each family.
Technology plays a role in home schooling students with special needs, as well. In a study conducted in the mid-1980s, Folio & Richey describe a model for using videos and television to increase awareness of intervention strategies to families living in rural areas. In order to be considered for this type of intervention, families had to live a certain distance from the main location of services, the child’s medical condition prevent the families from getting out of the house, or parents’ work schedules prevent regular visits to the center. The videos contained pertinent information parents needed for physical therapy or regular classroom instruction (Folio & Richey, 1991). Public Broadcasting Stations (PBS) provided air time on their channel for this instructional partnership as well as educational programming for all families who are able to receive the PBS channels on their televisions (Folio & Richey, 1991). This provided educational opportunities by using the television for parents who engage in home schooling.

Charter Schools vs. Home Schooling

Charter schools provide parents with another educational option for their children. These schools are accountable for standards set by each individual state. Any single person or group of people may open a charter school and must have a board of directors to ensure accountability for the school. The Center for Education Reform describes charter schools as a modern version of an old concept of public schooling (Center for Education Reform, 2009). The curricula of these new types of public schools are adapted specifically to the communities in which they are located in order to better serve that population (Center for Education Reform, 2009). St. Paul, Minnesota was the site of the opening of the first charter school in 1992. Currently, more than 1.5 million students are
educated in 39 states as well as the District of Columbia in over 5,000 charter schools (Center for Education Reform, 2009). Educators decide to teach in charter schools often because the government involvement is minimal compared to the traditional public schools (Center for Education Reform, 2009). Funding for charter schools varies from school to school, based on each school’s total student enrollment. States are supposed to provide monies per pupil as they do for traditional public schools, but some schools have to fight to ensure they receive the entire amount per pupil (Center for Education Reform, 2009).

Even though charter schools are available as an option to the traditional public schools, parents still do not have as much authority over their child’s education as they would if they chose to home school. As stated above, charter schools often struggle for state funding. Students report to a building for classes, as in a traditional setting.

Home schoolers are typically educated within their homes by a parent or guardian who can obtain educational materials through different resources. The Internet, public libraries, and other home schooling parents or groups can assist parents with necessary materials. Funding for these materials can be free, if borrowed from a library, or found online from many internet resources varying in cost to the parents. Home schoolers are held accountable to the district in which they reside as well as their state’s curriculum standards.

_Cyber Schooling vs. Home Schooling_

In her article, Cambre (2009) describes the hierarchy of authority within traditional, home school, and cyber school environments. While the authority figures in
traditional schools are the classroom teachers, parents assume this role in a home schooling environment. Traditional schools, as well as home schools, are under the direction of state agencies, unique to their specific situations. Cyber schools, on the other hand, report to the agency responsible for granting the charter along with the agency monitoring schools. The author indicates the principal difference between cyber schools and home schools is the fact that states allocate funding for cyber schools. Among the issues and concerns of state education officials, it doesn’t appear that controlling and supporting home schooled students is something they are putting on the top of their list. Thus, monitoring cyber schooled students is just as difficult and also not a main concern (Cambre, 2009).

Klein & Poplin (2008) conducted a study of California home schoolers who were enrolled in California Virtual Academies, or CAVAs. Questions for parents focused on several aspects of the home schooling experience including reasons for choosing the virtual charter schools and students’ academic achievement. Parents stated several reasons for choosing a CAVA including that it is tuition-free and the curriculum did not interfere with their religious values. Home schooling parents also mentioned that the pre-planned lessons and activities were a welcome change from having to do it themselves in previous home schooling curricula. Parents appreciated the opportunity of more control over their child’s educational experiences by working with the CAVAs. They deemed this aspect very important to their home schooling curricula.
Cyber Charter Schools and the Courts

Cyber charter schools have been confronted with challenges from parents and the education of their children. In the case *Fields v Palmdale School District* (2005), the court ruled that parents can not dictate how public schools teach their children. According to Cambre (2009) this ruling appears to say that if public monies are used toward education, such as cyber charter schools, parents have no voice in the delivery of educational content. In a home environment, parents interact with their children on an individual basis whereas a classroom includes a larger number of students per one educator (Cambre, 2009). Davis (2005) reflects on the court decisions of two court cases, which develop into what is known as Meyer-Pierce rights, by stating that parents have the right to make choices concerning their children but not when those children are enrolled in public schools’ curriculum. Cambre (2009) indicates that even though cyber charter schools are considered public schools, the rights appear to imply that parents may not be permitted to censor components of a cyber charter school’s curriculum due to parents’ religious beliefs.

In an effort to provide parents financial assistance with school choice, the Cleveland Scholarship and Tutoring Program was adopted by the Ohio Legislature in 1996. The money awarded through this program allowed parents to enroll their children in their choice of public or private schools, which included charter schools. The Ohio Supreme Court approved the program but the United States District Court for the Northern District of Ohio declared the program unconstitutional. The case was then heard by the United States Supreme Court (*Zelman v. Simmons-Harris*, 2002). Results of the
United States Supreme Court decision in the case *Zelman v. Simmons-Harris* had an impact on funding from public sources and religious education. The court ruled that parents and cyber schools are permitted to deliver religious instruction in a home environment. The decision specified that cyber school providers must be nondiscriminatory (Cambre, 2009).

**Self-Regulated Learning**

As previously mentioned in the theoretical framework of this study, students who are self-regulated tend to be successful in the classroom. Literature defines students who are self-regulated as those who are interested in discovering the information they desire and the best way to thoroughly comprehend it (Zimmerman, 1990) and academically achieve during the learning process (Barnard-Brak, Lan, & Paton, 2010). These students seem to have an internal instinct when they are met with obstacles within their learning experiences. They seek opportunities to further their learning and evaluate themselves during and after their experiences (Zimmerman, 1990). Students who are self-regulated tend to set their own learning goals and plans to achieve them, choose suitable strategies, examine their learning processes and evaluate their outcomes (Cheng, 2011). In his study of self-regulated learners in Hong Kong, Cheng reported these students continuously evaluate their own learning in an effort to maximize their learning experiences.

**Academic Achievement of Home Schoolers**

Home school students who have taken standardized tests tend to score above average to exceptionally high and those scores tend to be in the 70th to 80th percentile (Home School Legal Defense Association, 2010b; Rudner, 1999). Klein & Poplin (2008)
discuss standardized test information from the CAVAs must be submitted every year to the state to comply with their requirements as public schools. According to results from their study, scores in each part of the California standardized tests taken by home schoolers were above state averages.

According to a study conducted by Ray (2009), home schoolers generally score higher on standardized tests than public school students. Ray states that home schoolers are successful academically regardless of their family’s background, financial situation, or method of home schooling. The results of the study showed home schoolers scored between 34 and 39 percentile points above the average standardized scores. One aspect of the study focused on whether certain factors of the home schooling environment had an effect on the students’ test scores. The study discovered little difference between home schooled students when comparing three variables: amount of structure within the program itself, amount of time spent daily on activities directed by a parent or guardian, and whether or not the students were enrolled in an all-inclusive curriculum. An all-inclusive curriculum provides one year’s worth of materials including textbooks, lesson plans, and record-keeping items (Ray, 2009).

*Talented and Gifted Home Schoolers*

Students who are above average intelligence, or gifted, often engage in home schooling or some form of distance education. A study conducted by Howley & Howley (1987) discusses gifted students living in rural settings. Gifted students have the ability to comprehend the concepts easily in one or more content areas, such as math, English, or science. Those students living in rural areas may have less of a chance to extend their
knowledge even further due to the resources available in their school district. If these students are not given the chance to nurture their academic strengths, they might not be able to, eventually, perform on college entrance exams as well as their counterparts in suburban schools. Unfortunately, this data contributes to the lower college attendance rates from students in rural school districts. If programs to identify gifted students do not exist in a school or district, school officials may not see the need or the significance to recognize and service those students (Howley & Howley, 1987). In West Virginia schools, what would seem to most as an unlikely source of a large amount of gifted students, parents have lobbied over the years to secure teachers and programs in every school district in the state to guarantee their children are identified and provided with a curriculum appropriate to their needs. Gifted students have been identified in just about every school in West Virginia, something worth revealing considering this state has many rural districts (Howley & Howley, 1987).

Home Schooling and the Law

Home schooling families have had to defend and protect their beliefs for years. Since the early 1980’s, an organization known as the Home School Legal Defense Association was created by Michael Farris to support home schooling families across the country with legal advice and political support (Isenberg, 2007). This organization’s website is a wealth of information for home schooling families. National and international news, links to resources and support for parents, and political issues are among the topics home schooling families have access to for assistance in their own environment (Home School Legal Defense Association, 2010a).
Supreme Court rulings have not supported parents in their home schooling ventures specifically, but one case ruled in favor of an Amish family to home school their children for religious purposes (Legality of Homeschooling in the United States, 2006). After years of court hearings and decisions, home schooling became legal in South Carolina (Tyler & Carper, 2000). All colleges and universities accept the South Carolina Association of Independent Home Schools (SCAIHS) diplomas and transcripts.

According to mandatory attendance laws in the United States, each of the fifty states is required to offer educational opportunities in which students become independent learners (Stewart & Neeley, 2005). This study by Stewart and Neeley (2005) was conducted to determine the responsibility of states regarding home schooled students and how they correspond to that state’s education regulations as well as the requirements for home schooled students. Results of this study showed that each state has unique provisions for home schooling students. The researchers’ recommendation from these results is for a national set of standards and laws pertaining to home schooling in the United States.

Small groups of home schooling mothers worked hard to lobby their elected government officials to support their school choice. Many of these mothers did not work outside the home and used some of their time to encourage political leaders to take home schooling seriously. Because of their efforts, the state of Florida aided in creating home school laws in all fifty states (Isenberg, 2007).
National Laws for Home Schooling

The Home School Legal Defense Association keeps parents informed and updated on state and national laws which would impact the home schooling environment. Under The Family Education Freedom Act of 2009, parents would receive up to $5,000 per child as a tax credit annually for tuition or other costs related to elementary or secondary education (Home School Legal Defense Association, 2010f). This bill went to the House of Representatives. In May, 2009, a resolution was introduced to the Senate titled concerning the rights of parents to educate their children. Supporters want an amendment to the Constitution officially stating that parents are entitled to raise and educate their children and they should not be denied of this right (Home School Legal Defense Association, 2010f). Both state and national levels of government are working on issues that affect parents and educating their children. If home schooling parents stay informed of legislation on the state and local levels, their voices can be instrumental in securing rights and freedoms for their children as well as other K-12 children in traditional school environments.

Home Schooling and Requirements in the State of Ohio

Each state has some level of requirements and rules concerning home schooling. The Home School Legal Defense website, http://www.hslda.org, provides information and legal analysis for home schooling requirements in each state. The requirements for home schoolers in Ohio include 900 instructional hours in 15 subjects including the normal content areas from traditional schools, math, language, science, as well as first aid, safety, and fire prevention (Home Schooling Legal Defense Association, 2010e).
Parents are required to notify superintendents of the local school district every year the students are home schooled. Superintendents of local school districts must approve the home schooling curriculum for each family. The instructor, usually the parent, is required to possess a high school diploma or the equivalent of a diploma in order to be considered qualified to provide instruction in the home setting. Students are required to perform some sort of assessment in order to show growth in the content areas. Parents can choose from three forms of assessing their children. One is the state standardized tests which the students in the same age group and/or age level within the state take during the school year. A second option is a written account and examples of the child’s activities and work samples which are reviewed by a certified educator or third party mutually agreed upon. The third option is an alternative assessment which both the superintendent and parents have agreed is appropriate for the child to show growth and progress (Home School Legal Defense Association, 2010e).

Home Schoolers and Higher Education

With the increase of home schooled students in elementary and secondary grades, the number of those students applying for college is increasing. Before considering how home schooled students fare in higher education, one must take into account the admission process and how accommodating it is to these students. In his article Gary Mason (2004), a director of admissions at a college in Virginia, states that most home schooled high school students are not assisted by a guidance counselor during the application process, which is typical of a student attending a traditional high school. Mason feels colleges and universities should take this into account when providing
information on their website. During his employment in the admissions office in a college in Indiana, he met with leaders of organizations for home schoolers in Indiana and also took part in exhibits at annual home schooling conventions. He was influential in creating a more positive perspective of that college in the eyes of home schooling parents by simply talking with them and answering their questions.

Using technology to investigate options in higher education is crucial in attracting home schooled students. Websites should be accurate and accommodating for all students, but especially home schoolers (Duggan, 2010). The Home School Legal Defense Association instituted guidelines in 2007 for higher education programs to assist them in managing home schoolers interested in applying to their college or university (Home School Legal Defense Association, 2010c). These guidelines include information about standardized tests such as the ACT and SAT and financial aid available for home schoolers. Scott (2006) suggests colleges and universities should create access to information for different groups of students, from out-of-state residents to home schooled students.

Duggan (2010) conducted a study to determine the ease of use of community college websites for home schooled students. The study suggests that colleges may be more accommodating to home schoolers than their websites lead them to believe. One hundred five community colleges from eleven states were used in the study. Results showed that 65% of the websites lacked a section for home schooled students even though high school students, new students, and even students who transfer had specific sections personalized for them. According to Duggan, prior research on web site protocol
dictates that information for all users should be clear and readily available. The research stated that if home schoolers find a college’s website easy to maneuver, it’s highly likely they will return to it and even apply (Duggan, 2010).

Winters (2000) comments on how a large group of home schoolers nationwide were beginning to enter higher education. At that time, the author stated that the Department of Education’s figures on the increase of home schoolers was 15% annually.

Transcripts are somewhat challenging for home school students to obtain or even create in order to send to the college admissions office (Duggan, 2010). In the mid-1990s, the admissions offices of colleges and universities were overwhelmed by applications with nontraditional responses. Recommendations were from parents, courses were listed as textbooks or other possible resources used in their home schooling program, and grades would seldom range below average. Standardized test scores, such as the SAT, are important for college admission. In 2000, home schoolers scored an average of 81 points higher than the national average of their traditionally schooled counterparts (Winters, 2000).

The Home School Legal Defense Association (2010d) reported in 2000 that colleges and universities had some type of guidelines in place to accept qualifying home schooled students. The National Center for Home Education (NCHE) sent letters requesting admissions policy information to 931 colleges. With the 513 responses, the NCHE was able to compile statistics pertaining to the guidelines present in those colleges. Eighteen colleges requested home schoolers take another SAT exam. State-funded colleges tended to be stricter on their admission policies regarding home
schoolers. As a result of the existing policies, the NCHE developed criteria as only recommended admission policies for colleges and universities as an effort to transition the home schoolers into higher education in a smoother, non-discriminatory manner.

Summary

Both home schooling and technology are becoming more prevalent in education. The decision to home school may not be an easy one for some parents but studies show the number of home schooled students has been steadily increasing (Bielick, 2008; Home School Legal Defense Association, 2010b; Lines, 2000a; National Center for Education Statistics, 2010; Princiotta & Bielick, 2006). Technology is readily accessible and students use it for numerous tasks, including research, communication, and entertainment (Macgill, 2007). Home schooled students are not excluded from using technology for these same tasks.

Home schooling families with internet access have the option of providing an entire curriculum in an online environment to their children. Many parents choose to enroll their children in virtual schools which supply lessons and tests so parents do not have to prepare anything. Some virtual schools even offer extra-curricular activities such as language clubs and creating newspapers (Electronic Classroom of Tomorrow, 2009). Technology may pique the interest of some of those students and parents and excite them about learning.

Families living in rural areas have concerns that most urban families do not share regarding education. Road conditions and long bus rides (Howley, 2001) as well as access to computers and internet connections (Stern, et al., 2009) have impacts on the
children’s education. Parents in rural areas who choose to home school may find inadequate internet connections a hindrance.

Home schooled students show they can compete with other students academically regardless of locale, the family’s socioeconomic status, or type of home schooling program. Technology is allowing many of home schooling students to be successful and engage in a variety of educational experiences. The extent of technology’s influence on home schooling is the focus of this study.

The researcher attempted to address the possible aspects of home schooling which would pertain to this study. This study was conducted in a rural setting within one school district. Discovering the reasons the families chose to home school is an important part of this study in an attempt to determine if these families reflect the national population of home schooling families. Self-regulated learners could be successful in home schooling environments including those who use technology within their programs.
CHAPTER 3: METHODS

Chapter three focuses on the design and data analysis procedures used in this study. The research was directed by the following primary questions:

1. To what extent does technology appear to influence the decision of parents and guardians in rural areas to home school their children?
2. What role does technology play in the curriculum development in home school environments?
3. In what other ways does technology appear to influence home school environments?

Design

The study used a collective case study design and the researcher adopted a qualitative, exploratory perspective. Although case studies are often viewed as a form of qualitative inquiry, the technique focuses on a bounded phenomenon, and the question of whether qualitative or quantitative methods are utilized depends on data availability and research questions (Stake, 2005). Researchers who choose to conduct qualitative studies are generally interested in learning more about attitudes, beliefs, and views within a specific context (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005). Qualitative research is an intuitive approach that searches for understanding phenomena in specific situations. Qualitative inquiries explore individuals’ relationships with a phenomena and how those relationships are affected over time (Creswell, 2009). Strauss and Corbin (1990) state that qualitative research is appropriate for developing an understanding of phenomena that is somewhat unfamiliar to most. Even for situations and
experiences that are more common or familiar, qualitative research can uncover new aspects or deepen existing knowledge. Because this study was conducted to explore and examine home schooling and its relationship with technology, a qualitative approach was used to enable the researcher to investigate possible patterns, themes, and other connections between these constructs.

Case studies are generally conducted when the researcher investigates particular instances, individuals or groups of people, processes, programs, or activities thoroughly over a period of time (Brantlinger, et al., 2005; Creswell, 2009; Nastasi & Schensul, 2005; Stake, 2005; Yin, 2009). Case studies, as Yin (2009) states, are preferred when researchers are investigating current phenomena as it naturally occurs. There are different types of case studies, including intrinsic, instrumental and collective approaches (Stake, 2005). Intrinsic focuses on unique phenomena and instrumental case studies focus on more typical events. Collective case studies examine several cases with the goal of contrasting and comparing among constituent cases. This study utilized the last approach so as to gain a sense of how different households in Southeast Ohio utilize technology in the context of home schooling.

Creswell, Hanson, and Piano Clark (2007) suggest case studies can address research questions seeking to extend one’s understanding about how various cases present more information on an issue. Observations and interviews were appropriate data collection procedures for this study because technology’s influence on home schooling is explored by gathering participant perceptions of the role technology played while also looking for instances of actual application of technology. The researcher interviewed a
number of families, with each family considered a case. After analyzing the data individually, the cases were considered as a whole, or collectively.

Researcher

I was born in Northeast Ohio in a city with a population of approximately 100,000 people. Throughout my undergraduate program as well during my first few years as a full-time teacher, I was able to experience different teaching environments, such as inner-city and suburban schools. My one and only experience in a rural school district at that time was while I was student-teaching, which was a ten-week experience. I graduated in 1991 from Youngstown State University in June and began teaching in an inner city Christian School in August. Two years later, I taught kindergarten in a Catholic school in a small suburb of Youngstown. I enjoyed teaching kindergarten but my desire to relocate from the metropolitan area motivated me to seek another teaching position in a different environment. I moved to a county in Southeast Ohio to teach eighth grade in a rural school district in August, 1997. Moving from an inner-city location to a rural location was a huge transition for me. Throughout my teaching experience in this district, I have learned more about rural school districts and their distinct student populations. For this reason, readers should note that I have an a priori expectation that urbanicity is an important factor when understanding school experiences and this provides some motivation of focusing on home schooling in a rural setting.

In my current position, I teach social studies to an average number of 125 seventh grade students each year. I chose to further my education with a Masters” Degree in Computer Education and Technology from Ohio University. Because of this educational
experience, I became more aware of how I learn and how much I enjoyed working with technology, both as a student and as a teacher. My experiences throughout my coursework made me aware of how technology can motivate learners as well as increase their opportunities to learn. Upon graduating from Ohio University in 2004, my interest in technology and home schooling led me to begin a doctoral program in Instructional Technology from Ohio University.

Over the past several years, I have noticed the number of students in my classes who have been home schooled has slightly increased since I began teaching middle school. Not only have my students been previously home schooled and have enrolled in this district during middle school grades but several other students have withdrawn from the middle school to become home schooled. I am interested in learning what factors influenced these parents in their decision to home school in this area of Southeast Ohio. I would like to investigate how technology influences decisions to home school in addition to what types of technologies are used in the home schooling environment. I am curious to discover if this same motivation I experience when using technology is present in the home schooling students I will interview for this study.

From my experience with students enrolling after being home schooled, I suspect several reasons for their return in middle school are to participate in extra-curricular activities, such as athletics, and to fulfill the requirements to earn a high school diploma.

Participants

The participants in this study live in a county in Southeast Ohio. Data on this county is not yet available from the 2010 Census. According to the United States Census
from 2000, however, the population for this county was 62,223 (United States Census Bureau, 2010a). Other data from the 2000 Census reveals that 34.2% of the county population graduated from high school with an additional 12.6% having earned a bachelor’s degree in addition to their high school diploma. This compares to 83% of the people of the state of Ohio reported having graduated from high school with an additional 21.1% obtaining a minimum of a bachelor’s degree (United States Census Bureau, 2010c). The 2000 Census data also reveals that the average household income of this county was approximately $27,000. In 2008, the statewide average household income was $48,011 (United States Census Bureau, 2010c). Thirty-four percent of the population in this county holds managerial positions and other similar professional-related professions and 24% are employed in retail and office-related positions (United States Census Bureau, 2010b).

Participants in this study include home schooled students and their parents who use or have used some form of technology in their home schooling program. The technology might simply support the teaching and learning method for their program or it may be the entire method of delivery of instruction. In addition to the home schooling families, administrators and counselors from the local school district were invited to participate in this study. The administrators were interviewed for clarification of home school regulations as well as their own perspectives of home schooling. The counselors assisted in understanding the reasons families choose to home school as well as the reasons they choose to enroll in the public schools.
The researcher secured a copy of the list of families who home school within the local school district, which totaled 35 for the 2009-2010 school year. Twenty families from this list continued home schooling during the 2010-2011 school year. The researcher contacted the administrators for insight into the students and families in an effort to generate a list of possible participants. After discussions with the administrators, the researcher attempted to contact the agreed upon list of families to inform them of the study and invite them to participate. Because the researcher is familiar with the local school district and has access to the list of home schooling families within that district, the sampling number of participants and families could increase as a result of a snowballing approach, which is discussed in the data collection section of this report.

Five home schooling families volunteered to participate in this study.

**Demographics of Sample**

The majority of the participants in the sample reside in a small town, which is the initial focus of the study. Families whose children attend the local school district either live within the town or one of three neighboring communities. According to the website of the United State Census Bureau (2010d) for the 2000 Census, the total population of the town in the study was 808. The estimated population in 2008 was 832 (United States Census Bureau, 2010d). The 2000 Census stated the average age was 39.8, with 79.3% of the population over the age of eighteen (United States Census Bureau, 2010d). Caucasians make up 97.3% of town residents with minorities such as Hispanic/Latino and Black combining for 1.2% of the population.
The average household income as of 1999 was $31,534 while the national average was $41,994 (United States Census Bureau, 2010d). The unemployment rate, according to the 2000 Census was 2.9% with 8.3% of families below poverty level (United States Census Bureau, 2010d).

Setting

According to the Ohio Department of Development website, http://www.development.ohio.gov/, eight counties comprise Southeast Ohio, with the largest population found in the county included in the study. Eighty-one percent of the land in this region is forest. This website reports the population of the region in 2006 was 254,697. Twenty-seven percent of the population fall in the age range of 25-44 years of age and 22.8% are ages 45-64. Eleven percent of families are living below poverty level. There are 104 public schools with a total student population of 39,106. In 2006, the unemployment rate was 6.6%. More than 19,000 people are employed outside the region (Ohio Department of Development, 2010a). The county in the study is one of thirty-two counties considered to be Appalachia. The data for both the county and the town reflect the data for the entire Appalachian region.

The United States 2000 Census defined urban and rural areas. Urban areas and urban clusters consist of densely settled areas, including land and homes, with populations of at least 500-1000 people per square mile. Rural areas are classified as the areas, including land, population, and homes, located outside an urban area or urban cluster (United States Census Bureau, 2010a). As discussed above, families living in a rural area may have reasons for home schooling that differ from those families living in
urban or suburban locales. The availability of technology could vary from urban to rural areas. Research studies conducted on rural education shed light on this subject, which was discussed in chapter two of the research.

Recruitment

This study was primarily dependent upon voluntary participation families that home school. The recruitment process began in September, 2010 after the beginning of the new school year and approval from the Ohio University Institutional Review Board. As previously defined in chapter one of this report, two of the three reasons students are considered to be home schooled are if they are between ages 5-17 and their parents have reported them as being home schooled (National Center for Education Statistics, 2010). Selecting participants for this study was based on their interest in sharing their experiences as home schoolers with the researcher (Krueger & Casey, 2000). In accordance with the literature, the researcher used the following guidelines and suggestions when recruiting the sample of participants:

- In an effort to gain the trust of the home schooling parents, the researcher discussed the district’s home schooling families with each building administrator to ascertain those parents who would possibly cooperate and participate in this study.

- If the home schooling parents were willing to contribute to this study, the researcher attempted to impress upon them the hope in gaining their valuable knowledge and expertise about home schooling using technology. Lindlof & Taylor (2002) state that often people are flattered
when someone expresses an interest in something they do and invites them to discuss their area of expertise. This helps to establish confidence and trust in the researcher.

- The researcher attempted to recruit families by mailing a letter explaining the study and the intent of the research. Mailing included consent forms and the interview questions. By including the interview questions, the researcher hoped to further clarify the focus of the study and the interest of the researcher.

According to records for the school district at the time of inquiry, 25 families were officially home schooling their children for the current school year. This includes 58 students in grades K-12. In addition, 31 families who reside in the school district were officially enrolled in one of seven e-learning programs. This includes 43 students in grades K-12. Administrators and counselors provided suggestions to which home schooling families might be interested in participating in this study. Suggestions were derived from interactions with families whose children had attended the public school for a period of time either before or after being home schooled. The administrators and counselors suggested to first contact six specific families in an attempt to make connections to other families on the home schooling list.

During the initial recruiting phase of the study, the researcher was able to connect with only eight families from the home schooling list through a phone conversation, none of which were the suggested families. Phone messages were left for 16 families but they did not return the call. When the researcher dialed the phone numbers for five families,
the phone kept ringing which prevented the researcher from making contact in this manner. Of the eight the researcher spoke with, seven parents declined participation and one requested to call at another time. During the follow up phone call, the parent was adamant about not participating, stating that time was a concern and that many home schooling families are not interested in sharing their experiences with people not affiliated with home schooling.

In an effort to make contact with families through a different method, an information packet was mailed to 16 home schooling families. The packet included a letter explaining the purpose of the study, a parent survey, consent forms, and a return envelope. Only two families responded by returning consent forms and the parent survey. A second letter was mailed to the 14 families who did not respond and an additional five families from the e-learning list, specifically. This letter included the interview questions for the parents and children in an effort to inform the parents of the type of information requested and make them more receptive to participating in the study. Two families responded after this second attempt. The researcher contacted a colleague, who is also a home schooling parent. This parent agreed to participate in the study. A total of five families agreed to participate in the study. Six children within the five families are home schooled. One student was willing and excited to participate in the study but because of medical issues, he was unable to be interviewed. All participants were assigned pseudo names to protect their identities.
Data Collection

Conducting one-on-one interviews and observing students using technology were the primary forms of data collection during this study. Parent participants completed questionnaires and reflective surveys on their home schooling experience. This documentation served to augment the data from the interviews along with observations in order to provide a more accurate representation of the home schooling experience from each participant’s unique, personal perspective.

Sampling Strategies

Qualitative studies often utilize sampling strategies attempting to acquire data from participants who match the aspects of the study within a certain context. One such strategy is called purposeful sampling. Lindlof & Taylor (2002) define this technique as choosing participants specifically for a study because they will provide crucial data to assist the researcher in a better understanding of the phenomenon. In this study, the researcher had a list of home schooling families from the administration. This list, which provided basic information such as the family’s address and the names of the children, generated initial contacts willing to participate in the study.

Snowball sampling is another strategy used by qualitative researchers. Lindlof & Taylor (2002) define this strategy as utilizing a third person as a type of recruiter to locate other possible participants for the study. This third person may have connections with people who the researcher is not aware of who could prove to be essential in gathering data. This connection may, in turn, lead to subsequent interviews with another person or group of people willing to participate in the study. Participants themselves can provide
information, resources and specific names of other possible contacts to allow the researcher to recruit more participants (Lindlof & Taylor, 2002). The researcher in this study began with the list of home schooling families from one local school district, with the intent of making connections with home schooling families in other districts. These connections could have further enhanced data by revealing similarities of differences between school districts in the same region of Southeast Ohio. However, the researcher was unsuccessful in recruiting other home schooling families within the district. Two parents who participated in the study point out that many home schooling families may prefer to keep their home schooling experiences private. They share information primarily with those involved in home schooling in some way, such as other home schooling families and those affiliated with supporting home education.

Questionnaire

Prior to the interviews, participants were given a short questionnaire, based on another study conducted in a different geographic locality (Andrade, 2008). The questionnaire contained 20 items divided into two sections. The first section contains items to provide demographic data such as socio-economic status and parents’ level of education. The items in the second section focused on the types and uses of technology within the home schooling program. (See Appendix E)

This data was compared among the participants in order examine similarities and differences among local home schooling environments. The results were then compared with those of a similar study from a geographically different location to determine
patterns in technology use as well as attitudes toward technology in the home schooling environment.

**One-on-One Interviews**

Parents and their children were interviewed in order to establish an accurate illustration of technology used in a particular home schooling environment. Students were interviewed separately from their parents in hopes of providing a level of comfort for the children to be open and honest with the researcher. Four administrators including the superintendent were interviewed for this study. They provided a different perspective of home schooling by considering home schooling students as still part of the district population in the state’s eyes and how this district interacts with families who home school their children.

Semi-structured interviews were the main source of gathering data for this study. This technique enables the researcher to use specific, prepared questions along with open-ended questions in order to obtain a thorough description of the phenomena being studied (Kvale & Brinkman, 2009). Questions for parents related to three aspects of using technology within a home schooling program: (1) technology as a factor in choosing to home school their children, (2) parents’ choices to use any forms of technology during the home schooling experience, and (3) if technology is the main component of the home schooling program. Using prepared questions as a guide throughout the interview and being open to new ideas and questions was essential in gathering accurate representations of the home schooling experience. The interview protocols are located in Appendices F-H.
In qualitative research, the interaction between the researcher and the respondent during interviews is used in an effort to encourage the next steps of the inquiry. The role of the inquirer, or researcher, is to soak up the information like a sponge, thus enabling the researcher to extend his or her base of knowledge (Kvale & Brinkman, 2009; Rubin & Rubin, 2005). By obtaining more information, the researcher can formulate other questions that may not have been considered at the onset of the study (this idea of an emergent design is elaborated on below).

Wording questions effectively will encourage participants to describe their thoughts, feelings and opinions in detail. Interview questions for this study included asking the students if technology helps them learn and to provide an example. One set of question for parents and guardians was to discuss if technology simplified their home schooling program, made it more manageable, if it is time consuming, or made it more difficult and how technology affects each of these in their particular situation. These types of questions encouraged the participants to reflect and provide more than just a one word response. They replied in several detailed sentences. Using field notes along with the digital recordings of interviews, the researcher was able to compile detailed descriptions of each unique home schooling situation. These descriptions deepened the understanding of technology’s role in the home schooling experience (Brantlinger, et al., 2005; Kvale & Brinkman, 2009; Rubin & Rubin, 2005). Interviewing each participant individually enabled the researcher to develop a comfortable relationship in which each participant spoke freely about his or her thoughts (Kvale & Brinkman, 2009).
School guidance counselors are another source of data on home schoolers as they are often liaisons between the families and the school, whether the families are enrolling their children after being home schooled or withdrawing their children to become home schooled. By interviewing the counselors, the researcher obtained another perspective on home schooling. Parents may reveal information to the counselor which may or may not be the same information revealed to administrators or to the researcher. The data obtained from the counselors can be compared with the data from the families as well as the administrators to illustrate similarities or differences.

Interviewing allows for conversations between the researcher and the participants in which the researcher can obtain greater details about the topic. During the interviews, the researcher explored attitudes and thoughts about technology, its place in society, and if it fits into their beliefs about home schooling from the parents’ perspectives as well as those of the children. Data was gathered regarding one student who is home schooled part time and enrolled in the public school part time. Data from this student can be compared to national data to promote tenuous transfer of findings.

Interviews were recorded with a digital audio recorder to ensure the data is accurate and maintains the context of the interview (Krueger & Casey, 2000). Kvale & Brinkman (2009) suggest that using an audio recorder to record the discussion allows the researcher to direct his or her attention to other parts of the interview, such as gestures or facial expressions. Audio recorders are not fool-proof so researchers usually take additional notes during the interview to safeguard themselves and the interview data if something goes wrong with the recorded digital audio data (Kvale & Brinkman, 2009).
The researcher advised the respondents that they could ask that the audio recorder be
turned off at any time and were assured that the data is confidential. Each interview lasted
45-60 minutes. Participants had time to express any other thoughts, comments, or
concerns after completing the interview.

Participant Reflections

At the conclusion of each interview, the participants were asked to reflect on the
interview experience. This provided an opportunity to express thoughts or concerns they
may have that were not discussed in the interview itself. These responses were recorded
along with the interview. Participant reflections added to the understanding of their home
schooling experience and provide more rich details to the study.

Observations

Qualitative researchers often choose to observe participants, settings, behaviors,
etc. in order to collect data. Lindlof & Taylor (2002) state researchers must distinguish
between data that is and is not significant to the study as they conduct observations.
Creswell (2009) suggests an observation strategy which entails a simple note-taking
procedure. The researcher noted the descriptive aspects of the environment on one side of
the page and personal comments and reactions on the other side of the page. For this
study, the researcher noted physical aspects of the setting along with behaviors of the
home schooled students interacting with technology. The researcher’s personal feelings
and impressions of the observation were noted along with the descriptive data.

Lindlof & Taylor (2002) discuss observations as part of a qualitative researcher’s
repertoire in which the researcher is actively collecting data by focusing on the
participant’s behavior and actions while interacting with the phenomenon in a normal setting. Engaging in a discussion during the observation, known as “observer-as-participant,” (p. 149) enables the researcher to obtain the participant’s thoughts or clarification within the setting (Lindlof & Taylor, 2002). Creswell (2009) states that an advantage of researchers conducting observations is recording data in real time, as it happens, which can provide data an interview may not reveal. The researcher conducted semi-structured observations while interacting with the students using technology. Through these types of observations, the researcher surveyed the environment looking for specific things, such as the number of computers in the room, lighting, and other physical characteristics of the environment. During observations, the researcher attempted to note aspects and be open to observing things not necessarily considered a priori.

The physical aspects of the setting are noteworthy and contribute to the data in an effort to gain as complete an understanding as possible of the participant and the phenomenon in the study (Lindlof & Taylor, 2002). Examples include, but are not limited to, furniture, spacing, room temperature, and other objects in the setting that provide a complete picture of the environment (Lindlof & Taylor, 2002).

The researcher observed one student interacting with technology for 15-20 minutes. This amount of time provided the researcher with an idea of how the technology influences the home schooling curriculum. During this time, behaviors illustrating excitement, frustration, anger and thoughtfulness were noted by the researcher. Facial expressions along with other behaviors not specified will be documented in the
researcher’s field notes. The researcher engaged in a discussion with the student and recorded the experience.

Documents

The researcher acquired academic data in the form of standardized test scores for one student who participated in the study. This data is located in the school office and was obtained through the guidance counselor. The documents for this student were used to acquire data on individual home schooling experiences.

Emergent Design

The design of a qualitative research study can have many characteristics. According to Creswell (2009), the design can be identified as emergent because the plan developed at the onset of the study may change after the researcher begins collecting data. For instance, the research questions may change, the methods for collecting data may need adjusted, or the initial characteristics of participants may have to be revisited. Creswell (2009) states that an important concept of qualitative research is understanding more about the phenomenon from the participants themselves and to modify the research as necessary to obtain that information.

Data Analysis

Performing data analysis for qualitative research may involve several phases. Creswell (2009) suggests that the phases do not necessarily occur one after another but often at the same time. After the interviews are transcribed, the researcher attempted to obtain an overall meaning of what the participants think about the phenomena being studied. Once all of the data was read through, the next phase of analysis is known as
coding. Coding is a process by which qualitative researchers assign words or phrases to specific sections of text within a transcript. Afterwards, the researcher can then gather all of the sections of text with similar codes and sort them by theme or category. Themes can then be called findings, which are usually supported by evidence from several individuals. One of the final phases of data analysis is interpreting the data. The researcher must determine what all of the data seems to be saying, if it confirms the literature and if it answers the research questions (Brantlinger, et al.; Creswell, 2009; Kvale & Brinkman, 2009; Lindlof & Taylor, 2002; Rubin & Rubin, 2005).

Transcribing

Transcribing all of the interviews takes care and quite a bit of time. Digital recorders assist researchers in preserving the original context of the statements. After transcribing all of the interviews, the researcher was able to better understand the participants’ viewpoints and thoughts of technology in their home schooling environment. A theme that was uncovered was that technology is an integral part in home schooling and even drives the curriculum itself.

Coding

Coding the data is an important process in a qualitative study. According to Creswell (2009) and Lindlof & Taylor (2002), the qualitative researcher must arrange the information into groups of categories even before making an effort to determine the meaning of the data. Creswell (2009) suggests researchers use categories that would be naturally associated with the data in addition to those that might be unusual and
unexpected. For this study, the researcher generated categories such as the types of technology used and how often technology is used by parents and students.

*Document Analysis*

Locating documents that will contribute meaningful data to a qualitative study is often essential for studies of this type. Brantlinger, et al. (2005) suggests documents should be described clearly and their relevance to the study noted. The board policy regarding admitting home schooling students can be found on the district’s website. If home schooled students are enrolling in the district, exams may be given in order to determine appropriate grade or course placement. The policy regarding home schooling students in general states that the person providing instruction must have evidence of a minimum of completing high school requirements. Written requests for students to be home schooled rather than attend the public school must be made to the superintendent and include information required by the Ohio Administrative Code.

For this study, student’s school records were helpful for identifying and describing the sample, comparing academic ability before home schooling with national home schooling data. These instances were applicable for only one student in the study. The data from these records can be compared with data from other national surveys, such as the National Center for Education Statistics (2010) and the Home School Legal Defense Association (2010b).

*Trustworthiness and Credibility*

Throughout a qualitative study, the researcher may spend a large amount of time with the participants getting to know each of them and learning about their feelings and
views on the specific topic (Brantlinger et al., 2005; Creswell, 2009; Nastasi & Schensul, 2005). Because of this, it is important for the researcher to maintain as much objectivity as possible and not allow personal feelings and opinions to cloud the results of the study itself. There are safeguards a researcher used in order to remain objective during the study. Triangulation, member checking, and thick, detailed descriptions (Brantlinger, et al., 2005; Creswell, 2009) were some techniques employed during this study to promote validity. Other strategies utilized in this study were researcher reflexivity and an audit trail (Brantlinger, et al., 2005). Nastasi & Schensul (2005) suggest using a negative case analysis to check for validity concerns, so this technique was used as well.

**Triangulation**

Triangulation combines different data sources in an attempt to disclose similarities, such as stakeholders, methods, and theory (Creswell, 2009; Lindlof & Taylor, 2002). The more similarities discovered among the data, the greater the tendency to generate accurate and valid conclusions about the data (Johnson, 1997). For this study, parents”, students”, and administrators’“ transcriptions were triangulated to show similarities and differences from diverse perspectives. Triangulation will generally yield convergent or divergent findings. In the case of the latter, divergence may be explained within the context of extant data or provide a reason to collect additional information. The capacity to explain divergence can yield more detailed findings, and an inability to do so suggests a study limitation.
Member Checking

Member checking is performed when the researcher involves the participants in reviewing the transcripts and notes to check for accuracy or discrepancies (Brantlinger, et al, 2005; Brotherson, 1994; Creswell, 2009; Johnson, 1997). Brantlinger, et al (2005) defines member checking with two levels. First level member checking involves the participants reading through the transcriptions of the interviews before final interpretations and analysis of results. Second level member checking involves the participants reading over the researcher’s interpretations and analysis or discussing the interpretations in order to confirm or deny correctness before the document goes to publication. Both levels were used during this study in order to establish accuracy when explaining the participants’ experiences, thoughts, and perceptions. The researcher mailed a copy of the transcripts to the families with stamped, return envelope after each stage of transcribing. The administrators and counselors received copies in their mailboxes at school, each containing a return envelope to the researcher’s mailbox. Corrections involving student names and comments were made per parent’s notations.

Thick, Rich Descriptions

Thick, rich descriptions of data were found in the first-hand experiences of the interviewees (Rubin & Rubin, 2005). When the participants respond to questions or engage in a discussion that provides precise, descriptive information, the researcher can develop a clear understanding of the particular situation or concept. To obtain such details, the researcher must have quality main questions, probing questions, and follow up questions (Rubin & Rubin, 2005). The questions used during the interviews are
critical to gathering the evidence needed for the study. Brantlinger, et al. (2005) believes an adequate number of participant quotes as well as field note descriptions will provide the researcher with evidence to identify and interpret appropriate findings. Participants may use vocabulary pertinent to their situation or topic. This vocabulary may be specific to a particular home schooling family or typical to home schooling families regardless of environment or setting. If some words or phrases are common among the general home schooling population, the results of this study can show transferability in another study.

Reflexivity

A strategy known as researcher reflexivity is beneficial when employed during a qualitative research study (Brantlinger, et al., 2005). Using this strategy, a researcher is able to routinely reflect and comment about the study. During this study, the researcher maintained a journal which contained thoughts, reflections, and other personal notes as a reaction to different parts of the study such as interviews and observations. This approach can point out biases, values, and beliefs of the topic in a qualitative study (Brantlinger, et al., 2005). At the onset of the study, the researcher was assuming that the computer and participating in a curriculum provided entirely online was common among home schooling families. The results of the study provided examples of several types of technology such as DVDs and computer language software that were integral parts of the home schooling program.

Audit Trail

Qualitative researchers utilize an audit trail as an organized method of keeping records of all relevant procedures (Brantlinger, et al., 2005). By maintaining records of
interviews, observations and analytic steps during this study, the researcher monitored time spent to ensure an appropriate amount of time is allotted for each interaction for collecting data. The researcher was careful to allow the participant enough time to respond to questions and to add any other comments to the discussion. During this study, the researcher kept a notebook accessible at all times. This notebook, known as the researcher’s journal, contained the researcher’s thoughts and questions written down at any time throughout the day. Even just a few words jotted down early in the day can be helpful to the researcher when more time can be spent reflecting or developing new thoughts or questions pertaining to the study.

Negative Case Analysis

A negative case analysis enables researchers of qualitative studies to search for data that might disconfirm findings (Lindlof & Taylor, 2002; Nastasi & Schensul, 2005). Providing instances in which the data is clearly not within the underlying, common themes of the study contributes to the believability of the research from the study (Creswell, 2009). In this study, the researcher interviewed parents with children of different ages and a variety of home schooling experiences. Similarities along with differences existed between the home schooling families and are discussed in the results section. The researcher was aware that some data and evidence may not be explainable. With the small sample size in this study, the data was able to be explained.

Researcher Reflections

Because this study is primarily based on the interview process, the researcher is the main instrument for collecting the data. I kept a personal journal documenting my
thoughts and feelings throughout the research process. Ortlipp (2008) describes her experiences in keeping a reflective journal during her doctoral study program and another one while she was conducting her research. She found them to be very therapeutic during both experiences. Reflecting in her journal provided her with a place to voice her thoughts and opinions on paper. This not only allowed her to keep an open mind during interviews but work through ideas and uncertainties. The author felt her journal allowed her to grow as a researcher and added extra insight to her study that would not have been realized otherwise. I felt I had a similar experience both as a researcher and as a person. These personal journals recorded by the researcher are an example of another strategy to safeguard from researcher bias (Johnson, 1997).

The researcher kept field notes during the interviews in addition to notes in a personal journal. Field notes assisted the researcher in transcribing. The personal journal assisted with reflections from interviews. I was excited after each interview, noting especially comments from the participant on topics I hadn’t considered, like the district providing a streamed online version of classes to home schoolers. Thoughts for future questions for possible future studies were recorded in the journal (Creswell, 2009). I thought an interesting research topic in home schooling could focus on students who are home schooled part time and enrolled in a traditional public school part time.

Researchers have specific purposes for conducting a study and will view the phenomenon through a unique lens. This lens, or point of view, is known as the etic perspective (Lindlof & Taylor, 2002; Nastasi & Schensul, 2005). By employing strategies such as the researcher’s journal throughout this study, the researcher will ensure
credibility throughout the study. The researcher may unconsciously bring bias into the study due to the nature of the position of classroom educator having experience working with students previously home schooled. Documenting thoughts, concerns, and opinions could bring these feelings in the open so the researcher could resolve them and not let preconceived notions hinder the data and the study.

Qualitative researchers should consider different viewpoints of the topics relevant to the study. Through an emic perspective, the researcher considers the views of the participants in the study (Nastasi & Schensul, 2005; Lindlof & Taylor, 2002). The researcher in this study took into account the thoughts and opinions of parents, students, administrators. Common themes regarding home schooling and technology emerged from responses from participants within the same group in addition to across the groups. These themes enabled the researcher to generate connections between and among participants.

**Transferability**

The intent of research, according to Malterud (2001), is to share information obtained during a study so another researcher is able to replicate the study in another setting. Providing an adequate description of the study, especially the sample and the results, does not guarantee the ability to be replicated elsewhere. Shenton (2004) states results must be taken in the context they were obtained. Conducting comparable studies in separate locations could demonstrate the value of the original study if similar results were obtained. The results of this study were compared to a similar study conducted in an urban area in the state of New York (Andrade, 2008). Common themes emerged as did unique aspects of this study. Families in both studies began home schooling before
technology provided other curriculum options. One distinct aspect of this study is a student being home schooled part time and attending a traditional public school part time. This aspect may appear in future studies or become the focus of a future study.

Conclusion

This study is unique and the researcher showed that more research is needed in other localities nationally or even globally on the relationship of technology and home schooling. By working with a somewhat small sample size, breadth is sacrificed for depth since more time was spent with each participant to obtain rich details for the study. The reasons these parents have chosen to home school can be examined more closely and then compared with current literature. The results of this study may encourage more research in a different location with possibly a larger sample size. This study may create discussion among other researchers who are interested in the technology and home schooling connection.
CHAPTER 4: RESULTS

Qualitative data collection methods and analyses were used to generate a series of questions to probe for potential connections between the growth of homeschoolers and the use of technology, as evidenced by national statistics and research (Bielick, 2008; Gaither, 2009; Home School Legal Defense Association, 2010; National Center for Education Statistics, 2010; Pawlas, 2001; Princiotta & Bielick, 2006).

Participant Profile

Demographic data was used to describe the participant sample. Data from the questionnaire is comparable to data obtained from the 2000 Census describing the demographics of the area, explained above. Comparisons to the national home schooling are described below. Because the sample of home schooling families in this study is small, it was difficult to make generalizations to a larger population of home schooling families in the district.

Group Size

Descriptive analysis of the questionnaire data (Appendix E) showed that the five families who participated in this study generally represented the larger national population of home schooling families. Seven of the eight parents, or 87.5%, attained a minimum of some college education as compared to 75.4% of national home schooling families (Princiotta & Bielick, 2006). Nationally, 80.8% of students are home schooled in a two-parent family (Princiotta & Bielick, 2006). Three of five families, or 60%, in this study are two-parent households. Characteristics of the group proved to be diverse regarding family size, format chosen to home school and number of years they have
practiced home schooling. Two families noted they were affiliated with a home schooling group.

Four administrators, including the superintendent, and three counselors from the local school district representing the elementary, middle and high schools participated in this study. Inviting administrators to participate in the study was intended to obtain their perceptions regarding home schooling and technology and to determine if any similarities exist between reasons administrators presume parents chose to home school and the factors actually influencing parents to home school. This opens the door to cross-stakeholder triangulation.

Primary Educators

Four home schooling families report that the mother is the currently practicing educator in the home. Two fathers are reported to be the primary educators. Of the five families participating, four mothers and one father were interviewed. Additionally, one family reported that the online teachers were the primary education instructors for the home schooled child.

Two administrators, including the superintendent, who participated in the study are male and two are female. All three counselors are female. The only contact they have with home schooling students and their families is if they enroll in the district. When families choose to home school their children, the paperwork is completed through secretaries, the district office, and the county educational service center.
Setting

Fifteen of the seventeen participants report living in the rural community within the local school district chosen for the study. One family lives within the boundaries of another local school district but is considered to be a part of the one target district.

Ethnicity

All participants, including school personnel, are Caucasian. This statistic relates to the data from the United States Census for this locality which indicates 97.3% of town residents are Caucasian (United States Census Bureau, 2010d). Minorities were unrepresented in this sample as compared to the larger population of home schooling families (Bauman, 2002; Bielick et al., 2001; Grady et al., 2011).

Religion

Item 7 on the questionnaire requested the religious affiliation of the family. Three of the five families reported a specific religious affiliation which included Protestant, Jehovah’s Witness, and Quaker. Studies have shown that many home schooling families are affiliated with a specific religion (Ray, 2009). Item 15 on the questionnaire asked parents to provide their reasons for choosing to home school their children. Religion was not specifically stated as a reason for home schooling. One family was interested in providing a Christian education to their children and reported that the high cost of a private education through a religious affiliated traditional school was a consideration when deciding to home school. This parent mentioned that it was financially feasible to create her own home schooling program to include religious beliefs than to enroll all of the children in a private school.
**Socio-economic Status**

The median income for home schooling families nationwide is between $75,000 and $79,999 (Ray, 2009). Table 1 displays the results of item 4 on the questionnaire.

Table 1

*Estimated Total Annual Income*

<table>
<thead>
<tr>
<th>Annual Income</th>
<th>Number of Families*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below $25,000</td>
<td>0</td>
</tr>
<tr>
<td>$25,000-$49,999</td>
<td>1</td>
</tr>
<tr>
<td>$50,000-$74,999</td>
<td>1</td>
</tr>
<tr>
<td>$75,000-$99,999</td>
<td>2</td>
</tr>
<tr>
<td>$100,000-$174,999</td>
<td>1</td>
</tr>
<tr>
<td>$175,000-$199,999</td>
<td>0</td>
</tr>
<tr>
<td>$200,000-$249,999</td>
<td>0</td>
</tr>
<tr>
<td>Above $250,000</td>
<td>0</td>
</tr>
</tbody>
</table>

*Total number of families = 5

Two families estimate their annual income between the range of $75,000-$99,999 and appears to fall within the national average of home schooling families.

**Marital Status**

Three out of five of the home schooling families in this study report having a two-parent household. Four of the families report their ages being within the range of 30 to 49 years. One participant is a single parent who reported her age as 60+ years.
Education

All home schooling parents in the study reported having a high school diploma. Four of the parents stated they have some postsecondary education ranging from some education to a master’s degree. Two spouses attained an undergraduate degree with additional coursework or training and one spouse attained an advanced graduate degree.

Employment

Of the four parents who responded to the employment question on the questionnaire, two of them work part time and one works full time. The other parent reported being a full-time mother.

Reasons for Homeschooling

Upon coding and analyzing data from item 15 of the parent questionnaire, results revealed participants elected to home school for a mixture of financial, institutional, social and pedagogical reasons. One family who has been home schooling for 12 years chose to do so because financially they could not afford to send their children to a private school. Coding and analysis from parent interview question number 1 indicated that parents in this study elected to home school for a variety of reasons, each unique to their particular situation. While each family expressed the importance of flexibility in a home schooling environment, their reasons for home schooling are diverse. Following is a list of coded reasons. These include:

- public school teachers not promoting a caring, nurturing environment (see institutional code, Appendix I);
- child’s medical issues causing attendance problems (institutional);
- desire for more quality time with family members in addition to the flexibility of schedules to allow for family activities like traveling (social);
- desire to have more control over the content the child learns along with the method of teaching that content based on the individual learning styles of the child (pedagogical).

**Home schooling Experience**

Questionnaire item 10 requested the number of years parents have been home school educators. Parents reported an average of five years of home schooling experience with a range of 1 to 12 years. Three participants reported having three or fewer years of experience in home schooling and two participants reporting they have been home schooling more than nine years. All parents in the study are currently practicing home schooling educators.

**Number of Children Home Schooled per Household**

With a range of one to six children per household, participants reported an average of home schooling two children per household. Regardless of the number of children reported living in the household, all but one family reported educating all of their children at home. One family reported one child attends the local public school and one child is home schooled full-time. One family reported their two children are home schooled part time and attend the local public school part time. The other four children are home schooled full-time.

Of the six children in the study reported as being home schooled, the reported grade levels range from first grade to twelfth grade. Three of the children are reported to
be in high school, grades 9-12. Two are reported to be in middle school, grades 6-8. One child is reported to be at the elementary level, grades K-5.

Daily Time Spent on Schoolwork

Four of the five families reported their child or children spend at least 3-4 hours a day on schoolwork. One family reports spending between one to two hours daily. Two families report their children spending three to four hours a day, including one parent who reported the children spend this amount of time all year as opposed to the nine-month school year of a traditional school schedule. Two families report their children spend more than five hours a day on school work. One family reported that some days the children spend one to two hours on school work and more than five on other days.

Technology Profile

Item 17 on the questionnaire requested information regarding the amount of technology usage within the home schooling program. Three families reported using technology heavily. Heavily was defined as not being able to home school without technology and/or using a range of technologies virtually every day to support their version of home schooling. The other two families reported moderately relying on technology in their home schooling program. Moderately was defined as using some type of computer and/or technology most days to support home schooling and/or still being able to home school without access to technology, but it would be harder to do so. All five families reported using technology to some extent within their program.
Technologies Used

Participants indicated on questionnaire item number 18 that they utilize a wide variety of computer technologies to facilitate or support their home schooling program. Frequency analysis was used in order to determine the range of technologies used by the participants. Results revealed that all participants incorporated at least two different types of computer or communication technologies on a regular basis. Table 2 displays how technology is used in the home school families participating in the study.
Table 2

*Uses of Technology in Participating Families*

<table>
<thead>
<tr>
<th>Uses of Technology</th>
<th>Number of Families*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run interactive software</td>
<td>1</td>
</tr>
<tr>
<td>Locate/purchase home school materials</td>
<td>1</td>
</tr>
<tr>
<td>Communicate with school officials</td>
<td>3</td>
</tr>
<tr>
<td>Access agencies concerning home education</td>
<td>1</td>
</tr>
<tr>
<td>Seek/access feedback on child’s learning</td>
<td>1</td>
</tr>
<tr>
<td>Access online courses and/or instruction</td>
<td>3</td>
</tr>
<tr>
<td>Access instructors, mentors, tutors</td>
<td>2</td>
</tr>
<tr>
<td>Access and/or evaluate child’s progress</td>
<td>3</td>
</tr>
<tr>
<td>Access educational materials, information, resources</td>
<td>5</td>
</tr>
<tr>
<td>Plan/organize materials</td>
<td>3</td>
</tr>
<tr>
<td>Network with other home educators</td>
<td>3</td>
</tr>
</tbody>
</table>

* Total number of families = 5
Technology Applications

Question number 20 on the questionnaire enabled participants to record the variety of applications of the technologies within their program. Table 3 displays what types of technology home schooling families in the study use on a regular basis.

Table 3
Types of Technology Used by Families

<table>
<thead>
<tr>
<th>Types of Technology Used</th>
<th>Number of Families*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total online program</td>
<td>1</td>
</tr>
<tr>
<td>Videos or DVDs</td>
<td>3</td>
</tr>
<tr>
<td>Streamed audio or video</td>
<td>2</td>
</tr>
<tr>
<td>Email</td>
<td>2</td>
</tr>
<tr>
<td>Broadcast/cable/satellite TV</td>
<td>1</td>
</tr>
<tr>
<td>Instant messaging</td>
<td>1</td>
</tr>
<tr>
<td>Productivity software</td>
<td>4</td>
</tr>
<tr>
<td>Educational software</td>
<td>2</td>
</tr>
<tr>
<td>Internet/Worldwide Web</td>
<td>5</td>
</tr>
</tbody>
</table>

* Total number of families = 5

Cost

Data was collected to establish rough estimates of the amount of money spent on home schooling programs. When calculating their estimates, participants were asked to include computer hardware and software, maintenance and upgrades, internet services
and subscriptions. Two families reported spending between $0 and $499, including an online school, Ohio Connections Academy, which is free. One reported spending between $500 and $999. Two families reported spending between $1,000 and $2,499. This data seems to reveal that parents spend various amounts of money on technology for their home schooling programs.

Administrator and Counselor Interviews

For this study, administrators and counselors were interviewed to establish their thoughts in three areas: why they feel parents choose to home school, to determine their perception of technology’s influence on home schooling and their concerns when or if home schoolers enter into the public school environment. These interviews were conducted either in the administrator’s or counselor’s office or in the researcher’s classroom. Pseudo names were used to protect the privacy of the participants.

The administrators and counselors in this study believe that parents choose to home school for many different reasons including convenience, feeling they can provide a better quality education at home, or religious beliefs. The use of technology intertwined with the expectation that parents think they can provide a quality education at home (a point that is further examined below). Results of this study confirmed these presumptions along with revealing other factors that influence parents’ decisions. Counselor 2, for example, commented:

“I would say that it’s a lot of socialization and behavior problems. I believe that with the technology these days, that parents feel like they can pull them out of school and be able to home school them … They think
they can count on the technology to do it.”

Administrators reported that they really don’t have responsibilities to families when they choose to home school other than some paperwork, most of which is completed by school secretaries or someone at a local educational service center. This paperwork is the documentation notifying the district of the family’s intention to home school. Counselor 3 stated that information about the ACT or SAT is shared with the home schooling students who request it. The other counselors mentioned they don’t have any responsibilities or interactions with home schooling families unless they are withdrawing or enrolling their children in the public school. When asked what the responsibilities as an administrator to families who home school, Administrator 2 replied:

“I have none. When they home school they are officially withdrawn.” The administrator was then asked about paperwork regarding home schooling families and he replied, “Not on my end. They have to fill out the paperwork at the educational service center and it has to be approved by the service center’s superintendent.” Other administrators and counselors responded similarly.

Technology’s Effect on Choosing to Home School

Both the administrators and counselors feel technology has had some effect on the number of home schoolers in the local school district. With the advertising of electronic school, online schools providing technology to home schooling families and comprehensive curricula provided in online schools, administrators and counselors believe these factors could entice parents to use online schooling programs.
Administrator 2 remarked, “I got a brochure in my mailbox a couple of weeks ago. “FREE! You can do your schooling online with a computer!” I’d say it’s definitely had an impact.” Administrator 1 had similar thoughts on whether technology makes it easier to home school

“I went to some of the electronic schools and printed off some tests. So it would be fairly easy if you were a parent and had the ability … I think it would be easy, a lot easier than preparing and teaching the old-fashioned way. It just seemed pretty straight-forward. I think you’d have a good feel of where your children are.”

Counselor 1 echoed these sentiments.

“I think it makes it easier, yes, for parents to home school because they’re not having to do all of the teaching because it’s done through the Internet. I believe most of the companies like ECOT [Electronic Classroom of Tomorrow] and those provide software.”

Counselor 2 stated that she feels technology might help families in the district who live quite a distance from the school and don’t want their children on the long bus ride. She said that these families might if they have the capability of „hooking up with the Internet.”

*Home Schoolers Entering the Public School*

When parents withdraw their children from the public school in order to home school them, administrators and counselors reported their concerns include the amount of parental involvement with the child and curriculum along with the amount of structure in
the home learning environment. These administrators and counselors showed agreement on the types of issues or concerns that occur when home schoolers enter into a public school environment. Common responses include whether or not the child is on grade level, ability to socialize with their peers and the difference in the type of structure from the home learning environment to the school learning environment. For the latter, administrators and counselors are curious about whether the home environment is somewhat less structured than the school environment and whether or not the child can adapt to the difference. Counselor 2 stated,

“I think one huge issue is the issue of our structured time and from what I understand … the home schooling for some is a little more unstructured. Going from very little homework to understanding why homework is an essential piece in our setting. It is pretty important to help them bridge that … We’ve had some kids come into our school from home schooling and adapted well and just got right into the flow of the students and the teachers and were just fine.”

Counselor 3 stated that most home schooled students she encounters are behind when they enroll in public school. It is her feeling that the parents are not “standing up to be parents. They’re caving to the students saying, „I want…” and the student not being mature enough to handle it.” Comments like this suggest home schooling parents concerns regarding public schools and their attitudes toward home schooling families are not entirely misplaced.
Technology Used as an Outreach Program

Administrators were asked if they had other thoughts or concerns regarding home schooling and technology (Appendix H). Administrator 1 has interests in providing an online program, which could be linked with the school district, in an attempt to retain the financial connection between the public school and the home schooled students. He stated:

“If they continue to fund schools the way they are, we’ll have to have a concerted effort to have electronic schools. The other thing I think will drive some of this is specialty areas. Chemistry, physics. Those kinds of things. There’s going to be a shortage of those people who teach that subject. And so you’ll probably have to do that electronically. And then maybe have a proctor who can help the kids and do experiments and stuff because there is a decreasing number of students in high school anyway because of birth rates.”

Many home schooled students are enrolled in online programs that do not enable the public school to count them in the school population. Because of this, even though the student lives within the public school district, the state will not provide funding to the local school district for that student. Administrator 2 and Counselor 1 had an idea similar to this one with one difference, the teachers of the local school district would put the courses they teach online and maybe even stream live videos of a class. Administrator 2 suggested online courses offered by the local school district could keep home schooled students within the district and the students would still be counted toward the total student population of the school district. He stated, “So, I think it’s something down the
road we will be looking at as public schools. „How can we offer this course online?” so these kids are still our kids and retain the funding.”

Counselor 2 remarked,

“I know just recently, in the last few years, where they started doing the webcast where they are connected with people in another country. The children can see children. That would be excellent if we could have something like that. That type of technology would be beneficial.”

*Change of Perception*

Counselor 2 shared that after questioning home schooling programs and their validity, she admitted that after working with students with mental and medical issues, she believes there is a place for home schooling in certain circumstances. One family did chose to home school their children, she stated, because of a child’s medical issues. These parents have shared with her that they felt that the public school was not the best educational option for their children who had certain needs and limitations. A home environment, they felt, would best suit their circumstances. She commented:

“… for me, personally, and I have children, home schooling was never an option. But I can’t sit here and say today that home schooling should never be an option because I don’t think that’s necessarily true. There are some and maybe we don’t know all the reasons why they are leaving. I was thinking of a family, the parents as well. There were some real mental health issues … They wanted to regroup to get themselves mentally and
emotionally ready to face the world as it is and the world of school. So there are times when [home schooling] is okay.”

This counselor mentioned that she see home schooling through the eyes of parents in addition to the eyes of a counselor and a former educator.

Cross Stakeholder Triangulation

Data from the administrators’ and counselors’ interviews revealed common thoughts and opinions. This demonstrates that the school officials who participated in this study share ideas towards home schooling and technology’s influence on home schooling. Qualitative researchers are encouraged by results showing commonalities among stakeholders because this presents evidence of corroboration which can give the data more credibility. Divergence among data is equally important. Data showing differences among stakeholders can provide unique perspectives for researchers to take into consideration when analyzing the data itself.

Each family in this study is unique and has individual home schooling preferences. Families are profiled below in order to provide basic background information. Data was obtained from the questionnaire.

Family 1

Family 1 is a two-parent family with two children. Parents are between 30-39 years of age and report to have been home schooling for three years. The children are in first and seventh grades. Their estimated annual income is within the range of $75,000-$99,999. One parent has a high school diploma and some college education while the other parent is a graduate student attending a local university. The family reported their
religion as Protestant. Family time, flexibility, instill a love of learning, positive socialization and one-on-one instruction were as reasons the family ultimately decided to home school. The children spend between one to two hours a day on schoolwork, which does not include partial enrollment in a local school district. The family „moderately” relies on technology for their home schooling program. The term „moderately” was defined as using some type of computer and/or technology most days to support home schooling or they family would still home school without technology access but it would be more difficult to do so. The family reported spending between $1,000-$2,400 each year on computer and/or technology to support home schooling. This includes computer hardware, software, maintenance and upgrades and internet services and subscriptions. The researcher interviewed one parent and one of the children in the researcher’s classroom because it was more convenient for the family at that time. The children are home schooled part time and attend the public school part time.

Family 2

Family 2 is a one-parent family with one child. The parent reported being at least 60 years of age and working full-time outside the home with an estimated annual income within the range of $75,000-$99,999. The student is in 11th grade. The parent reported having attained a Master’s degree and reported „none” when asked about the family’s religious affiliation. The parent reported being a home school educator for one year and listed the primary educators as the online teachers. The student’s medical condition was contributing to attendance issues in the public school in addition to the death of the other parent were stated as reasons for choosing to home school. The student spends one to two
hours a day on some days on home schooling work and five or more hours on other days. The parent reported relying on computers and/or technology „heavily.” The term „heavily” was defined as not being able to home school without technology or using a range of technologies every day in order to support their version of home schooling. This student is enrolled in an online home school program, Ohio Connections Academy. The estimated cost reported spent on computer and/or technology annually was $0-$499. The parent commented that the online home schooling program is free.

**Family 3**

Family 3 is a one-parent family with six children living in the household, one currently being home schooled. The parent reports a being 40-49 years of age, having attained a high school diploma plus some college education and works part time with an estimated annual income within the range of $25,000-$49,999. A religious affiliation was not marked on the questionnaire for this family. This parent reported as being a home school educator for 12 years. The family decided to home school for a “reasonable Christian education price-wise. A private Christian school was unobtainable for us financially in [other city in Ohio] and down here as well.” On average, the student spends between three to four hours a day on school work. This family relies heavily on computers and/or technology. The student uses DVDs from Bob Jones as the home schooling program.

**Family 4**

Family 4 is a two-parent family with two children in the household, only one is currently being home schooled. The parents are 40-49 years of age and have an estimated
annual household income of $100,000-$175,000. One parent reports having attained a high school diploma while the other has an undergraduate degree plus additional coursework or educational training. The family’s religious affiliation is reported as Jehovah’s Witness. The mother is the primary home schooling educator and reports that they have been home schooling for two years. The child who is being home schooled is in sixth grade. Reasons for choosing to home school include the fact that the child “requested it, many social pressures at school, screaming teachers and disruptive students.” On average, the child spends five or more hours on schoolwork daily and the family relies heavily on computers and/or technology to support their version of home schooling. This family reports spending $0-$499 on computer and/or technology related expenses a year. This includes one student who uses Ohio Connections Academy, which is free.

**Family 5**

Family 5 is a two-parent family with two children. Both children are home schooled. One parent works part-time at home and the estimated annual income is within the range of $50,000-$74,000. One parent attained an undergraduate degree and the other attained an advanced graduate degree, which includes a PhD, EdD, CAGS, or something comparable. The religious affiliation of this family was reported as Quaker and they belong to the Redbud Home School Co-op. The family has been home schooling for nine years, with both parents reported as the primary home schooling educators. The students are in grades six and eight. “Superior socialization with diverse people and age groups, the failure of the public schools to apply principles of educational psychology and
developmentally appropriate practices and freedom to meet each child’s individual needs and interests” prompted this family to home school. The students work three to four hours each day, year round, on school work. The family reported using computers and/or technology moderately to support their version of home schooling. The students utilize computer software such as *Rosetta Stone*.

**Parent Interviews**

**Interview Settings**

One family allowed the researcher to enter their home to conduct interviews. The interview for one family was done electronically and in writing. Another parent was interviewed over the phone. The others were conducted in the researcher’s classroom. Due to circumstances unforeseen by the researcher, the observation data was not as detailed as intended for this study because of access issues.

**Interviews**

Table 4 displays the relationship between the pseudo names for parents and pseudo names for students.
Table 4

*Parent Pseudo Names Matched with Pseudo Names for Students*

<table>
<thead>
<tr>
<th>Family</th>
<th>Name</th>
<th>Student Age</th>
<th>Years Home Schooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent 1</td>
<td>Brenda</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student 1</td>
<td>Betsy</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Family 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent 2</td>
<td>Anna</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student unable to participate</td>
<td>17</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Family 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent 3</td>
<td>Amanda</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student 2</td>
<td>Cody</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Family 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent 4</td>
<td>Patty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student 3</td>
<td>Pam</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Family 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent 5A</td>
<td>Dan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent 5B</td>
<td>Beverly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student 4</td>
<td>Sam</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Student 5</td>
<td>Jared</td>
<td>13</td>
<td>9</td>
</tr>
</tbody>
</table>

The researcher taught the three youngest of Amanda’s children in seventh grade in the public school and is familiar with the family. When the youngest child was home schooled again in eighth grade, the researcher contacted Amanda for an interview. Upon entering the house, the researcher noted evidence of teenagers living in the house. Technologies in the form of cell phones, a video gaming system, and a computer were in plain sight. Several teens were home from school watching television and sending text messages on their cell phones. The room to the left upon entering the house was the
location of the computer and small television where Cody is able to do his schoolwork using the DVDs. Both Amanda and Cody were interviewed separately in this room.

There is a comfortable chair as well as a chair at a computer desk available in this room. It was apparent to the researcher after being in the house for 20 minutes that after school, the household was inundated with teenagers constantly coming in and out of the house. When the researcher questioned Cody about when he did his schoolwork, he mentioned that he liked completing it during the day because it was quieter without so many distractions. His older siblings were available if he had questions on the work he had completed during the day. Cody said his siblings and their friends would often help him if he had questions and Amanda was not sure of the answers. The lighting of the room seemed adequate and Cody had enough room to work and focus on his schoolwork. Because the kitchen was connected to this small room, Cody admitted that he does stop for breaks to get something to eat from the kitchen since it is nearby. This room is set up for schoolwork with shelves of books, paper and writing utensils. A small bookshelf contains the DVD case, Cody’s textbooks, and more notebook paper. The temperature of the room was comfortable for the researcher and both Amanda and Cody seemed comfortable. Neither one made comments about being too hot or too cold.

Reasons for Home Schooling

The decision to home school was not one made in haste. The parents in the study each had their own reason for choosing home schooling. Even though the flexibility a home schooling program can afford was a common theme among all five families, the major reasons differed across each individual situation. Anna shared that the decision was
based on the death of the other parent in addition to the child’s medical issue as the main factors for choosing to home school. Patty noted that the child requested to be home schooled due to compounding issues in the classroom. This family deliberated for some time, assessing the situation before finally deciding home schooling would better benefit their child. Patty elaborated:

“My daughter was begging us to in fourth grade. For several years, it seemed the teachers couldn’t control their classrooms. My daughter is a rather quiet child and she didn’t like the constant disorder in the classroom. The few times I went into the classroom [to help out], the teacher was always yelling at someone … I really didn’t want to do it [pull her out of public school], but I did.”

Amanda expressed the cost of private education that included religious content as the reason home schooling was the only option for the family. “Providing a religious education was important to us and I wanted to ensure my children received one without exceeding our financial boundaries.”

The parents in Family 5 expressed concern with public schools inability to apply developmentally appropriate practices and produce citizens who can think critically. Beverly, a college professor, commented that her college students “lack the ability to problem solve or think critically.” They emphasized the ability to choose a home schooling program that will encourage their own children to become critical thinkers. The freedom to provide individualized instruction in a home environment along with raising children who can easily interact with adults are several factors influencing their decision
to home school. Beverly and Dan decided they wanted to be the primary influence in their children’s lives rather than their children’s peers in a public school environment. They felt that

“grouping dozens or hundreds of children the same age together in a school setting creates an artificial environment, complete with its own culture, which can impede and alter a child’s emotional and psychological maturation … Home schoolers, on the other hand, interact regularly with children of all ages and with adults. Our initial desire to home school was prompted by our observation that home school children interact with adults quite easily. That observation continues today in our own children and many of their home schooled friends.”

Factors prompting Brenda to opt for home schooling include more family time, flexibility, instilling the love of learning that seemed to be declining in the public school environment and the ability to choose curriculum that interests her children and can be “tailored to move at a pace that challenges them.”

_Perceived Influence of Technology in the Decision to Home School_

After coding parent responses to question 1 during the interviews, it became apparent that only one family’s decision to home school was based on technology as the primary delivery system of the curriculum. This family specifically mentioned that technology was the primary delivery source of the curriculum. For Anna, being a full-time educator was not conducive with a traditional home schooling program for her son. She felt the only option because of the unique situation was an online home schooling
program. Parents in three families revealed that technology was an influence in choosing to home school. Patty shared that friends who were familiar with and actually used a certain software program recommended it as an option for the home schooling curriculum. Patty reported the first home schooling program that was considered provided a computer and a printer, *Ohio Virtual Academy*. Acquiring these technologies influenced the parent’s decision to home school. Two families commented that since they began home schooling before technology became an integral part of society, it was not a factor for them. Even though technology was not a huge factor when choosing to home school all of the children in the mid 1990’s, it is a “huge blessing” now, says Amanda. The DVD program is a perfect fit for the youngest child in the family, Cody, who is currently being home schooled.

*Choosing a Home School Format*

After deciding to home school their child, parents have to determine which format of delivering content would best suit their child’s needs. Each of the families in this study has chosen a format that reflects their unique situation. Brenda shared that they first decided to home school after the oldest child seemed to lose interest in learning in second grade in the local school district. They home schooled full-time for third and fourth grade utilizing a software program. According to Brenda, “We weren’t sure we were going to continue home schooling so we used a program recommended to us by friends, *Switched On Schoolhouse*. Their children were successful using it so we decided to try it.” When their oldest child, Betsy, was in fifth grade, they decided to enroll both children in the local school district full-time. At the end the following school year, the family made the
decision to home school both of their children part of the day and to attend public school for the other part of the day. Brenda admits that either attending public school full-time or home schooling full-time would be easier for her, but since this arrangement seems to benefit both children, the family will continue with this format. Both children attend the public school for three class periods in the afternoon. Betsy participates in band and cheerleading and attends science and social studies classes. Brenda teaches math, history, and language arts to both children. Betsy’s feelings and opinions about this arrangement are discussed later.

Choosing a format that is completely online was the only option for another family. Anna is a single parent who is also a full-time educator. She felt the home schooling option that was conducive to her family’s needs was a totally online program. “Because of our circumstances, [technology] was the only way to do it [home school]. Traditional schooling wasn’t going to work and since I’m a full-time educator, other home schooling formats are difficult because I’m in school all day. I want to be an integral part of my son’s education, especially if we home school. We like the totally online format. It is comprehensive. I check his assignments when he completes them. I do try to help him with science labs and things like that. This program also grades the assignments and provides online support for both parents and students. I like that.”

Another parent, Amanda, has been home schooling for a number of years. She began with the more traditional approach using manuals and an occasional textbook with
her children. She enrolled her older children in the local school district when they were in high school. Her younger children were enrolled when they were in sixth grade. The youngest, Cody, was home schooled again when he was in eighth grade and is currently home schooled as a ninth grader. In eighth grade, he used a computer software program, the 2006 version of *Switched on Schoolhouse*. Amanda mentioned Cody was able to discover a way to complete the assignments successfully without doing the required reading. He bypassed much of the content and she was concerned that he would have learning gaps. She researched other home schooling formats and programs from a company whose materials she had used in the past from Bob Jones University Press. Amanda discovered a DVD program which they currently use through Bob Jones University Press. Both she and Cody are very satisfied with the program. Cody is doing well and enjoys the DVD format. “It’s stable,” he stated in his interview. He likes that the lessons are 45 minutes long and the structure for each class is consistent. Bob Jones University Press is a resource for home schoolers who are interested in providing a religious-based curriculum for their children (Bob Jones University Press, 2011).

*Successes and Challenges*

Common themes that emerged from the interviews parents consider to be challenging when home schooling include the ability to control and direct their child’s education. Even though much of the curriculum for home schoolers is chosen by a third party, participants explored many curriculum formats and options before choosing one that best suited the needs of their children and family. Several parents stated that in general, the ready-made, prepackaged curriculum provided in online programs can be
helpful to the parent as well as the child. Brenda commented about other families they know who use prepackaged curriculum. “The children love it and are successful using that type of format.” Amanda felt it was important for the child follow a regular school-day schedule and the flexibility with the technology used in the chosen program enables the child to complete school work during the day.

Parents reported appreciating the convenience, flexibility, and organization of the comprehensive home schooling programs as positive aspects. Dan commented that they enjoy witnessing their children become „intelligent, critical thinkers they hope them to be” as something they liked about home schooling. Parents are grateful for the structure that their chosen programs provide, both for their children and themselves. Brenda stated that the ability to “teach history chronologically makes more sense to me and my children than jumping around from time period to time period, which is often how history is taught in the public schools.” By home schooling her children, she feels she has the flexibility to teach her children history in a way they can better understand the concepts and further appreciate why learning history is important. Brenda mentioned that she was exploring education as a major while in college. Due to circumstances at the time, she was unable to pursue this goal. She values the current opportunity to teach her children with the freedom to direct the content and the manner in which the content is delivered to her children.

Keeping their children motivated was a challenge submitted by two families. Patty remarked that “my child seems to do better with someone outside the family than with me because it can be challenging to be strict as a teacher would be in a classroom.”
Another challenge Brenda commented on was the stereotype associated with families who home school their children. She stated that comments like “You’re neglecting your kids.” and “You’re creating FREAKS!” are often made by those who do not home school. Comments made by Counselor 3 mentioned previously regarding her concern that home schooling parents may not be seriously committed to educating their children seems to be an example of Brenda’s comment from non-schoolers. Patty notes that being a home school instructor is a “full-time job but not getting paid to do it.” She was not complaining, merely expressing the fact that the hard work and diligence required to be a good home school educator is a full time job.

Home schooling parents listed several characteristics of home schooling they disliked. These included that the children may be spending too much time with the home schooling parent, “wearing the teacher hat not the mom hat” and the fact that some programs, particularly the programs that are totally in an online environment, suit children who are self-starters. Patty mentioned that she is worried her child may “take on my emotions of the day. If I’m having a bad day, she may react to those emotions which, in turn, can put both of us in a bad mood.” Playing the role of a teacher instead of a parent can be somewhat daunting if a parent is venturing into an area out of their comfort zone, according to Patty, “The separation of mom and teacher is hard. When in teacher-mode, a child can push buttons for the parent to be more lax about getting things done.”

Dan mentioned one shortcoming of being a home schooling family is the fact that it could “limit the income and employment possibilities of at least one of the parents.” In a somewhat similar situation, Anna shares this sentiment because she has to work full-
time, she feels the options available for home schooling for her child are limited. Anna expressed concern about the child’s lack of motivation toward completing schoolwork. She stated that,

“Unfortunately, the online program is the only home schooling option for us at this time and I struggle to motivate my child to engage with the program and become more actively involved in his learning. I feel that programs that are totally online are more for students who are self-starters. My son is not a self-starter. Never has been. I wish I could figure out how to motivate him. There’s really no other way for me to home school him other than through this online program, Ohio Connections Academy.”

Another challenge to home schooling, according to Dan, is “finding enough time in the day to be a teacher, parent, and spouse.” Juggling multiple roles is difficult and attempting to be successful in each of them consistently at different parts of the day can be frustrating for some.

**Benefits of Using Technology Within a Home Schooling Program**

Each family who participated in the study shared positive feedback regarding the use of technology within their home schooling program. While the amount and type varied, each family used some form of technology on a regular basis. The families also feel that technology makes their home schooling easier to manage and it is less time consuming for parents and children. Brenda expressed that not only does the child learn to use a computer and a variety of programs, technology is useful for the parent to organize, plan and locate lessons and activities for the curriculum. Anna noted that if
students are unable to attend the live lessons that are provided and required, there is another option to complete the missed assignment. Amanda, who used VCR tapes in earlier years of her home schooling, experience shared her pleasure to work with the improved technology in the form of DVDs:

“We had stacks and stacks of VCR tapes I used to tape the streaming videos. They were everywhere and unlabeled. It was hard to find exactly what we needed and then rewinding and fast-forwarding was a pain. Now with the DVDs, my child can easily access each lesson and one case can hold a year”s worth of all of the DVDs. Labeled and in one convenient location.”

Amanda stated that the technology they use is able to present the content in a visual form which seems to aide many students, including her children, in comprehending the content. Technology can present students with different types of interaction with content that other resources may not provide to the same degree. Cody is currently studying algebra, science, Spanish, English, and history.

The families who utilize online schooling programs appreciate the fact that the teachers and other online support respond to questions and return graded assignments in the timely manner. Anna commented that “some totally online programs can be very structured. You can”t skip content to go on to a more enjoyable topic. You have to complete everything in order.” Chatting online with other students in the class is helpful for some students to share experiences and ask questions. Amanda remarked that the teachers on the DVDs teach to the camera, looking directly at the student, as if the
teacher was speaking only to that student. She believes this style encourages the student
to be focused on what the teacher is saying without other possible distractions for the
student that may occur in a classroom full of students. Since this program is not
dependent on an internet connection, the child can work if the Internet connection fails or
the family does not have Internet access.

Dan feels technology enables them to have access to a “wide range of subjects,
some of which would be outside our personal ability to teach, such as Spanish language
or college level science.” They believe their children can acquire more in-depth
knowledge through the use of technology. Dan stated that “As we get into more complex
math, we’ll be breaking out the scientific calculators.”

*Computers as Tools*

Parents were asked if they believed computers were great tools to improve the
quality of learning. Brenda stated that computers and technology were great tools, but
only tools. Anna felt that a quality teacher was necessary to give attention to the students
but that the computers provide access to a wide variety of information. Amanda
mentioned that if students are not properly monitored, students could be lead astray using
computers. This parent contends that students in today’s world need a certain amount of
computer and technology experience in order to be successful in most occupations. Patty
stated that the computer enables her daughter to view tutorials which allow her to further
understand lessons and concepts. This is helpful to parents, she believes, if they have a
difficult time explaining certain concepts to their children.
Dan supports the use of a particular piece of foreign language software, *Rosetta Stone*. The parent praised the fact that it is “interactive and employs all of the senses in learning language … mimics learning in the way infants learn speech, by showing pictures with corresponding audio phrases. These are then reinforced by the written phrase.” The parent commented that when curricula are specifically designed for computer use, the technology is a great tool to improve the quality of learning.

**Student Interviews**

*Thoughts About Home Schooling*

Four students were interviewed for this study. Sam and Jared, both children in Family 5, agreed that the flexibility of the schedule and the ability to move at their own pace through curriculum are two aspects they liked most about home schooling. As home schooling students, they feel they can learn the same amount of content in a shorter amount of time compared to a public school schedule. Sam said that with the home schooling format his family choose, he does not have any homework and his lessons are at his own home rather than “completely different place.” Jared likes the fact that their schedule is all year long, even through the summer, but the amount of time spent during the day is a little less than in a public school environment.

When asked what they did not like about home schooling, Cody replied, “I don’t like doing school period. But I have to do this so I do.” Sam made a similar comment, “Nothing specific. The only thing that I ever do not like is the contents of the subjects themselves.” Betsy stated that missing being around friends was something about home school she did not like. Jared shared his thoughts, “I don’t like the fact that I’m not doing
it with my friends.” Another aspect of home schooling that Sam disliked is that “compared to public school, there is less of an incentive to get up out of bed. In public school, taking the bus in the morning is an incentive to get up so you do not miss it.”

**Technology and Home Schooling**

The amount of technology used by each student varied from rarely to daily, depending on the type of home schooling program. Betsy, who is home schooled part time, uses technology primarily to gather more information on certain subjects or topics. By using technology, she is able to access a wide variety of information quickly. Betsy utilizes books because she feels they can provide more in-depth information. Cody, who is enrolled in the program only utilizing DVDs, viewed them every day. He favors the DVDs over reading textbooks because “you just read books. I get bored. With the DVDs, you don’t have to read as much. I can just sit and relax and watch them teach.” Cody stated that even though he uses the DVDs during the day, much like a regular school schedule, he said “It’s not like eight hours of a school day. Reading, reading, reading. My eyes sometimes hurt. With the DVDs, I can pause them and take a break.”

Sam and Jared use similar forms of technology for their program. Both use DVDs and CD players for subjects such as music and math as well educational videos for other subjects. There are even some videos in VHS format that are used by this family. Courses like Spanish are done using computer software. Sam uses both his iPad and the personal computer for his schoolwork, specifically writing assignments. Assignments are emailed upon completion for several students.
Each of the students shared positive feedback when asked if they liked using technology. Sam and Jared both feel they can learn more than their parents are able to teach them by using technology to access more information. Sam mentioned that technology is “fun to use for non-school purposes.” Jared felt that technology seems to make the learning easier for him. He feels that because he likes using technology, it helps him pay more attention to the lessons and assignments.

**Returning to Public School**

Students were asked their thoughts and feelings about possibly returning to a regular school environment full-time. Betsy liked the flexibility attending public school only half of the day and spending one-on-one time with her mother the other half of the day. She feels this option best suits her needs and does not foresee attending a public school full-time. Cody stated that maybe he would return full-time as a junior or senior in high school to be with his friends and possibly participate in sports. He is currently in ninth grade.

**Standardized Test Scores**

Research has shown that home schooled students tend to score above average and above students in traditional school environments on standardized achievement tests (Collom, 2005; Ray, 2011; Rudner, 1999). Several students who participated in this study were enrolled in the local public school for a period of time. Betsy’s records are accessible to the researcher, since she is home schooled part time and attends the local school district part time. On standardized tests administered in kindergarten, Betsy scored in the 61st percentile in reading, 75th percentile in language, and 99th percentile in math.
In second grade, she scored 67\textsuperscript{th} percentile in science and 99\textsuperscript{th} percentile in math and social studies. Betsy was then home schooled for several years. When returning to the public school in fifth grade, her scores in reading were considered accelerated and scores in math, social studies and science were considered in the advanced range, advanced being the highest level of academic achievement. Betsy scored in the accelerated range in reading and advanced range in math on the sixth grade standardized achievement tests. Ray (2010) reported that most studies conducted on home schoolers and their academic achievement maintain that home schoolers standardized test scores generally fall between the 65\textsuperscript{th} and 80\textsuperscript{th} percentile. The national average of non-home schooled students is the 50\textsuperscript{th} percentile. Betsy’s scores are within the range of home schooling students.
CHAPTER 5: DISCUSSION

Summary of Results

The essential purpose of this research was to determine the influence, if any, technology has when parents choose to home school their children. Two questions primarily guided the study: To what extent does technology appear to influence the decision of parents and guardians in rural areas to home school their children? If it does, what other ways does technology appear to influence home school environments?

In response to the first question, results suggest that technology is a factor of influence in some home school environments. The range of influence includes a major factor, representing a student who is enrolled in a totally online program, to not a factor at all because technology was not considered when the family decided to home school. Results showed that, in fact, other factors such as dissatisfaction with the current state of the local public school and the financial cost for a private education to weigh more heavily when choosing to home school their children. When deciding to home school, three families considered it and use technology on a regular basis as part of their program. For two families, technology was not a factor in their decision because they began home schooling before modern technology provided more home schooling options. Both of these families currently use technology as an integral part of their program.

The extent of the amount and type of technology incorporated in home schooling programs vary among the families in this study. Regarding the second question, technology seems to be used for a wide range of purposes, including researching the Internet for more information about a topic to completing assignments online and sending
them through electronic mail or other specified locations where the teacher can receive and grade them. Several families use DVDs and software programs to supplement their curriculum.

Home Schooling Families

Technology’s Influence

Upon interviewing the four families in this study, it was interesting to discover the range of technology’s influence and use in home schooling in such a small sample of participants. For Anna, technology provided the only option for home schooling. A program offered totally online was the best solution for a single-parent family, the parent being a full-time educator in the local school district and unable to be a full-time home educator. Amanda began home schooling before the use of computers and the availability of the Internet became such an integral part of society. Cody currently uses technology in the form of DVDs which demonstrates that technology use has come full-circle for this family. The other three families use technology on more of an as needed basis. Betsy uses the Internet to research information and Pam and her mother Patty use the Internet to supplement lessons and locate other resources with which to teach concepts. Other children use DVDs, software programs, and VHS tapes to supplement lessons.

Comparisons to Another Study

In order to establish triangulation among similar studies, results from this study was compared to a similar study conducted in a geographically different location. Both studies revealed that technology is an influence in a variety of ways within home schooling programs. The results from Andrade’s study (2008) revealed that some
participants were influenced by the Internet and the web to home school their children. The Internet provided resources and information for these participants. One participant in Andrade’s study commented that the Internet made her more aware of home schooling opportunities. In this study, one family relies on a totally online program as the home schooling format.

Both the participants in this study and in Andrade’s study (2008) agree that technology makes the ability to home school their children easier. Parents state that for certain courses, such as high school science or math, technology in the form of software, DVDs, and Internet resources have enabled their children to participate in these courses. Without the technology, parents admit, these courses would be more challenging for them to teach their children, mostly because as parents, they are not particularly strong in these areas.

What the Demographics Reveal

Even though the sample size for this study is very small, the demographics of the participants in this study do compare to the national home schooling population. According to Ray (2009), the average income for home-educating families was $75,000-$79,999. Two of the five families in this study reported their income being within the range of $75,000 and $99,999. Approximately sixty-three percent of nationally home schooling parents had achieved a minimum of a bachelor’s degree (Ray, 2009). In this study, 62.5% of parents, including spouses, have achieved a minimum of a bachelor’s degree. According to the study conducted by Klein and Poplin (2008), 57.6% of home schooled children spend 3-4 hours a day on schoolwork. Results of this study reveal 40%
of the children spend the same amount of time daily. Home schooling families within the
district who do not fall into these demographics may have been some of those who did
not return the researcher’s phone calls or mailings. They may have needed another type
of strategy, such as a recommendation from a participant, to be recruited for this study.

Technology Profile

Each of the families in this study uses some form of technology on a regular basis.
By comparing technology between families, a form of triangulation is used to display
similarities and differences. Three families reported on the questionnaire that they rely on
technology heavily, meaning that they could not home school without it and use a range
of technologies on a daily basis to support their home schooling format. The other two
families reported using technology moderately, the second level choice on the
questionnaire. This level of technology use is defined as in utilizing some type of
computer and/or technology most days to support home schooling. These families admit
that they could still home school without the technology but it would be more challenging
to do so.

Motivations for Home Schooling

Recent studies (Collom, 2005; Klein & Poplin, 2008) have revealed reasons why
home schooling parents chose to home school. Reasons include parents feeling they can
provide more academic opportunities for their children in a home environment, have
greater flexibility of schedules and content and have greater control over their child’s
education. Results from this study indicate that parents in a locality of Southeast Ohio
have similar reasons for home schooling their children. In addition, one family chose to
home school because of the cost of a private education which included religious content was not financially possible.

Administrator and Counselor Interviews

Kozlowski’s study (1999) interviewed school officials, including superintendents, and home schooling parents about their thoughts on home schooling. Public school officials expressed concerns over the amount of content that is covered in the home environment and if students are really receiving a comprehensive education, as they would in a traditional school. Because states create their own mandates for education, each state develops their own regulations for the home schooling in that state (Kozlowski, 1999). The administrators and counselors in this study share the concern found in Kozlowski’s study. In the state of Ohio, home schooling requirements include an annual notification by the parent to the appropriate superintendent, 900 hours of instruction and one of three acceptable forms of assessment (Home School Legal Defense Association, 2010e). Even though home schooling parents are required to submit the curriculum they will be teaching, administrators and counselors still wonder about the amount as well as the quality of the content being taught in the home environment. Results on this study indicate that the administrators and counselors are also concerned with home school students working at least at their grade level and the type of structure and discipline in the home environment.

Thoughts on the Future of Home Schooling and Technology

The final interview question for the administrators and counselors was open ended to encourage creative responses. The question targeted other thoughts on home
schooling, home schooling and technology, or home schooled students returning to the public schools. The responses appeared to focus on district educators delivering their courses in an online format in addition to teaching in the classroom. The administrators and counselors felt that if the local school district could offer courses to home schooled students, they would not be inclined to enroll in other online programs. This would enable the local school district to keep retain the students as part of the school population and in turn, receive state funding for that student. Anna suggested using other forms of technology such as classroom webcams, which could be part of the educator’s online course.

Student Thoughts and Opinions

Each of the students who participated showed an interest in utilizing technology within their home schooling programs. For one student, technology was the main source of content delivery. For others, computers assisted in seeking more information through the Internet. The students seemed to appreciate the options technology afforded them. The student who uses the DVDs enjoys viewing them and feels he is more attentive and does well on assignments.

Findings

Accessing Home Schooling Families

As a researcher, I experienced difficulties when attempting to contact and recruit home schooling families. Recent studies, discussed earlier, and this study cite parent’s dissatisfaction with public schools as a reason for home schooling their children. Some parents I attempted to contact may view me as an outsider because I am part of the K-12
community or associate me with the reason they withdrew their children from the
parents who choose to home school their children cite reasons they feel the public school
has not lived up to the parent’s standards for education. Lack of discipline, inadequate
standards and safety are among reasons parents dislike public school education.

According to Lines (2000), home schooling families are reluctant to participate in
surveys, particularly from the government, but are more willing to answer questions from
home schooling affiliates. Lines (2000) reports that a significant number of home
schooling families are hesitant to cooperate with researchers due to the family’s
educational philosophy. Due to the fact I am not affiliated with the home schooling
community and I am conducting research as a doctoral student, parents may have been
unwilling to share their experiences with someone who is an outsider in their eyes.

Andrade’s study (2008) conducted in an urban area in another state had less
complications when recruiting because the researcher was considering home schooling
his children and was interested in acquiring information from home schooling families.
He began recruiting participants twelve months prior to conducting interviews and
collecting data for the study. The participants were his personal contacts or contacts made
through friends.

“During the year-long cultivation of relationships before the research was
approved, I was able to gain the confidence of a few key leaders of the
local homeschool groups who were known and trusted by their own and
other local homeschool communities. With the help of these individuals,
who vouched for my credentials as a de facto homeschooler and my good intentions as a researcher, I was able to recruit a sufficiently representative number of participants.” (p. 69).

Andrade commented that “unsolicited cold calls and invitations for participation proved to be a rather unsuccessful approach for recruitment in this research.” (p. 70).

Dan, who communicated with the researcher via email, commented that he was more forthcoming in writing than he would have been in person. An interview was initially scheduled with Dan and his sons, but because of scheduling conflicts and forgetting the day and time of the scheduled meeting, Dan suggested conducting the interview with Skype. Skype is an application that enables a personal computer to be used as a telephone in order to communicate using the Internet (Educause Learning Initiative, 2007). The researcher was not able to interview in this manner. Dan and his sons agreed to answer the interview questions on a word document sent as an email attachment.

Practical Implications

One of the outcomes of the research was identifying a connection between home schooling and technology. Various forms of technology were utilized within the families of this study. It was evident that technology was an integral part of the home schooling program of these families, whether it was in a total online home schooling program or using Internet resources for supplementing content. With computers and computer access becoming more prevalent and financially more affordable, home schooling families have more options when choosing a program and curriculum for their children. The fact that
technology is becoming more portable, in the form of iPads and Smart Phones, students, regardless of where they are educated, have more opportunities to conduct research and complete assignments from many locations. For home schooling families who travel regularly, portable technologies enable the students to working on their assignments in the car or on the plane while they are away from home. These factors could have an effect in the future on the number of home schoolers and the programs used to facilitate the curriculum.

The Bigger Picture of Home Schooling

Even though technology appears to have an influence on home schooling, traditional school settings will still maintain a consistent student population (Hill, 2000). Technology will continue to improve and affect society, especially in education, where entire curricula can be provided in an online environment. The question regarding technology and education focuses on the quality of the delivery and the content itself. In home schooling environments, administrators and counselors are concerned whether or not the children are being educated or if technology is a glorified babysitter. Technology can prove to be inspirational to many students, either home schooled or traditionally schooled. The manner in which technology is utilized varies from household to household as does the type of technology. Inevitably, the adult has the authority to decide how and when technology is integrated within the home schooling environment.

Recommendations for Further Research

The results of this exploratory study generated more questions than answers. Does this small sample of participants represent the larger population of the home schooling
families in this locality? What are the thoughts and concerns of students who are enrolled in a totally online program? Although, the findings illustrate a number of different paths of inquiry other researchers might take into consideration in order to further develop the understanding of the connection between technology and home schooling. One path may focus on students enrolled in completely online programs. Another path could further investigate students who attend public schools part time and participate in home schooling part time.

Students with special needs and who are home schooled were not represented in this study. This is another path that could be explored further. Little research exists on the topic of students with special needs who are home schooled. Technology may be a factor in home schooling these students more so than other students. A larger sample in a different geographic location may reveal more information about this unique student population.

Rural areas are an untapped resource of information regarding home schooling. Based on the amount of research available in order to prepare for this study, more studies need to be conducted in rural areas. Results of a study conducted by Johnson & Strange (2007) stated the number of students living in rural areas across the United States is 440,000. This number is enough to warrant future studies investigating home schooling families within this population and if technology has an influence in their home schooling program.

An interesting aspect to investigate for future research could be what can be learned from home schoolers to improve public education? Parents in this study as well
as many others have cited issues with public schools as reasons for choosing to educate their children at home. Research has shown that home schooled students score very high on standardized tests. Even though many home schooling environments do not have 20-25 children in one room, as many classroom across the country do, but maybe there are characteristics from smaller environments that could be useful and effective in a regular public school classroom.

One student in this study is home schooled part time and attends traditional public school part time. Future researchers could examine the amount of technology used in these unique situations. The National Center for Education Statistics (2011) provides data displaying the amount of part time home schoolers over an eight year period. In 1999, 153,000 of 850,000 home schooling students were home schooled part time. The number of part time home schoolers increased to 198,000 out of a total of around 1.1 million home schooled students in 2003. The most recent data provided from 2007 shows that the number of part time home schoolers increased again to 242,000 out of a total of 1.5 million home schooled students (National Center for Education Statistics, 2011a). Cooper and Sureau (2007) discuss a court case in which parents applied for home schooling and wanted their children to attend public school part time and the legal struggle the family encountered. The authors state that laws regarding the rights of home schooling families can be somewhat vague in certain instances. According to this article, the U.S. 10th Circuit Court of Appeals sustained the school”s right to refuse home schoolers attending public school on a part time basis (Cooper & Sureau, 2007). Future studies could
examine why students are home schooled part time and enrolled in public school part time.

Validation

The extent of the research should be broadened to include a larger representation of families who home school from urban localities. In addition, minorities and ethnicities may be represented within a larger population of home schoolers in an urban area. According to the National Center for Education Statistics (2011b), recent data from 2007 revealed that the percentage of African American home schooled students in relation to the total number of home schooled students was 4%. Hispanic students made up 10% of the total number of home schooled students.

Limitations

The research was limited by the recruitment of participants from a list of home schooling families who were willing to volunteer. Even though the home schooling population for the local school district included over 30 families, only four volunteered to participate. One additional family resides in a neighboring district but the parent is a colleague of the researcher. This sample of five families, while it demonstrates characteristics of the general home schooling population, is rather small and a larger study might highlight more evidence of technology as an influence in home schooling. Future research should include more than one school district in the study if possible in order to enlist a greater number of participants.

Gender and the location were somewhat limited this study. The primary home schooling educators were female. In a study in which a greater number of males were the
primary educator, results could reveal a different perspective on home schooling and technology. The rural area in which the study was conducted also limited results. Two families confirmed belonging to a home schooling group, or cohort. One parent even mentioned belonging to one in a larger city before they moved to this locality. A study conducted in an urban area may reveal more home schooling groups and a different outlook on the inclusion of technology within their program.

Qualitative studies require time and patience, especially on the part of the researcher, due to the nature of this type of research. Recruiting the participants, the interview process, including follow-up interviews, and transcribing the interviews are time consuming processes but major components in qualitative studies. This study was limited on time and would have benefitted from follow up interviews to obtain more information and possibly contacts to more home schooling families. More in-depth interviews could have provided more of an insight into how home schooling families perceive technology as a part of their home schooling program and possibly created a more comfortable relationship between the researcher and the participants. This sense of comfort may have enabled the researcher to visit the families in their homes and observe the students interacting with technology. The fact that only one family allowed the researcher in their home limited the observations for this study. Observing students interacting with technology in their own homes would have afforded the researcher a different perspective of the technology as it is actually used in the environment. Creswell (2009) states that the more time spent with the participants in their own environment, the more accurate the data for the study.
Transferability

As stated previously, results from this study can be used to compare and contrast results from other studies. A rural setting was the focus of this study. Future studies in similar or different settings could present comparable results. The researcher compared data from this study to Andrade’s study (2008) conducted in a different geographic location. Researchers interested in exploring the influence of technology in home schooling programs can develop a new study utilizing the methodology and suggestions from this study. Further examination of home school students who are enrolled part time in public schools and home schooled part time could be explored in future studies.

Researcher’s Final Thoughts

At the onset of this study, I was not aware that there were two lists of home schooling families. One list included families who home school using any number of programs and methods to educate their children and another list includes families who are enrolled in programs that are totally online. This was the first discovery of my study. The e-learning list displays families whose children are enrolled in online programs that provide some amount of funding per student to the public school.

I was anticipating discovering interesting information from the participants reflecting findings from other studies and something new and unique for this study. I anticipated a low response during the recruiting phase, but I did not think I would only have five families who were willing to participate. I focused on one school district because I thought that a few of my former students who were on the district list of home schooling families might be interested in speaking with me. Since I got married after I
had these students in class, they might not have been familiar with my married name and therefore did not want to speak with someone they did not know. In an effort to ease the mind of the families, I sent a mailing to the families which included the interview questions, hoping if they knew what I was interested in learning, they would be more willing to volunteer for my study. After rereading portions of Andrade’s study (2008), without some type of link to home schooling families, it is challenging to make a connection in an effort to get someone to share their experiences.

Upon completion of the study, I feel I may have lost opportunities in networking with other home schooling families. If I had done follow-up interviews, I may have been able to establish a more comfortable relationship with the participants, which could have led to observations in the family’s home and/or names of other home schooling families who might be interested in sharing their experiences with me. With the deadline for this study getting closer, I unfortunately did not have much time to schedule more interviews.

Through this study, I had hoped to discover a variety of uses and forms of technology incorporated in home schooling programs. I was pleased that even within my small sample size, the families in my study do in fact use different forms of technology and rely on technology for various applications. I believe this study informs the reader of the connection between technology and home schooling and provides a basis for future studies to explore this same topic.

Summary

Results from this study demonstrate that technology seems to influence many families when they decide to home school. The families in this study use a variety of
technology in unique situations. One family utilizes an online program while another uses DVDs. All of the families use the Internet as a resource. The families compare to the national population of home schooling families in a number of characteristics including reasons why they chose to home school, estimated household income and levels of education attained by parents.

Administrators and counselors in this study provided their perspectives on home schooling and how they feel it affects public schools. One counselor shared that her opinion of home schooling has changed over the years because she has encountered a family in which home schooling was a necessary option. Administrators shared their visions of the future in which technology can provide more opportunities to retain a connection to the home schoolers within the district. Examples include online courses from the teachers in the district and using webcams or other digital resources to present courses.

Parents in this study appear to be very involved in their children’s education. Several state that technology enables them to expand their knowledge in certain content areas where they are not as strong in order to provide a well-rounded curriculum to their children. The students enjoy being home schooled and appreciate the advantages technology affords them in their programs.

Each family discovered how technology can enhance their home schooling program, provide the individualized curriculum parents seek and enable the students to work at their own pace in an environment which they deem as fun. Future studies could
explore how new, innovative technologies influence home schooling and how they are incorporated in home schooling programs.
REFERENCES


  
  [http://www.amazon.com](http://www.amazon.com)


  
  [http://www.ohiolink.edu/etd/view.cgi?ohiou1204138318](http://www.ohiolink.edu/etd/view.cgi?ohiou1204138318)


APPENDIX A: RECRUITMENT TOOL

Telephone Script

I will rely primarily on telephone calls to initiate contact with potential participants. Home schooling parents I knew personally will attempt to contact other home schooling families within the school district in an effort to make the other parents feel comfortable participating in this study. Whether or not initial contact is made through a parent I know, I will contact the family and generally adhere to this script:

Hello. My name is Kerry Bullock. I am a seventh grade teacher in the local school district. I am also a doctoral candidate in the Instructional Technology program at Ohio University. I am calling to inquire if you would be interested in participating in a research project on the use of technology in home education.

The purpose of the study I am conducting is to understand the relationship between technology and home education. Participation involves a willingness to discuss your unique home education program with me during an interview. The interview will last for about an hour and will be audio recorded. I would also like to interview your child or children who are educated in your home. Your participation is voluntary and you will not receive any compensation for participating.

My hope and goal for the interviews is to explore the relationship technology has with home education and if it is a determining factor when choosing to educate children in the home environment.
If you agree to participate and have any questions during the study, I can be reached at 740-753-1440. You may also contact my faculty advisor, Dr. Teresa Franklin, at Ohio University by email at franklit@ohio.edu or by telephone at 740-593-4561.
APPENDIX B: PARENT/GUARDIAN CONSENT

PARENT/GUARDIAN CONSENT FOR PARTICIPATION IN AN OHIO UNIVERSITY EDUCATIONAL RESEARCH PROJECT


PURPOSE OF THE RESEARCH STUDY: The purpose of this study is to explore how technology impacts home schooling environments.

WHAT YOU WILL DO IN THE STUDY: Prior to the study, you will complete a questionnaire about yourself and your home schooling program. During the study, you will be interviewed for approximately 1 hour. The researcher will observe your child interacting with technology if it is part of the home schooling environment.

TIME REQUIRED: Each interview will take approximately 1 hour.

RISKS: There are no known risks.

BENEFITS: There are no known benefits to you beyond the sharing of your unique home schooling environment as a contribution to the study.

CONFIDENTIALITY: The information you provide in the study will be handled confidentially and your information will be assigned a pseudonym. Your name will not be used in any report; information you provide will not be shared with anyone and will be destroyed upon completion of the study.

VOLUNTARY PARTICIPATION: Your participation in the study is completely voluntary.

HOW TO WITHDRAW FROM THE STUDY: You may withdraw from this study at any time by telling the researcher or the researcher’s advisor.

PAYMENT: You will receive no payment for participating in this study.

WHO TO CONTACT IF YOU HAVE QUESTIONS ABOUT THE STUDY:
Kerry Bullock, Graduate Student, College of Education, Ohio University, Athens, Ohio, 45701. Telephone (740) 591-1604. email: kk272294@ohio.edu

Dr. Teresa Franklin, Faculty Advisor, College of Education, Ohio University, Athens, Ohio, 45701. Telephone (740) 593-4561. email: franklit@ohio.edu
If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

AGREEMENT: I ________________________________ agree to

Print Name

participate in the study described above.

Signature:_________________________________________ Date: __________
APPENDIX C: PARENT/GUARDIAN CONSENT FOR STUDENT PARTICIPATION

PARENT/GUARDIAN CONSENT FOR STUDENT PARTICIPATION IN AN OHIO UNIVERSITY EDUCATIONAL RESEARCH PROJECT


I invite your student to participate in the research study named above. Before you can decide whether or not to allow your student volunteer for this study, you must understand the purpose, how it may affect your student, any risks to your student, and what is expected of your student.

Your student’s participation is entirely voluntary;

You may decide to not allow your student to participate or to withdraw your student from this study at any time;

If you decide to withdraw your student from the study, please notify me or my advisor;

If the study is changed in any way, which could affect your student’s participation, you will be told about the changes and may be asked to sign a new informed consent;

WHAT YOUR STUDENT WILL DO IN THE STUDY: During the study, your student will be interviewed for approximately 30 minutes. Your student will observed for approximately 20 minutes interacting with technology.

TIME REQUIRED: Each interview will take approximately 30 minutes.

RISKS: There are no known risks.

BENEFITS: There are no known benefits to your beyond the sharing of your unique home schooling environment as a contribution to the study.

CONFIDENTIALITY: The information your student provides in the study will be handled confidentially and your student’s information will be assigned a pseudonym. Your name will not be used in any report; information you provide will not be shared with anyone and will be destroyed upon completion of the study.

WHO TO CONTACT IF YOU HAVE QUESTIONS ABOUT THE STUDY:

Kerry Bullock, Graduate Student, College of Education, Ohio University, Athens, Ohio, 45701. Telephone (740) 591-1604. email: kk272294@ohio.edu
Dr. Teresa Franklin, Faculty Advisor, College of Education, Ohio University, Athens, Ohio, 45701. Telephone (740) 593-4561. email: franklit@ohio.edu

- If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

AGREEMENT: I agree to allow _________________________________________ to participate in the study described above.

Signature: _________________________________ Date: ___________

Print your name: ____________________________________________
APPENDIX D: STUDENT PARTICIPATION CONSENT FORM

STUDENT PARTICIPANT CONSENT TO PARTICIPATE IN AN
OHIO UNIVERSITY EDUCATIONAL RESEARCH PROJECT


PURPOSE OF THE RESEARCH STUDY: The purpose of this study is to explore how technology impacts you in a home schooling environment.

WHAT YOU WILL DO IN THE STUDY: During the study, you will be interviewed for approximately 30 minutes. The researcher will observe you interacting with technology if it is part of the home schooling environment.

TIME REQUIRED: Each interview will take approximately 30 minutes. Each observation will last approximately 20 minutes.

RISKS: There are no known risks.

BENEFITS: There are no known benefits to you beyond the sharing of your unique home schooling environment as a contribution to the study.

CONFIDENTIALITY: The information you provide in the study will be handled confidentially and your information will be assigned a pseudonym. Your name will not be used in any report; information you provide will not be shared with anyone and will be destroyed upon completion of the study.

VOLUNTARY PARTICIPATION: Your participation in the study is completely voluntary.

HOW TO WITHDRAW FROM THE STUDY: You may withdraw from this study at any time by telling the researcher or the researcher’s advisor.

PAYMENT: You will receive no payment for participating in this study.

WHO TO CONTACT IF YOU HAVE QUESTIONS ABOUT THE STUDY:

Kerry Bullock, Graduate Student, College of Education, Ohio University, Athens, Ohio, 45701. Telephone (740) 591-1604. email: kk272294@ohio.edu

Dr. Teresa Franklin, Faculty Advisor, College of Education, Ohio University, Athens, Ohio, 45701. Telephone (740) 593-4561. email: franklit@ohio.edu
If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

AGREEMENT: I ______________________________ agree to

Print Name

participate in the study described above.

Signature: _____________________________________________________________________ Date: ___________
APPENDIX E: PARENT/GUARDIAN QUESTIONNAIRE

Please take a few minutes to complete the following questions. The purpose of the questionnaire is to provide some basic information to the researcher about you as a home educator.

Your responses to the questionnaire will be confidential and will not be shared with other participants in the study. Questionnaires and your individual responses will be destroyed upon completion of the research. Thank you for your time and participation.

Section 1: Participant Profile

1) How old are you? How old is your spouse, if applicable?

___ younger than 20    ___ younger than 20
___ 20-29    ___ 20-29
___ 30-39    ___ 30-39
___ 40-49    ___ 40-49
___ 50-59    ___ 50-59
___ 60+     ___ 60 +

2) What is your race/ethnicity?

___ African American
___ Asian
___ Caucasian
___ Native American
___ Non-white Hispanic
___ Other (please specify) _______________________________________

3) What is your employment status?

___ Work full-time
___ Work full-time (occasionally at home)
___ Work full-time (at home)
___ Work part-time
___ Work part-time (at home)
___ Full-time mom, dad, grandparent
___ Unemployed
4) What is your estimated total annual household income?

___ Below $24,999  ___ $100,000-$174,999
___ $25,000-$49,999  ___ $175,000-$199,999
___ $50,000-$74,999  ___ $200,000-$249,999
___ $75,000-$99,999  ___ Above $250,000

5) What is your highest attained educational level?

___ Some high school
___ High school diploma
___ High school diploma, plus some college education
___ Undergraduate degree
___ Undergraduate degree, plus additional coursework/educational training
___ Master’s level degree
___ Advanced graduate degree (PhD., EdD., CAGS, etc.)

6) If applicable, what is the highest educational level of your spouse?

___ Some high school
___ High school diploma
___ High school diploma, plus some college education
___ Undergraduate degree
___ Undergraduate degree, plus additional coursework or educational training
___ Master’s level degree
___ Advanced graduate degree (PhD., EdD., CAGS, etc.)

7) What is your religion?

___ Catholic  ___ Jewish
___ Protestant  ___ None
___ Other (please specify) ____________________________________________

8) Are you currently affiliated with a home schooling group?

___ Yes  ___ No

If yes, please write the name of the group ___________________________________
9) What is your status as a home educator?
   ___ Currently practicing educator    ___ Former home schooling educator

10) How many years were you or have you been a home school educator? ________

11) How many children live in your household? ________

12) How many of your children are/were educated at home? ________

13) Who are the primary education instructors for your child/children? (Circle all that apply.)
   ___ Mother    ___ Father    ___ Grandparents
   ___ School-based educators
   ___ Other (please specify) _________________________________________

14) What are the grade levels of the children in your household who are home schooled?

   ___ K    ___ 3    ___ 6    ___ 9-10
   ___ 1    ___ 4    ___ 7    ___ 11-12
   ___ 2    ___ 5    ___ 8

15) List the reasons you and your family ultimately decided to educate your child/children at home?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

16) On average, how much time does your child/children spend doing schoolwork daily?

   ___ 1-2 hours    ___ 5+ hours
   ___ 3-4 hours
Section 2: Technology Profile

17) To what extent do you and your family rely on computers and/or technology?

_____ **Heavily** - We could not home school without it; we use a range of technologies virtually everyday to support our version of home schooling

_____ **Moderately** - We use some type of computer and/or technology most days to support home schooling; we would still home school without access to technology, but it would be harder to do so

_____ **Somewhat** - We use computers and/or technology occasionally to support home schooling in our household

_____ **Minimally** - We use computers and/or technology minimally in our household; computers and/or technology are not a central part of our home schooling

_____ **Not at all** - We do not use computers and/or technology to support or facilitate home schooling

18) Which of the following computer and/or technologies do you use to facilitate, support, or enable your capacity to home school? (Check all that apply.)

_____ Internet/World Wide Web  _____ Email

_____ Educational software  _____ Streamed (audio, video)

_____ Productivity software (e.g., word processing, spreadsheets, etc.)

_____ Instant messaging (text) (e.g. AOLIM, Facebook, Twitter, etc.)

_____ Broadcast/cable/satellite TV  _____ Videos/DVDs

_____ Other (please specify) _______________________________________________

19) How much do you estimate you spend on computer and/or technology each year to support home schooling (include computer hardware and software, maintenance and upgrades, internet services and subscriptions)?

_____ $ 0-$499  _____ $5,000-$9,999

_____ $500-$999  _____ $10,000 +

_____ $1,000-$2,499

_____ $2,500-$4,999
20) In what ways do you need to use computer and/or technology? (Check all that apply.)

___ Network with other home educators and groups
___ General administration (planning, organizing materials, etc.)
___ To access educational materials, information, resources
___ To assess and/or evaluate child’s progress
___ Access online courses and/or instruction (for your child)
___ Access instructors, mentors, tutors (for your child)
___ Seek and access on-going feedback from peers and/or instructors on child’s learning
___ Access local, state, or federal regulatory or legal agencies and organizations concerning home education
___ Access local, state, and/or federal standards, exams, tests, etc.
___ Communicate with school officials
___ Other applications (please specify) ________________________________
APPENDIX F: STUDENT INTERVIEW QUESTIONS

Age ___________ Grade/Level: ______________

Questions:

1) What do you like most about home schooling?

2) What do like least about home schooling?

3) What is easy about home schooling?

4) What is hard about home schooling?

5) Do you use technology to help you learn? Do you use it every day?

6) If you do, what type of technology do you use?

7) If you do not have access to technology, do you think you would improve your learning by having access? Why?

8) How does technology help you learn?

9) Do you like to use technology? Why or why not?

For students who are currently enrolled in the public school district:

10) Do you miss being home schooled? Why or why not?

APPENDIX G: PARENT/GUARDIAN INTERVIEW QUESTIONS

Questions:

1) Why did you choose to home school?

2) How much of an influence was technology in your decision to home school?

3) What do you like most about home schooling?

4) What do like least about home schooling?

5) What is easy about home schooling?

6) What is difficult about home schooling?

7) What do you see as the biggest challenge of home schooling your child/children?

8) Do you incorporate technology every day as part of your home schooling program?

9) If you do, what type of technology do you use in your home schooling program?

10) If you do not have access to technology, do you think it would improve your student’s learning by having access? Why or why not?

11) What are the benefits of using technology in learning/teaching?

12) Do you believe that computers are great tools to improve the quality of learning? Explain.

13) How much computer experience do you have? (Identify yourself as novice, intermediate or expert user of computer)

14) What types of technology do you have experience with?

15) Does using technology make your teaching/home schooling program: easier? more manageable? time consuming? difficult? How so?
For parents/guardians whose child/children began in the public school and decided to home school:

16) Did academics play a role in choosing to withdraw your child/children from the public school?

For parents/guardians whose child/children returned to the public school environment:


APPENDIX H: ADMINISTRATOR/COUNSELOR INTERVIEW QUESTIONS

Questions:

1) Why do you feel most parents/guardians choose to home school?

2) What are your responsibilities as an administrator to families who home school?

3) Do you feel technology has had an impact on the number of home schoolers in the district? Please explain.

4) What are common issues of home schoolers entering into a public school environment?

5) Are academics a factor when parents withdraw their child/children from the public school? Extra-curriculars? Sports?

6) Are academics a factor when parents enroll their child/children in a public school? Extra-curriculars? Sports?

7) What are the biggest problems or concerns when home schoolers withdraw from the public school?

8) What are the biggest problems or concerns when they return to the public school?

9) Do you have any other thoughts on home schooling, technology’s influence on home schooling, or home schooled students returning to the public school?

APPENDIX I: CODING CATEGORIES

Using interview questions to compare responses, the researcher determined common themes emerged and are explained in the table.

<table>
<thead>
<tr>
<th>Code/Theme</th>
<th>Sample Raw Data</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence (question #2)</td>
<td>“It was an influence because the first program provided a computer and a printer. We needed internet access and were interested in having the technology.” “Absolutely necessary. It was the only way to do it.” “Technology was not the reason I home schooled but it was a major, huge blessing.”</td>
<td>degree technology was an influence when deciding to home school</td>
</tr>
<tr>
<td>Benefits (question #10)</td>
<td>“Students need to know how to use technology. I think it helps me personally than it helps her. I use it more to organize lessons, my research, find new curriculum.” “Technology gives us the ability to teach a wide range of subjects, some of which would be outside our personal ability to teach.” “… Technology wasn’t as far [when we first started home schooling]. Now we have DVDs, a whole year’s worth. Everything’s done for you.”</td>
<td>how using technology assists in a home schooling program</td>
</tr>
</tbody>
</table>
Learning Quality (question #11)

“Yes. It engages the kids.”

“It truly is … Computers are good … Nowadays I don’t think the child could succeed without a computer and a moderate to advanced knowledge of it. There’s obviously no going back.”

“Certainly. When a curriculum is designed for computer use, the PC is a great tool.”

whether technology is an appropriate tool to improve the quality of learning

Question #1 in the parent interview asked why parents decided to home school. The researcher coded the responses into the categories noted in the table.

<table>
<thead>
<tr>
<th>Code</th>
<th>Sample Raw Data</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional</td>
<td>“We home school because public schools are not producing a citizenry of thinking adults.”</td>
<td>dissatisfaction with traditional school policies or practices; unhappiness with classroom situations; child’s needs not being met within public school</td>
</tr>
<tr>
<td></td>
<td>“My daughter was begging to in fourth grade. It seemed the teachers couldn’t control their classrooms.”</td>
<td></td>
</tr>
<tr>
<td>Pedagogical</td>
<td>“When parents send their children to school, they give up being the primary influence in their kid’s lives.”</td>
<td>parent’s philosophy of education, learning theories, and appropriate choices of curricula</td>
</tr>
<tr>
<td></td>
<td>“Our initial desire to home school was prompted by our observation that home school children interact with adults quite easily.”</td>
<td></td>
</tr>
</tbody>
</table>
| Social | “Lots of reasons. Number one, family time and flexibility. We like to travel. It’s hard to pull the girls out [of public school].”

“I’m a full-time teacher myself and I couldn’t do [the traditional] home schooling. So we chose an online program because it works best for our schedules.” | parent’s strong values regarding family and relationships within the family; flexible lifestyle (vacations, flexible scheduling for appointments) |
|---|---|---|
| Ideological | “Any adult who remembers middle school can attest to the jungle-like atmosphere they experienced. Home schoolers, on the other hand, interact regularly with children of all ages and adults.”

“I chose to home school because it was a cheap alternative to Christian school.” | parent’s perspective that moral and ethical standards fostered in traditional schooling environments are unacceptable; home environment is more suitable for teaching such morals and ethics |

(Codes adapted from Andrade, 2008)
Transcripts were generated from audio recordings taken from each of the participant interviews. The researcher (R) used PB in the transcript to identify Administrator 2.

R: Let’s move on. Number four. What are the common issues of home schools entering into the public school environment? If they do come back into our public schools, do you see…

PB: Well, the most common issues are that the child is not on grade level. So, we have academics. There are deficiencies. For kids coming in, we’ve had a lot of that.

R: Really?

PB: Yea, a lot of that. A majority. I would feel safe to say 80%.

R: Really?

PB: Actually, I could say 90%, but I don’t want to go that high.

R: Wow.

PB: A lot of the parents are of a lifestyle that that is more into discovery methods and learning rather than doing anything that is going to require a child to sit.

R: More of a disciplined approach.

PB: Right. That’s exactly right. They just don’t see that. Speaking of that word, that brings up the second issue. Discipline is always an issue. No, that’s not true. Ninety percent of the time discipline is an issue because…discipline and social kind of go together. Sometimes the kids socially don’t know how to work in a classroom setting. They’re almost like kindergartners coming into a school. They have to be taught what to do and they’re wary sometimes because they’re uncomfortable because they’ve never had that. So a lot of what they did [at home] is not real successful. And the second thing is that they have never had any discipline that has required them to do things they didn’t want to do. I remember one parent telling me, after the child threw the stapler at the teacher because he didn’t want to do what she [the teacher] was asking him to do, and he [the parent] told me I had to understand that he [the child] was different. And that he hadn’t been in a school environment and I had to have a separate set of rules for him until he learned the set of [school] rules.

R: Oh, okay. (smiling with a raised eyebrow)
PB: I remember telling him [the parent], “We have one set of rules and he has to learn them. And he has to obey them.” It was an awful year. He actually did get better. It was a very hard year and the parents actually came back and apologized to me because they realized they were wrong. They were just panicked about their child being in trouble and me calling them.

R: Well, at least they realized…

PB: Yes, eventually they did. So, those are the most common ones. I think a lot of times they’re [home schooled children] are not socially developed at all. It’s not always true, but often. I think the biggest problem is that they’re very shy.

R: Well, they’re [probably] not used to interacting with other people unless they’re in a large family or they work with other home schooling families.

PB: Sometimes we have parents take their kids out for a year. And then the kids come back the next year for whatever reason. Who knows? I don’t even ask them [the parents].

R: Well, you may get the answer. You may not, so why even go there?

PB: Right.

R: And that’s a good point. And I know going in [to interview with the home schooling parents], I have that on the survey, too that I may not be getting a 100% honest answer either. And that’s fine. I’ll just see what their reasons are and compare that to the research I’ve done and see what percentage is this [reason] and this [reason]. I know there’ll be some, like you’ve already mentioned, they just weren’t happy with the schools, or the administrator, or some of the teachers. They [home schooling parents] didn’t really agree with that [particular instance] so they yank them out [of public school]. That’s fine. I’m not going to judge them.

PB: Right.

R: That’s one of my issues I have to try to get across [to the families] that I’m not there to say, “Hey, you’re this, this, this, and this.” I just want to know about what you’re doing [for your home schooling program].
The following research study has been approved by the Institutional Review Board at Ohio University for the period listed below. This review was conducted through an expedited review procedure as defined in the federal regulations as Category(ies):

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**Project Title:** Home Schooling and Technology: What is the Connection? A Collective Case Study in Southeastern Ohio

**Primary Investigator:** Kerry Bullock

**Co-Investigator(s):**

**Faculty Advisor:** Teresa Franklin

**Department:** Educational Studies

Rebecca Cale, AAB, CIP
Office of Research Compliance

Approval Date: 7/15/10

Expiration Date: 7/14/11

This approval is valid until expiration date listed above. If you wish to continue beyond expiration date, you must submit a periodic review application and obtain approval prior to continuation.

Adverse events must be reported to the IRB promptly, within 5 working days of the occurrence.

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved by the IRB (as an amendment) prior to implementation.